
NOTES

CLEAR SKIES AHEAD: WHY THE SUPREME COURT'S DECISION IN *AEREO* SHOULD HAVE LIMITED COPYRIGHT IMPLICATIONS ON CLOUD TECHNOLOGY

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INTRODUCTION

There is no doubt that young Americans now consume media in ways wholly unlike the generations that have preceded them.¹ We are becoming a culture of “on-demand” users, downloading the exact content we want, at the precise moment in which we are prepared to consume it, and our desire for instant gratification continues to grow.² Whether advancements in

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1. Take, as an example, a recent interview with Chase Carey, chief operating officer of media company 21st Century Fox (parent company of 20th Century Fox and the FOX television network), in which he noted that “[the] 20-year-old segment, is a segment over time [Fox has] to address . . . [They have] a different set of habits . . . [and Fox] want[s] to make sure [it] figure[s] out how [to] make products that work for them . . .” John McDuling, *Millennials Are Forcing Change on the TV Industry—and Making It Better*, QUARTZ (Sept. 11, 2014), <http://qz.com/263840>.

2. Christopher Muther, *Instant Gratification Is Making Us Perpetually Impatient*, BOS. GLOBE (Feb. 2, 2013), <https://www.bostonglobe.com/lifestyle/style/2013/02/01/the-growing-culture-impatience-where-instant-gratification-makes-crave-more-instant-gratification/q8tWdNGeJB2mm45fQxtTQP/story.html> (discussing Americans’ growing demands for instant gratification—including media content). As one recently interviewed college student stated, “If I want to watch a movie now, and it’s not on Netflix or on-demand, then I’m not going to put any more effort into finding it.” *Id.* See also

technology have helped to create or satisfy these new demands, the ultimate result of recent innovation offers consumers infinite flexibility to choose content specifically tailored to their preferences.³

In America and across the globe, new technology is causing a particularly dynamic effect on the television (“TV”) industry and the ways in which the average viewer consumes TV. For example, consumers are becoming increasingly more likely to “timeshift” programs using in-home digital video recorders (“DVRs”)—technology that allows viewers to record their favorite shows as they air and replay them later, thus enabling more flexible viewing than is ordinarily possible with fixed programming schedules.⁴

Perhaps even more disruptive to the traditional television consumption model are the Internet-based services that allow users to stream content directly to TVs and other personal devices, such as computers, phones, and tablets.⁵ In addition to allowing users to choose content on demand, these services also make television programming more portable than ever before because they are increasingly accessible via mobile applications.⁶ Not only can consumers choose *when* to watch their favorite shows, but they can also determine *where* to watch them—on mobile devices or laptops using an Internet connection, which is often wireless, as opposed to living room fixtures that require cables or antennas. A service like Netflix, for example,

Brian Stelter, *As DVRs Shift TV Habits, Ratings Calculations Follow*, N.Y. TIMES (Oct. 6, 2013), <http://nyti.ms/1fbsOP7> (“[M]ost directional arrows are pointing toward on-demand’s dominance in the future . . .”).

3. See, e.g., *Netflix’s View: Internet TV Is Replacing Linear TV*, NETFLIX, <http://ir.netflix.com/long-term-view.cfm> (last updated Jan. 19, 2016) (discussing Netflix’s content-delivery service as being “about the *flexibility* of any screen at any time” (emphasis added)).

4. Stelter, *supra* note 2 (“On-demand viewing behaviors, which have been reshaping television since the first TiVo DVR was shipped . . . are becoming more pronounced with each passing year . . .”). A DVR is a device “that records TV programs in a digital format to a disk drive or other memory medium within a device.” *What Is a Digital Video Recorder (DVR)?*, TIME WARNER CABLE, [http://www.highspeedonline.com/Corporate/site.faqs/DigitalCab/DVR\(Digita/What-is-a-Digital-Video-Record](http://www.highspeedonline.com/Corporate/site.faqs/DigitalCab/DVR(Digita/What-is-a-Digital-Video-Record) (last visited Mar. 27, 2016).

5. See Stelter, *supra* note 2 (“To be sure, the majority of television is still watched live . . . But most directional arrows are pointing toward on-demand’s dominance in the future, thanks to services like Netflix, Amazon, Hulu or the DVR.”).

6. As examples, Hulu, Netflix, and Amazon provide users with free mobile applications so that users can access the service on the go in addition to their flagship computer and television delivery systems. See, e.g., *Amazon Instant Video on Apple iPhone, iPad, or iPod Touch*, AMAZON, <http://www.amazon.com/gp/feature.html?&docId=1000798971> (last visited Mar. 27, 2016); *Using Hulu.com on Your Phone or Tablet Browser*, HULU, <http://www.hulu.com/help/articles/23875521> (last visited Mar. 27, 2016); *Using Netflix on Your iPhone, iPad or iPod Touch*, NETFLIX, <https://help.netflix.com/en/node/23927> (last visited Mar. 27, 2016).

is illustrative of this point.⁷ Netflix's streaming service is only available via the Internet.⁸ Fundamentally, Netflix provides the same service as a cable television network, mixing its own original programming (*House of Cards*, *Orange Is the New Black*, and *Mitt*, to name only a few)⁹ with a host of licensed content.¹⁰ But Netflix's connection to the Internet offers consumers more flexibility than ordinary television—viewers can select when to play any given title within the entire Netflix library from virtually anywhere in the world. In fact, recent trends are beginning to suggest that younger consumers are growing more and more likely to “cut cords” with cable providers entirely, preferring to consume media only through Internet services like Netflix rather than through the more expensive traditional cable services that Comcast and Time Warner Cable provide.¹¹

In response to these changing trends, new companies have emerged to satisfy the public's growing demand for greater television flexibility through the Internet. Aereo is an example of one such service that tried to do so but when faced with growing legal challenges and regulatory issues, could not succeed.¹² As an alternative to a traditional cable subscription or

7. See *What Devices Can I Use to Stream Netflix?*, NETFLIX, <https://help.netflix.com/en/node/14361?catId=en%2F131> (last visited Apr. 5, 2016). For purposes of this Note, when I discuss Netflix, I am referring only to the Netflix “Watch Instantly” service—not the Netflix-by-mail service, which is a separate plan requiring a different fee. See *How It Works*, DVD NETFLIX, <http://dvd.netflix.com/HowItWorks> (last visited Apr. 5, 2016).

8. See *How Does Netflix Work?*, NETFLIX, <https://help.netflix.com/en/node/412> (last visited Mar. 27, 2016).

9. *Netflix Original Documentaries*, NETFLIX, <http://www.whats-on-netflix.com/originals/documentaries> (last updated Feb. 25, 2016); *Netflix Original Dramas*, NETFLIX, <http://www.whats-on-netflix.com/originals/dramas> (last updated Feb. 25, 2016).

10. See *About Netflix: Netflix Has Been Leading the Way for Digital Content Since 1997*, NETFLIX, <https://media.netflix.com/en/about-netflix> (last visited Apr. 9, 2016); Shirley Pelts, *Wall Street Expects Netflix Growth in 3Q15 Earnings Release*, MARKET REALIST (Oct. 7, 2015), <http://marketrealist.com/2015/10/netflix-domestic-streaming-usiness/>

11. See Edmund Lee, *TV Subscriptions Fall for First Time as Viewers Cut the Cord*, BLOOMBERG (Mar. 19, 2014), <http://www.bloomberg.com/news/2014-03-19/u-s-pay-tv-subscriptions-fall-for-first-time-as-streaming-gains.html>. It is true that Comcast and Time Warner Cable now offer mobile applications for their services. *Make the Most of Your TV Services with XFINITY Apps*, XFINITY, <http://xfinitytv.comcast.net/apps> (last visited Mar. 28, 2016); *TWC TV—Your World Is Always On*, TIME WARNER CABLE, <http://www.timewarnercable.com/en/tv/features/twc-tv.html> (last visited Mar. 28, 2016). But, unlike Netflix or Hulu, these traditional television providers still require a subscription to their more expensive cable television services in order to access the streaming applications. See *id.* Commentators attribute “cord cutting” (a tongue-in-cheek term to describe the trend of cancelling cable subscriptions in favor of Internet-only services) to this difference in subscription requirements because Netflix, for example, does not require a hard-wired subscription in order to access its online services. Lee, *supra* (“It’s not that viewers are watching less video. [It is that] [o]nline-streaming services from Netflix Inc. and Amazon.com Inc. continue to draw more users . . . charging fees of less than \$10 a month.”).

12. Emily Steel, *Aereo Concedes Defeat and Files for Bankruptcy*, N.Y. TIMES (Nov. 21, 2014),

a home antenna, Aereo streamed the broadcast networks' signals through the Internet to an end-user's computer or mobile device.¹³ The service was unique because it was the first to offer a virtually *live* broadcast television signal without a traditional cable subscription or antenna in many U.S. markets.¹⁴ And it was cheap.¹⁵ Functioning much like a traditional cable provider's DVR service, Aereo could record television programs as an additional feature to live viewing.¹⁶ This allowed users to store live content remotely "in the cloud" for later viewing.¹⁷

Even prior to Aereo's launch, the broadcast networks objected to its services, claiming that the new company violated copyright laws by retransmitting their signals without paying a licensing fee to do so.¹⁸ Aereo, on the other hand, claimed that it was merely providing access to content already available to users for free, since the major networks have always broadcast their signals without charge over the air.¹⁹ Litigation to enjoin Aereo's service ensued, and the U.S. Supreme Court granted certiorari.²⁰ An important component of Aereo's defense throughout the trial and appellate processes was to focus the courts' attentions on its services' similarities to the essential functions of many cloud-computing companies (such as Apple's iCloud, Google Drive, and Dropbox).²¹ Aereo cautioned

<http://www.nytimes.com/2014/11/22/business/aereo-files-for-bankruptcy.html>.

13. Brian Stelter, *New Service Will Stream Local TV Stations in New York*, N.Y. TIMES: MEDIA DECODER (Feb. 14, 2012), <http://mediadecoder.blogs.nytimes.com/2012/02/14/new-service-will-stream-local-tv-stations-in-new-york/?smid=tw-nytimstv&seid=auto>.

14. *Id.*

15. See Steel, *supra* note 12 (discussing that a monthly subscription to Aereo cost customers between \$8 and \$12).

16. *Id.*

17. Joe Flint, *Aereo Fights for Future Before the Supreme Court*, L.A. TIMES (Apr. 22, 2014), <http://www.latimes.com/business/la-et-ct-aereo-supreme-court-20140422-story.html>.

18. George Winslow, *Broadcasters File Suits Against Aereo*, BROADCASTING & CABLE (Mar. 1, 2012), <http://www.broadcastingcable.com/news/washington/broadcasters-file-suits-against-aereo/59885>.

19. Brief for Respondent at 1, *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (No. 13-461), 2014 WL 1245459, at *1.

20. *Aereo*, 134 S. Ct. at 2498.

21. Brief for Respondent at 2-3, *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (No. 13-461), 2014 WL 1245459, at *2-3 (arguing that the broadcast networks' "construction of the [Copyright Act of 1976] imperils the cloud computing industry"). See also, e.g., *id.* at 49; Brief of 36 Intellectual Property & Copyright Law Professors as Amici Curiae in Support of Respondent at 27-29, *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (No. 13-461), 2014 WL 1348474, at *27-29; Brief of Amici Curiae the Consumer Federation of America & the Consumers Union in Support of Respondent at 34-35, *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (No. 13-461), 2014 WL 1348473, at *34-35; Brief of Filmon X, LLC, Filmon.TV, Inc., Filmon.TV Networks, Inc., & Filmon.Com, Inc. as Amici Curiae Support of Affirmance at 28, *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (No. 13-461), 2014 WL 1348476, at *28.

the courts that any ruling against it would have vast legal implications on the burgeoning cloud technology industry, thereby discouraging future innovation.²² In fact, amici parties, arguing on Aereo's behalf, also stressed this point.²³

Despite Aereo's efforts, the Court found it in violation of copyright law.²⁴ But in a dissenting opinion, Justice Scalia acknowledged that the majority's opinion could open the door to questions about the application of copyright law to the cloud industry, as Aereo and its amici had predicted.²⁵ Moreover, in the wake of the opinion, many commentators in the news media have continued to latch on to this contention.²⁶

Despite Justice Scalia's dissent and the claims of Aereo and its amici, this Note will argue that, when viewed on the whole, any potential fears that the *Aereo* decision could implicate the legality of cloud-based technology or affect copyright infringement analysis with respect to this industry are likely unwarranted. First, there are substantial structural differences between how Aereo operated and how cloud-based services (particularly remote storage systems) continue to run. Second, the *Aereo* decision is a narrow response particularly attenuated to that company's practice of functioning like a traditional cable system while failing to pay the fees required by such systems when they rechannel broadcast networks' signals. Thus, because the case addresses such a specific factual scenario,

22. See Neal Katyal, *Aereo at the Supreme Court: Ruling for Broadcasters Won't Harm Cloud Computing*, HOLLYWOOD REP. (Apr. 30, 2014), <http://www.hollywoodreporter.com/thr-esq/aereo-at-supreme-court-ruling-699937> ("Aereo has loudly proclaimed that the whole sweep of future innovation will be at stake if it loses."); Todd Spangler, *Why a Loss for Aereo Wouldn't Threaten Cloud Services*, VARIETY (Mar. 28, 2014), <http://variety.com/2014/digital/news/why-a-loss-for-aereo-wouldnt-threaten-cloud-services-1201149611> (discussing that Aereo argued how "[a] decision against [it] would upend and cripple the entire cloud industry").

23. E.g., Brief Amici Curiae of Computer & Communications Industry Ass'n & Internet Ass'n in Support of Affirmance at 3, *WNET, Thirteen, Fox Television Stations, Inc. v. Aereo, Inc.*, 712 F.3d 676 (2d Cir. 2013), *rev'd sub nom.* 134 S. Ct. 2498 (2014) (No. 12-2786-cv), 2012 WL 5387385, at *3 [hereinafter *Brief Amici Curiae*] (arguing that a ruling against Aereo "would destabilize settled expectations and investment for a wide array of Internet industries").

24. *Aereo*, 134 S. Ct. at 2503.

25. *Id.* at 2517 (Scalia, J., dissenting) ("The [majority] vows that its ruling will not affect cloud storage providers . . . , but it cannot deliver on that promise given the imprecision of its result-driven rule.")

26. See, e.g., Peter Decherney, *Aereo Supreme Court Loss Could Affect Cloud-Based Innovation, and Open Door for Fair Use*, FORBES (June 25, 2014), <http://onforb.es/1qwR6G7>; Shalini Ramachandran & Shira Ovide, *Aereo Ruling Muddies the Picture on Cloud Storage: Justices Said Their Decision Doesn't Address Other Services*, WALL ST. J. (June 25, 2014), <http://www.wsj.com/articles/aereo-ruling-muddies-the-picture-on-cloud-storage-1403736175>; Joan E. Solsman, *How Supreme Court Ruling Affects Aereo, the Cloud, and You*, CNET (June 26, 2014), <http://www.cnet.com/news/how-the-supreme-court-ruling-affects-aereo-the-cloud-and-you>.

its holding is unlikely to be extended to other cloud-based services. To illustrate this point, Part I will discuss Aereo's technology to clarify how the system physically functioned to stream practically live television through the Internet. Part II will analyze the key reasons why the Supreme Court found this particular technology to violate the networks' rights, while also analyzing Justice Scalia's concerns about potential fallout from the majority opinion, particularly with respect to the cloud industry. And finally, Part III will contrast Aereo's technological infrastructure with that of several common cloud-computing service providers and will examine the shortcomings of the argument that *Aereo* leaves in flux: the legality of cloud-computing services and the copyright infringement analysis with respect to those services.

I. WHAT WAS AEREO'S SERVICE? HOW DID IT WORK?

A. BROADCAST AND CABLE NETWORKS AND RETRANSMISSION CONSENT

To fully understand how Aereo's service operated from a technological standpoint, it is important to begin by briefly acknowledging an important aspect of the American television infrastructure. At its inception, television, like radio, was only distributed over the air, meaning as long as a viewer's television had an antenna, the viewer could receive the signal being sent over the airwaves.²⁷ The original broadcast networks (ABC, CBS, and NBC) adopted terrestrial radio's single-revenue stream for their business model, such that they profited not by charging viewers a subscription to receive programming, but by selling time to advertisers to sponsor commercial breaks.²⁸ The earliest cable services arose because signal reception via an antenna was poor, unreliable, or even nonexistent in many parts of the country.²⁹ For a fee, such services provided the broadcast networks' signals via a wired connection, which was more stable than an in-home antenna.³⁰ Today, the majority of American households subscribe

27. See HOWARD J. BLUMENTHAL & OLIVER R. GOODENOUGH, THIS BUSINESS OF TELEVISION xxi (3d ed. 2006) ("Contemporary television began in 1948, when ABC, CBS, and NBC began *broadcasting* for four hours each night.") (emphasis added).

28. *Id.* at 3 ("To pay for . . . programming, most network programs include about 20 commercial slots . . . per hour . . ."). See also *id.* at xxi (comparing the broadcast-television model with that of the radio, which was to "accumulate audiences with entertainment programming and require sponsors to pay a fee to be associated with [those] programs").

29. See Megan Mullen, *The Moms 'n' Pops of CATV*, in CABLE VISIONS: TELEVISION BEYOND BROADCASTING 24, 24 (Sarah Banet-Weiser et al. eds., 2007).

30. See Gary R. Edgerton, *Introduction* to THE ESSENTIAL HBO READER 1, 4 (Gary R. Edgerton & Jeffrey P. Jones eds., 2008) ("As early as 1948, community antenna television (CATV), or cable TV, was merely the means by which television signals were brought into hard-to-reach rural and

to such services even though broadcast networks still distribute their signals via free over-the-air broadcast for viewers to receive via antenna.³¹ Cable providers (Time Warner Cable, Comcast, and Cox, for example) also offer a host of additional cable networks (Discovery Channel, Bravo, and Food Network, for example) that are *only* available with a subscription (that is, cable networks are not broadcast for free over the air).³² Unlike broadcast networks, cable networks operate under dual-revenue streams—their limited availability via subscription allows them to command both advertising dollars *and* a subscription fee collected from the cable provider’s subscriber base.³³

Despite their traditional single-revenue model, broadcast networks have effectively been given an additional (and substantial) source of revenue because Congress requires cable television providers to obtain “retransmission consent” from a broadcast network when providers distribute that network’s signal via their cable system.³⁴ That consent does not come cheaply.³⁵ In effect, the law mandates that the broadcast networks are entitled to a fee (similar to the ones received by cable networks) whenever their signal is distributed via a cable system, even though that signal is still available for free over the air. These retransmission consent fees lay at the heart of the dispute between Aereo and the broadcast networks. While Aereo distributed television shows directly to consumers—in the same way that cable providers do—its technology was specifically engineered to avoid paying retransmission consent fees.³⁶

mountainous regions.”); Mullen, *supra* note 29 (“The early cable industry—better known as community antenna television (CATV)—began around 1950 in towns too small and remote for residents to receive broadcast signals using set-top (‘rabbit ear’) or rooftop antennas.”).

31. Alex Ben Block, *Cable TV Providers Hit by Continued Subscriber Erosion*, HOLLYWOOD REP. (Sept. 3, 2013), <http://www.hollywoodreporter.com/news/cable-tv-providers-hit-by-619875> (describing that, although the number of television subscriptions is declining—in part due to Internet-based alternatives such as Aereo—“[c]able’s share of the customers in U.S. TV homes who take some sort of pay service is . . . 55.3 percent”).

32. See BLUMENTHAL & GOODENOUGH, *supra* note 27, at 12 (discussing cable networks’ revenue models).

33. *Id.* (“Each [cable] network’s monthly service is sold to a cable system [provider] at a wholesale price. The operator then marks up the monthly price, but sells the channel . . . [to subscribers] for a flat monthly subscription fee.”).

34. 47 U.S.C. § 325(b)(1) (2012) (“No cable system or . . . distributor shall retransmit the signal of a broadcasting station . . . except . . . with the express authority of the originating station . . .”).

35. See Todd Spangler, *CBS Chief Moonves: We Can Go Over-the-Top if Aereo Wins at Supreme Court*, VARIETY (Mar. 11, 2014), <http://variety.com/2014/digital/news/cbs-chief-moonves-we-can-go-over-the-top-if-aereo-wins-at-supreme-court-1201129362> (“CBS projects that by 2020 it will generate \$2 billion in retransmission consent [fees].”).

36. See *id.* (noting that “CBS and other broadcast networks have raised the specter of converting broadcast networks into cable channels if Aereo prevail[ed]” in Court, suggesting that they would cease

Because the Federal Communication Commission did not classify Aereo as a cable operator, it was not required to pay retransmission consent fees, so the networks used copyright law as a tool to prevent the service's operation.³⁷

B. THE AEREO TECHNOLOGY AND WHAT WAS AT STAKE

As previously discussed, Aereo allowed users to stream the broadcast television networks' signals, which were virtually live, using *neither* an in-home "rabbit ears" antenna *nor* a wired cable subscription.³⁸ Instead, mixing old technologies with new ones, Aereo leased individual "dime-size" antennas that could receive the broadcast networks' signals to subscribers.³⁹ Each antenna was unique and specific to a given subscriber and was activated only when called upon by such subscriber.⁴⁰ The antennas worked to capture broadcast signals just like antennas that users would have in their homes but with a significant exception: Aereo's antennas were not mounted to users' television sets, adjacent to their houses, or in many cases, even remotely close to subscribers' homes.⁴¹ Instead, Aereo stored each of their customers' antennas in warehouses located sporadically across the country and it distributed the signals via the Internet.⁴² Using modern terminology, Aereo marketed its product as renting consumers their own personal television antenna that sends and stores information remotely "in the cloud."⁴³

Ultimately, Aereo brought traditional over-the-air broadcast television

broadcasting to the public (in favor of cable subscription fees) if their rights to retransmission fees were threatened). *See also* Flint, *supra* note 17 ("[R]etransmission consent fees have become crucial for broadcasters since increased competition for eyeballs from cable channels and digital services . . . have eaten away at [the broadcast networks'] ratings and shrunk their piece of the advertising pie.").

37. *See* Brian Fung, *Aereo to the FCC: Let Us Join the Cable Companies We Tried to Replace*, WASH. POST (Oct. 13, 2014), <https://www.washingtonpost.com/news/the-switch/wp/2014/10/13/aereo-to-the-fcc-let-us-join-the-cable-companies-we-tried-to-replace>.

38. *See* Adam Liptak & Emily Steel, *Aereo Loses at Supreme Court, in Victory for TV Broadcasters*, N.Y. TIMES (June 25, 2014), <http://www.nytimes.com/2014/06/26/business/media/supreme-court-rules-against-aereo-in-broadcasters-challenge.html>.

39. *Id.*

40. *See* Flint, *supra* note 17 ("A consumer using Aereo's system captures a signal through an antenna available only to a particular user and enables that user to make an individual copy from a unique data stream that can be viewed solely by that user at the user's direction.").

41. *See id.*

42. *See* Liptak & Steel, *supra* note 38; Roger Parloff, *Aereo Is Leaving the Courts Dazed and Confused*, FORTUNE (May 21, 2012), <http://www.fortune.com/2012/05/21/aereo-is-leaving-the-courts-dazed-and-confused>.

43. Matthew Moskovciak, *Aereo Brings Over-the-Air TV to the Cloud*, CNET (Feb. 14, 2012), <http://www.cnet.com/news/aereo-brings-over-the-air-tv-to-the-cloud> ("As Aereo investor Barry Diller explained [this service], '[t]hink of every little antenna having someone's name on it' . . .").

into the new century, making it easier and more convenient for subscribers to access the free content—publicly broadcast television shows—already available to them in return for a nominal fee.⁴⁴ Consumers received the service as a low-cost alternative to oppressive cable bills or the unreliable “rabbit ears” of the past.⁴⁵ And—at least initially—Aereo’s technological model allowed the company to avoid paying hefty retransmission consent fees, since it was not classified as a cable provider and was set up to aggregate an individual’s ability to use his or her own personal antenna.⁴⁶ Although the process is astoundingly analogous to what cable companies do, the *technological* differences allowed the service only a brief run.⁴⁷

II. THE SUPREME COURT AND AEREO

A. THE COPYRIGHT ACT OF 1976

To determine whether Aereo’s service directly violated the broadcast networks’ copyrights, the Court began by exploring the relevant sections of the Copyright Act of 1976.⁴⁸ The Act gives copyright holders “the exclusive right[] . . . to perform [a] copyrighted work publicly.”⁴⁹ The Act’s Transmit Clause further describes this exclusivity as including the right to “transmit or . . . communicate a performance . . . of [a copyrighted] work . . . to the public, by means of any device or process, whether the members of the public capable of receiving the performance . . . receive it in the same place or in separate places and at the same time or at different times.”⁵⁰ In regard to whether Aereo violated copyright law, the Act poses two significant questions. First, did Aereo “perform” when it operated its service to stream practically live content to its users? And second, if it did “perform,” was the performance a public one?⁵¹

44. See Flint, *supra* note 17 (“[Aereo] [s]ubscribers pay \$8 to \$12 a month for Aereo.”).

45. See, e.g., Gerry Smith, *My Year Using Aereo: How a Dime-Sized Antenna Met My TV Needs*, HUFFINGTON POST (Aug. 13, 2013), http://www.huffingtonpost.com/gerry-smith/my-year-using-aereo_b_3745981.html.

46. Fung, *supra* note 37.

47. Liptak & Steel, *supra* note 38 (“[Aereo] acted like a cable system in that it transmitted copyrighted content. ‘Insofar as there are differences, . . . those differences concern not the nature of the service that Aereo provides so much as the technological manner in which it provides the service.’”) (quoting *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498, 2511 (2014)).

48. *Aereo*, 134 St. Ct. at 2502.

49. 17 U.S.C. § 106 (2012).

50. 17 U.S.C. § 101 (2012).

51. *Aereo*, 134 St. Ct. at 2504.

B. DID AEREO “PERFORM”?

Taken from the Act’s language, one way to “perform” is to “transmit” a performance.⁵² Aereo argued that because it merely provided users access to equipment—a home antenna stored in Aereo’s warehouses—it did not perform at all; thus, it could not be subject to direct copyright infringement.⁵³ Aereo contended that since its service “allow[ed] a *user* to control every aspect of the receipt, recording, and transmission of the programming . . . only the *user*, not Aereo,” performed.⁵⁴ As I will later discuss in greater detail, this distinction is an important one. When only the user, and not the manufacturer, of a device “performs,” a direct infringement claim against a manufacturer, like Aereo, necessarily fails.⁵⁵ Instead, in these instances, a copyright holder’s claim may be valid against the directly infringing individual user; however, because these individuals may be too numerous or too difficult to find, courts have routinely found manufacturers liable on a theory of secondary infringement.⁵⁶ In *Sony Corp. of America v. Universal City Studios, Inc. (Betamax)*, the Supreme Court found that a device manufacturer may escape liability under secondary infringement if the manufacturer can show a “substantial noninfringing use” of that technology.⁵⁷ The Court later clarified its position in *Betamax* in *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*⁵⁸ In *Grokster*, the Court stated that even if a company manufactures technology with noninfringing uses, that company can still face secondary liability if it “distributes a device with the object of promoting its use to infringe copyright.”⁵⁹ Regardless, in *Aereo*, because the procedural posture of the case posed only the question of direct infringement, the question of *who* “performed” was critical.⁶⁰ While at first glance Aereo’s argument may have appeared plausible, the Court’s subsequent discussion of the

52. 17 U.S.C. § 101 (2012).

53. Brief for Respondent at 40–41, *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (No. 13-461), 2014 WL 1245459, at *40–41.

54. *Id.* at 41 (emphases added).

55. *Aereo*, 134 S. Ct. at 2512 (Scalia, J., dissenting).

56. ROGER E. SCHECHTER & JOHN R. THOMAS, PRINCIPLES OF COPYRIGHT LAW 394 (2010). *See generally* *Sony Corp. of Am. v. Universal City Studios, Inc. (Betamax)*, 464 U.S. 417 (1984) (discussing secondary infringement in detail as the topic relates to the in-home recording of television programs onto videotapes using videotape recorders).

57. *Betamax*, 464 U.S. at 789 (“[T]he sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes.”). *See also* WILLIAM S. STRONG, THE COPYRIGHT BOOK: A PRACTICAL GUIDE 305 (6th ed. 2014).

58. *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005).

59. *Id.* at 919.

60. *Aereo*, 134 St. Ct. at 2512 (Scalia, J., dissenting).

history surrounding the Act's Transmit Clause and Aereo's technology led it to conclude that Aereo's public performance was clear.⁶¹

1. Interpreting "Performance" in *Fortnightly* and *Teleprompter*

In 1968, the Court considered whether the Copyright Act applied to community antenna television ("CATV") systems in *Fortnightly Corp. v. United Artists Television, Inc.*⁶² The precursor to modern cable television, CATV services improved the quality and strength of subscribers' television signals more so than was possible using only the less reliable in-home antennas of the day.⁶³ CATV services operated high-quality antennas, which were connected to a subscriber's home television set via a lengthy cable outside of cities.⁶⁴ "The systems contain[ed] equipment to amplify and modulate the signals received . . . in order to . . . improv[e] their strength."⁶⁵ In *Fortnightly*, the Court focused on the distinction between viewers, who the Court believed did not "perform," and broadcasters, who did.⁶⁶ According to the *Fortnightly* Court, understanding this difference centered on the extent to which an entity exercised choice.⁶⁷ For example, broadcast networks clearly "perform" because they actively choose the programs to be sent over the air and "procure programs and propagate them to the public."⁶⁸ The Court reasoned that because "CATV systems simply carr[ie]d, without editing [the] programs they receive[d]," they behaved like viewers as they were merely passive.⁶⁹ Moreover, since "[v]iewers do not become performers by using 'amplifying equipment,' . . . a CATV provider should not be treated differently for providing viewers the same equipment" that they could ostensibly provide themselves.⁷⁰

Several years later, in *Teleprompter Corp. v. Columbia Broadcasting*

61. *Id.* at 2504 (majority opinion).

62. *Fortnightly Corp. v. United Artists Television, Inc.*, 392 U.S. 390 (1968).

63. *Id.* at 391–92.

64. *Id.* at 392.

65. *Id.*

66. *Id.* at 400–01.

67. *See id.* at 398–400.

68. *Id.* at 400. The Court drew a line between broadcasters and viewers, noting that "[broadcasters are] treated as active performer[s]" and viewers "as passive beneficiar[ies]." *Id.* at 399.

69. *Id.* at 400–01.

70. *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498, 2505 (2014) (quoting *Fortnightly*, 392 U.S. at 400) (describing how the Court in *Fortnightly* reasoned that a CATV did not perform). For example:

If an individual erected an antenna on a hill, strung a cable to his house, and installed the necessary amplifying equipment, he would not be "performing" the programs he received on his television set. The result would be no different if several people combined to erect a cooperative antenna for the same purpose. The only difference in the case of CATV is that the antenna system is erected and owned not by its users but by an entrepreneur.

Fortnightly, 392 U.S. at 400.

System, Inc., the Court considered a CATV system that provided signals not from antennas just outside the city—as in *Fortnightly*—but hundreds of miles away.⁷¹ The Court understood that although the longer distance between the CATV antennas and subscribers may have made amplification equipment cost-prohibitive for the individual viewer to provide, the CATV provider continued to act more like a viewer than a broadcaster.⁷² Regardless of distance, “[t]he reception and rechanneling of [broadcast television signals] . . . [was still] essentially [considered] a viewer function,”⁷³ and viewers did not “perform.”⁷⁴ Notably, the Court acknowledged that the CATV services exercised *some* degree of choice over content because they selected which stations to retransmit, but because they only carried the signal without any editing thereafter and only broadcasters exercise “significant creativity in choosing what to air,” the CATV services still acted more like viewers than broadcasters.⁷⁵

2. Congress’s Response to *Fortnightly* and *Teleprompter*

Congress, disagreeing with the Court’s decisions in *Fortnightly* and *Teleprompter*, clarified its intentions in 1976 by redefining “performance” under the Copyright Act in the Transmit Clause, adding new language that ultimately overrode the Court’s prior interpretations.⁷⁶ The change broadened the scope of the original Act because it specifically prohibits showing a copyrighted work’s “images in any sequence or . . . mak[ing] the sounds accompanying it audible.”⁷⁷ In changing the Act as it did, Congress “erased the . . . line between broadcaster and viewer” that the Court relied upon so heavily in *Fortnightly* and *Teleprompter* because both broadcasters and viewers “show [a] program’s images” and make a program’s sounds audible.⁷⁸ The newly adopted Transmit Clause further weakens the Court’s reasoning in those cases by including an additional definition of “transmit” as a performance: to “transmit” a work is “to communicate it by any device or process whereby images or sounds are received beyond the place from

71. *Teleprompter Corp. v. Columbia Broad. Sys., Inc.*, 415 U.S. 394, 399–400 (1974).

72. *Id.* at 408–09.

73. *Aereo*, 134 S. Ct. at 2505 (quoting *Teleprompter*, 415 U.S. at 408) (alteration in original).

74. *Id.*

75. *Id.*

76. *Id.* at 2505–06 (“Cable system activities, like those of the CATV systems in *Fortnightly* and *Teleprompter*, lie at the heart of the activities that Congress intended this language to cover. . . . [T]he concept[] of public performance . . . cover[s] not only the initial rendition or showing, but also any further act by which that rendition or showing is transmitted or communicated to the public.”) (citing H.R. REP. NO. 94-1476, at 63 (1976)).

77. 17 U.S.C. § 101 (2012).

78. *Aereo*, 134 S. Ct. at 2505–06 (citing H.R. REP. NO. 94-1476, at 63 (1976)).

which they are sent.”⁷⁹ Therefore, a performance is “not only the initial . . . showing, but also any further act by which that . . . showing is transmitted or communicated.”⁸⁰ These clarifications unambiguously prevent services like CATV systems from operating—even if they merely enhance a broadcast network’s signal—without a license from the broadcast networks.⁸¹

3. Applying the History of the Act to *Aereo*

With a specific understanding of the legislative history surrounding the Copyright Act’s 1976 amendment as a response to the CATV services discussed in *Fortnightly* and *Teleprompter*, it is no surprise that the Court found *Aereo* “to perform.”⁸² *Aereo* clearly displayed a television show’s images and sounds through the service’s streaming process; thus, with the new language in place, *Aereo* “perform[ed]” a work in violation of the Copyright Act.⁸³ More importantly, *Aereo*’s service is directly analogous to CATV services—those that Congress explicitly targeted in its 1976 amendment to the Act.⁸⁴ As the Court reasoned:

Aereo’s equipment may serve a “viewer function”; it may enhance the viewer’s ability to receive a broadcaster’s programs. It may even emulate equipment a viewer could use at home. But the same was true of the equipment that was before the Court, and ultimately before Congress, in *Fortnightly* and *Teleprompter*.⁸⁵

Therefore, *Aereo* was “not simply an equipment provider,” because its technology collected television signals and carried those signals to its subscribers without a license from the copyright holders to do so.⁸⁶

C. WAS AEREO’S PERFORMANCE A PUBLIC ONE?

Relying on the Second Circuit’s decision in *Cartoon Network LP, LLLP v. CSC Holdings, Inc. (Cablevision)*,⁸⁷ *Aereo* argued that even if it did “perform” under the Copyright Act, the performance was not a “public”

79. 17 U.S.C. § 101 (2012).

80. *Aereo*, 134 S. Ct. at 2506 (quoting H.R. REP. NO. 94-1476, at 63 (1976)).

81. *See id.*

82. *Id.* at 2504–05.

83. *Id.* at 2505–06.

84. *Id.* at 2506–07.

85. *Id.*

86. *Id.* at 2506.

87. *Cartoon Network LP, LLLP v. CSC Holdings, Inc. (Cablevision)*, 536 F.3d 121 (2d Cir. 2008).

one given the way in which its service's specific technology operated.⁸⁸

1. Public Performance in *Cablevision* as Construed by the Second Circuit

In *Cablevision*, the Second Circuit considered whether transmissions from Cablevision's remote storage DVR, dubbed the "RS-DVR," constituted public performances in violation of the Copyright Act.⁸⁹ Unlike traditional DVRs, which digitally store programs on an internal hard drive installed within the set-top boxes attached to subscribers' television sets, "the RS-DVR allow[ed] . . . customers who d[id] not have a stand-alone DVR to record . . . programming on central hard drives housed and maintained by Cablevision at a 'remote' location."⁹⁰ Stressing that to determine whether a performance is public requires a court to identify "the potential audience of a given transmission," *not* the potential audience of the underlying work,⁹¹ the Second Circuit found the RS-DVR in compliance with the Act.⁹² "Because each RS-DVR playback *transmission* [was] made to a single subscriber using a single unique copy produced by that subscriber, [the court] conclude[d] that such transmissions [were] not performances 'to the public,' but instead private performances."⁹³

2. Public Performance in *Aereo* as Construed by the Supreme Court

Relying on the Second Circuit's reasoning in *Cablevision*, Aereo claimed that even if its service "performed" under the Copyright Act, the performance was not a "public" one.⁹⁴ Instead, Aereo argued that—at best—its service's performances were private because the company leased each subscriber his or her own antenna so that "[o]ne and only one subscriber ha[d] the ability to see and hear each Aereo transmission."⁹⁵ Therefore, Aereo transmitted content to that individual and to no one else.⁹⁶

88. Brief for Respondent at 22, *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (No. 13-461), 2014 WL 1245459, at *22.

89. *Cablevision*, 536 F.3d at 123.

90. *Id.* at 124. Home videotaping of a copyrighted broadcast for later non-commercial viewing inside that home has long been protected by the fair use doctrine. *See Betamax*, 464 U.S. 417, 421, 425 (1984); SCHECHTER & THOMAS, *supra* note 56, at 462. But because Cablevision's RS-DVR copied broadcasts on commercial servers outside of the home and later transmitted those broadcasts to home subscribers, content creators claimed that the RS-DVR "engag[ed] in [unlicensed] public performances[] of their copyrighted works." *Cablevision*, 536 F.3d at 123.

91. *Cablevision*, 536 F.3d at 137.

92. *Id.* at 140.

93. *Id.* at 139 (emphasis added).

94. *See ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. at 2498, 2508 (2014).

95. *Id.*

96. Brief for Respondent at 16–17, *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (No. 13-461), 2014 WL 1245459, at *16–17.

However, disagreeing with the Second Circuit's interpretation of the Act, the Court implicitly condemned Aereo's service as a scheme that used a loophole in the law to avoid paying for retransmission while disguising itself as something other than a cable operator.⁹⁷ The Copyright Act "specifies that an entity performs publicly . . . at 'any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered.'"⁹⁸ The Court found that the language of the Act, on its face, suggests that an entity performs publicly when it communicates content "to a large number of people who are unrelated and unknown to each other."⁹⁹ Because Aereo communicated the same content to large groups of people who were unknown to one another, it performed publicly even if its antennas were user specific.¹⁰⁰

D. JUSTICE SCALIA'S DISSENT

1. Direct Liability, Secondary Liability, and the Volitional Conduct Requirement

In his dissent, Justice Scalia argued that the majority's opinion distorts the difference between direct and secondary copyright infringement.¹⁰¹ According to Justice Scalia, the networks' *direct* infringement claim should have failed because copyright jurisprudence requires defendants to "personally engage[]" in infringing conduct.¹⁰² In contrast, secondary infringement is appropriate under *Betamax* and *Grokster* "even when the defendants 'have not themselves engaged in the infringing activity' . . . [if] a defendant 'intentionally induc[es] or encourage[es]' infringing acts by

97. See *Aereo*, 134 S. Ct. at 2508–09 ("[Aereo's technology does] not distinguish Aereo's system from cable systems, which do perform 'publicly.' . . . They concern the behind-the-scenes way in which Aereo delivers television programming to its viewers' screens. They do not render Aereo's commercial objective any different from that of cable companies. Nor do they significantly alter the viewing experience of Aereo's subscribers. Why would a subscriber who wishes to watch a television show care much whether images and sounds are delivered to his screen via a large multisubscriber antenna or one small dedicated antenna, whether they arrive instantaneously or after a few seconds' delay, or whether they are transmitted directly or after a personal copy is made? And why, if Aereo is right, could not modern CATV systems simply continue the same commercial and consumer-oriented activities, free of copyright restrictions, provided they substitute such new technologies for old? Congress would as much have intended to protect a copyright holder from the unlicensed activities of Aereo as from those of cable companies.").

98. *Id.* at 2510 (quoting 17 U.S.C. § 101 (2012)).

99. *Id.* at 2509.

100. *Id.*

101. See *id.* at 2512 (Scalia, J., dissenting).

102. *Id.* Justice Scalia acknowledged that the Court has not opined specifically on this volitional conduct requirement, yet "[e]very Court of Appeals . . . has adopted that rule" and the Supreme Court's cases "are fully consistent with [such a] requirement." *Id.* at 2512–13.

others or profits from such acts ‘while declining to exercise a right to stop or limit [them].’”¹⁰³ Volitional conduct that infringes, therefore, is required to find a defendant liable for “performance” under a theory of direct liability, and—by extension—it is also a key way to distinguish a direct copyright violation from a secondary one.¹⁰⁴ In Aereo’s case, Justice Scalia claimed that because Aereo did “nothing more than operate an automated, user-controlled system” that was indifferent from the material it transmitted, it did not volitionally infringe on any copyright; thus, it could not have “performed.”¹⁰⁵ Instead, because Aereo’s *users* chose when to activate the system and what to watch while using it, the Aereo *users*—not Aereo—displayed the volitional conduct necessary “to perform.”¹⁰⁶ Justice Scalia contrasted Aereo with a service like Netflix—one that performs because it “carefully curate[s]” and arranges its selection of content.¹⁰⁷ Simply put, Justice Scalia asserted that “Aereo [did] not ‘perform’ for the sole and simple reason that it [did] not make the choice of content.”¹⁰⁸ Justice Scalia specifically highlighted that this lack of volitional conduct did not necessarily imply that the company could escape liability for infringement; instead, he merely suggested that infringement would have to be found on a theory of secondary liability since Aereo was not the entity performing.¹⁰⁹

2. The Consequences of the Majority’s Distortion

Justice Scalia worried that the majority’s opinion is a “result-driven” approach that “boils down” to nothing more than Aereo’s guilt by resemblance: (1) Aereo resembled a cable service, (2) Congress amended the Copyright Act to ensure that cable services “performed” within the Act, and (3) therefore, Aereo “performed” under the Act.¹¹⁰ In Scalia’s view, the majority veered from prior jurisprudence that applied the straightforward

103. *Id.* at 2512 (alteration in original) (first quoting *Betamax*, 464 U.S. 417, 435 (1984); then quoting *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 930 (2005)). Justice Scalia used peer-to-peer file-sharing services as a prime example of companies found liable under a theory of secondary infringement. *Id.* See also SCHECHTER & THOMAS, *supra* note 56, at 399–400 (claiming that, in *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004 (9th Cir. 2001), “Napster did not contest that its users directly infringed,” but “the Ninth Circuit reasoned that [because] Napster knew its users were direct copyright infringers and materially contributed to their infringement through its centralized servers and searching index,” it was secondarily liable).

104. See *Aereo*, 134 S. Ct. at 2514 (Scalia, J., dissenting).

105. *Id.* at 2513.

106. See *id.* at 2514.

107. *Id.* at 2513.

108. *Id.* at 2514.

109. *Id.* at 2517.

110. *Id.* at 2515, 2517.

volitional conduct bright-line rule in favor of something more ad hoc.¹¹¹ By ignoring volitional conduct, the majority's holding, Justice Scalia claimed, will distort well-established copyright jurisprudence outside of *Aereo*.¹¹² For example, the *Aereo* decision creates a rule that cable television look-alikes "perform," but it gives no guidance on how to specifically determine what type of entities qualify as cable companies.¹¹³ Thus, how will future courts know "which automated systems now in existence are governed by the traditional volitional-conduct test and which get the *Aereo* [look-alike] treatment[?]"¹¹⁴ Does the rule apply to satellite systems? Or, as is most relevant to this discussion, how does the majority's holding affect cloud storage providers?

3. Other Potential Worries About the Decision with Respect to Cloud Computing

While Justice Scalia's dissent is primarily critical of the majority's interpretation of who "performs" under the Copyright Act, amici parties worried about the potential fallout that could result from the Court's straying from the Second Circuit's application of "public" in *Cablevision*.¹¹⁵ One group argued that cloud-computing companies have come to rely on the Second Circuit's interpretation of "to the public" within the meaning of the Copyright Act—"that a user's watching, listening to, or reading copies of works she stored" are *private* performances.¹¹⁶ Thus, a different interpretation in *Aereo* could subject these companies themselves—and not just their users—to liability, discouraging new investment and innovation in the growing sector.¹¹⁷

III. FALLOUT

Aereo, its amici, and Justice Scalia's dissent in *Aereo* have all latched on to the idea that the majority's opinion, finding *Aereo* liable for direct copyright infringement, could negatively affect the future investment, innovation, and growth of cloud computing.¹¹⁸ To assess the extent of

111. *Id.* at 2516.

112. *Id.* ("[The majority opinion] greatly disrupts settled jurisprudence which, before today, applied the straightforward, bright-line test of volitional conduct directed at the copyrighted work.")

113. *Id.*

114. *Id.* at 2517.

115. See Brief *Amici Curiae* at 5–8, *WNET, Thirteen, Fox Television Stations, Inc. v. Aereo, Inc.*, 712 F.3d 676 (2d Cir. 2013), *rev'd sub nom.* 134 S. Ct. 2498 (2014) (No. 12-2786-cv), 2012 WL 5387385, at *5–8.

116. *Id.* at 6–7.

117. *Id.*

118. See *supra* Introduction, Part II.D.

Aereo's reach on cloud-based companies, I will begin by briefly describing cloud technology and its goals.

A. WHAT IS CLOUD TECHNOLOGY?

Cloud technology offers an alternative to storing computer data on a personal, local hard drive installed within a given device.¹¹⁹ Cloud services enable users to store data remotely on servers located all over the world and allow users to access these files via the Internet.¹²⁰ The use of cloud technology is growing at a rapid rate, and its services are attractive to personal consumers and businesses alike.¹²¹ For one, cloud services allow users to access their files anywhere in the world because a user need only have Internet connectivity to connect to the cloud server and retrieve data stored there.¹²² Also, for many, cloud computing provides increased file stability because information stored in this way is not (at least in theory) susceptible to more common local hard drive failures.¹²³ For instance, Google's popular cloud-based storage service, Google Drive, allows Google account holders to store up to fifteen gigabytes of data for free on the company's servers.¹²⁴ Users can upload any file to the cloud (be it music, film, television, photos, personal documents, spreadsheets, and so forth), allow Google to hold it remotely, and access it when needed, provided the user has access to the Internet.¹²⁵

Issues relevant to our discussion of *Aereo* and pertaining to copyright may occur, however, when cloud *storage* devices, such as Google Drive, hold on their servers user-uploaded content—pirated songs, films, and

119. See Michelle Maltais, *Who Needs Cloud Computing?*, L.A. TIMES (Apr. 26, 2012), <http://articles.latimes.com/2012/apr/26/business/la-fi-tn-who-needs-cloud-computing-20120425>.

120. See PETER MELL & TIMOTHY GRANCE, NAT'L INST. OF STANDARDS & TECH., U.S. DEP'T OF COMMERCE, SPECIAL PUB. 800-145, THE NIST DEFINITION OF CLOUD COMPUTING 2 (2011), <http://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-145.pdf> ("Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.").

121. See TJ McCue, *Cloud Computing: United States Businesses Will Spend \$13 Billion on It*, FORBES (Jan. 29, 2014), <http://www.forbes.com/sites/tjmccue/2014/01/29/cloud-computing-united-states-businesses-will-spend-13-billion-on-it> ("Instead of a slow-moving fluffy white cloud image, the cloud computing industry should use a tornado—that might be a better way to visualize how fast cloud computing is growing today.").

122. See *id.*

123. See *id.* (describing "cloud storage as a way to backup and protect . . . data").

124. See *Your Storage Limit*, GOOGLE, <https://support.google.com/drive/answer/6558> (last visited Apr. 3, 2016).

125. See *Get Started with Google Drive*, GOOGLE, <https://support.google.com/drive/answer/2424384> (last visited Apr. 3, 2016).

television shows, for example—for which the uploading user does not hold a license.¹²⁶ It is worthwhile to confine our discussion at this point. There are three main types of consumer cloud services.¹²⁷ One commentator succinctly described them as follows: “[C]loud services, like Google Drive or Dropbox, function [*only*] like storage lockers for files their users have acquired elsewhere. Other cloud services, like Netflix, Amazon Prime and Spotify, obtain and supply content pursuant to licensing arrangements. Still other services, like iTunes, provide licensed content as well as storage.”¹²⁸

Upon even an initial analysis, one can see that to argue that *Aereo* could affect cloud computing as a whole is an exaggerated argument that confuses the technology.¹²⁹ At most, a potential copyright distortion could call infringement analysis into question—but only with respect to the storage services that could potentially host a user’s illegally obtained files, since the other two types of cloud services discussed necessarily license content.¹³⁰ However, the only similarity between those cloud storage-locker services and *Aereo* is that they both provide a mechanism for consumers to remotely store information on the service provider’s equipment and to later access that content. It is the significant differences between *how* the two products operate and serve the consumer that greatly undermine any slippery slope implications stemming from *Aereo*.

B. COMPARING AEREO WITH CLOUD STORAGE LOCKERS

1. Was Justice Scalia Correct in Asserting that *Aereo* Failed to Act with Sufficient Volitional Conduct for Direct Copyright Infringement?

In his dissent, one of Justice Scalia’s main arguments to reject direct liability with respect to *Aereo* is that *Aereo* does not exhibit the volitional

126. See Katyal, *supra* note 22.

127. See *id.*

128. *Id.* Netflix’s and Amazon Prime’s clouds are simply not at issue after *Aereo* because they “play by the rules”—namely, they contract with the copyright owners to distribute the content with permission. *Id.* The same is true for songs purchased via the iTunes Store that are then saved and distributed in the iCloud. See *id.* There, too, the songs were purchased pursuant to a licensing agreement so there is no concern regarding infringement. See *id.* The services that are most in play, or at least most susceptible after the *Aereo* decision, are cloud services that act as remote storage lockers—ones that hold user-uploaded content for which it is impossible (or at least impracticable) for the service provider to determine whether the user that uploaded the file actually owned the license to use it. *But see id.* iTunes is interesting because it offers its customers both a storage locker component and a component tied to its store. See *id.* So, while data purchased from the store would certainly be licensed, data uploaded by the customer for storage may or may not be. See *id.*

129. *Id.*

130. See *id.*

conduct required for direct copyright infringement.¹³¹ As Justice Scalia noted, the majority opinion does not address this point (in fact, it does not specifically reference volitional conduct at all).¹³² Still, I want to merely raise doubts about whether this assertion remains wholly intact given the prior litigation in *Fortnightly* and *Teleprompter*, Congress's response to those decisions, and—most importantly—the current television marketplace. It is certainly true that Aereo's users selected which programs to watch when they logged into the service.¹³³ However, this fact alone may not preclude Aereo from acting with the requisite volitional conduct to “perform.”¹³⁴ Rather, perhaps Aereo (as opposed to the user) performed by specifically selecting which networks' signals to make available to customers in the first place. In other words, Aereo could have potentially exhibited the requisite volitional conduct to “perform” under the Act when it decided to offer certain networks and their programs (the broadcast networks), but not others (the cable networks) because it was choosing which programming the consumers could access.

Even in the *Teleprompter* decision (one that disfavored direct infringement), the Court recognized this logic precisely when it conceded that the CATV systems in question exercised *some* control over content when they selected which signals to redistribute.¹³⁵ Given the rather significant changes in today's television marketplace from the time of *Teleprompter* and *Fortnightly*, such a concession by the Court may have at least some implications for our current discussion. Perhaps these television industry advancements warrant revisiting whether the mere act of selecting which networks' signals to offer is *now* in and of itself sufficient volitional conduct to “perform” within the meaning of the Act. For example, the CATV providers of the past—which existed before the explosion of cable network offerings—had a selection of only a few broadcast signals from

131. See *supra* Part II.D.

132. See generally *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014).

133. *Id.* at 2515 (Scalia, J., dissenting) (“Aereo transmits only specific programs selected by the user, at specific times selected by the user.”).

134. See *id.* at 2501 (majority opinion) (“In . . . cases involving different kinds of service or technology providers, a user's involvement in the operation of the provider's equipment and selection of the content transmitted *may* well bear on whether the provider performs within the meaning of the Act.”) (emphasis added). The majority's use of the word “may” could suggest that a user's involvement in the action is perhaps not the only way to determine whether a service provider performs pursuant to the language of the Act. See *id.*

135. *Teleprompter Corp. v. Columbia Broad. Sys., Inc.*, 415 U.S. 394, 410 (1974) (“Even in exercising its limited freedom to choose among various broadcasting stations, a CATV operator simply cannot be viewed as ‘selecting,’ ‘procuring,’ or ‘propagating’ broadcast signals . . .”).

which to retransmit.¹³⁶ As a result, the *Teleprompter* Court believed that this act alone was insufficient for liability because it was the broadcaster—not the CATV system—that made the creative decisions.¹³⁷ Aereo, like the CATV services, chose to retransmit all of the broadcast signals available,¹³⁸ but because there are dramatically more networks available today than there were during the time of CATV, choosing to make a specific subset of networks available to subscribers just *feels* like a more substantial calculation. Simply put, the vast increase in available television networks between today and *Teleprompter* may suggest that offering some networks but not others could be construed as “volitional” under the present law. Aereo (and not its users) had at least some ultimate choice over content on its service because it did in fact negotiate certain programming beyond the ordinary broadcast television networks.¹³⁹ For example, Aereo negotiated a licensing deal to carry Bloomberg TV.¹⁴⁰ Viewed this way, Aereo begins to look more like a service such as Netflix, one that Justice Scalia himself concluded to exhibit sufficient volitional conduct to “perform” because, factually speaking, both Aereo and Netflix make choices about the content to make available to their customers in the first place.¹⁴¹ If Aereo did exhibit sufficient volitional conduct to “perform” under the Act, then Justice Scalia’s worries about copyright law distortion face a potential problem—the majority would not have ignored the volitional conduct test;

136. See *Fortnightly Corp. v. United Artists Television, Inc.*, 392 U.S. 390, 392 (1968).

137. *Teleprompter*, 415 U.S. at 410 (“When a local broadcasting [network] selects a program to be broadcast at a certain time, it is exercising a creative choice among the many possible programs available . . . from copyright holders of new or rerun motion pictures, or from its own facilities to generate and produce entirely original program material. The alternatives are myriad, and the creative possibilities limited only by scope of imagination and financial considerations. An operator of a CATV system, however, makes a choice as to which broadcast signals to rechannel to its subscribers, and its creative function is then extinguished.”).

138. See *Aereo*, 134 S. Ct. at 2507. See also Hiawatha Bray, *Aereo’s Internet TV Service Is So Good It’s Scary*, BOS. GLOBE (May 30, 2013), <https://www.bostonglobe.com/business/2013/05/29/aereo-internet-service-good-scary/sGECft4KQwmT1Ip4ZVbYxN/story.html>.

139. Spangler, *supra* note 22.

140. *Id.* (“Users [could not] even opt to remove Bloomberg TV or any other channels from the lineup.”).

141. *Aereo*, 134 S. Ct. at 2513 (Scalia, J., dissenting). Justice Scalia argued that Netflix “performs” because it “choose[s] the content” to offer to subscribers. *Id.* In an article for the entertainment trade publication *Variety*, Todd Spangler offers an additional example of Aereo’s volitional conduct that is worth briefly mentioning here. Spangler, *supra* note 22. The company “use[d] geolocation software to block users from accessing the service outside a given designated market area (DMA) for the over-the-air TV stations.” *Id.* While Aereo implemented this feature to prevent users from accessing television that they would not ordinarily be able to access themselves with an antenna (implying that the service was a mere passive one), it is in fact another instance of Aereo’s control over a user’s experience; thus, “Aereo—not users—[was] facilitating the performance of copyrighted TV signals.” *Id.*

instead, its decision would have implicitly relied upon it. Therefore, *Aereo* does not leave a confusing hole in copyright jurisprudence and potential cloud litigation can proceed under the law's tried and true analysis.

2. So Which Position Is Correct? Justice Scalia's or the Majority's? Does It Even Matter for the Cloud?

Let us assume for a moment that Justice Scalia's position is correct—that perhaps the majority reached the correct destination (enjoining Aereo's service) but by using the wrong route (direct infringement versus secondary infringement because the user, not Aereo, "performed"). Will such a possible distortion in *Aereo* affect copyright jurisprudence and its analysis with respect to who "performs" when using the cloud?¹⁴² I argue that it will not because the specific, structural differences in *how* the services operate confine the *Aereo* decision to an ultimately narrow application, leaving no confusion that solely the user performs when he or she operates a cloud-based storage system. Because the "who performs" question is so clear with respect to cloud computing, any potential *Aereo* copyright distortion should still not affect infringement analysis in disputes about the cloud. Even though a court could find that a cloud-computing company is a secondary infringer, *Aereo* should not determine the analysis applied. Instead, well-established law applied in both *Betamax* and *Grokster* should continue to govern.

3. Technological Differences: Why the "Who Performs" Problem in *Aereo* Need Not Affect Cloud Computing

A. Explicit Differences

The key technological difference between Aereo and cloud storage services is the entity that provides the content "*in the first instance*."¹⁴³ Specifically, "Aereo itself supplie[d] the content to users," whereas practical use of a cloud storage system depends entirely on users to supply their own files.¹⁴⁴ As referenced by the Court, the mere fact that a given

142. See *Aereo*, 134 S. Ct. at 2514 (Scalia, J., dissenting). Justice Scalia wrote:

The key point is that [with Aereo] subscribers call all the shots: Aereo's automated system does not relay any program, copyrighted or not, until a subscriber selects the program and tells Aereo to relay it. Aereo's operation of that system is a volitional act and a but-for cause of the resulting performances, but . . . that degree of involvement is not enough for direct liability.

Id.

143. Spangler, *supra* note 22 (quoting Brief for the United States as Amicus Curiae Supporting Petitioners at 31, *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014) (No. 13-461), 2014 WL 828079, at *31).

144. *Id.*

Aereo subscriber's antenna remained "off" until the user called upon it does not change the fact that from the moment an Aereo user actually activated the service (even for the very first time), Aereo began sending a signal to that user, delivering him or her content.¹⁴⁵ In stark contrast, because cloud storage lockers like Google Drive are designed only to hold *user*-uploaded content, when a Google Drive user opens his or her cloud folder for the first time, the drive will be empty because the service depends upon the *user*—not Google—to decide what to place there.¹⁴⁶ Theoretically speaking, if a Google Drive user never chooses to add any content to the drive, his or her cloud locker will remain forever empty.

Put another way, Aereo was always designed to distribute content *it* acquired elsewhere, and a user's enjoyment of the service depended on Aereo actively pushing a signal to that user.¹⁴⁷ The cloud storage devices are designed to store content passively and will not send anything to the user that the user has not already sent to it.¹⁴⁸ Therefore, the fact that in Aereo's case there may have been a certain degree of ambiguity as to which entity controlled the content (creating a unique situation in which it became difficult to determine whether Aereo or its users performed), such ambiguity simply does not exist among cloud storage services and their users. The latter service operates in a clear way such that only the user has control over the content in his or her cloud drive; thus, the analysis with respect to remote storage should remain unaffected after *Aereo*. Even if the majority's opinion is "result-driven" and fails to provide a proper framework for determining what is a cable "look-alike" service that falls afoul of *Aereo*, as Justice Scalia suggested,¹⁴⁹ the vast technological differences between Aereo and cloud storage companies still seem to strongly suggest that the latter just would not fit that bill.

145. See *Aereo*, 134 S. Ct. at 2507 ("Aereo's system remains inert until a subscriber indicates that she wants to watch a program. Only at that moment, in automatic response to the subscriber's request, does Aereo's system activate an antenna and begin to transmit the requested program.").

146. See *Get Started with Google Drive*, *supra* note 125. In this sense, digital storage lockers look no different than their familiar, physical storage unit counterparts. Surely, there is no question that a public storage facility would not be found liable for direct copyright infringement if a customer renting one of its units stored illegally obtained CDs inside one of its repositories. Public storage does not participate in the actual infringement. It merely rents out physical space.

147. See *Aereo*, 134 S. Ct. at 2507; Spangler, *supra* note 22.

148. See Katyal, *supra* note 22 ("[In *Aereo*, the Court] repeatedly mentioned the line between merely passive storage, on the one hand, and active content-distribution services, on the other. Aereo falls in that second category . . ."). See also Spangler, *supra* note 22 ("The Aereo service is custom built to present TV shows and networks in an easy-to-use way Whereas cloud storage services act as repositories for personal files, Aereo itself supplies the content to users.").

149. *Aereo*, 134 S. Ct. at 2516–17 (Scalia, J., dissenting).

B. Implicit Differences

More nuanced, however, is the fact that while Aereo may have designed its entire infrastructure to exploit a potential loophole in the law, remote storage companies do not operate simply to avoid illegality.¹⁵⁰ Beneath the surface of the majority opinion, the *Aereo* Court did not give the service provider the “looks like a cable company” treatment that Justice Scalia suggested.¹⁵¹ I argue that instead, the Court essentially struggled, albeit implicitly, with the notion that Aereo was, in fact, a new kind of cable company—one of the twenty-first century. As such, because it was designed to reappropriate the broadcast networks’ signals and sell them at a profit, it needed a license to do so. Unsurprisingly, the underlying tone of the majority opinion targets Aereo’s use of advancements in technology to conveniently escape paying the well-established retransmission consent fees.¹⁵² Even Aereo itself must have conceded its likeness to a traditional cable provider—at least on some level—since in the months after the Court’s decision, the company launched a campaign urging the Federal Communications Commission (“FCC”) to grant it a license to operate as a cable system.¹⁵³ As a result, I believe that it is this underlying suspicion that led the majority to declare the *Aereo* holding a “limited” one, brushing aside Justice Scalia’s concerns about the emerging growth of technologies because those burgeoning sectors are not designed specifically to avoid retransmission consent.¹⁵⁴ The Court recognized that “Congress, while intending the Transmit Clause to apply broadly to *cable companies and*

150. See Spangler, *supra* note 22.

151. *Aereo*, 134 S. Ct. at 2516 (Scalia, J., dissenting).

152. See Alyssa Rosenberg, *How the Television Industry Should Respond to the Aereo Ruling*, WASH. POST (June 25, 2014), <http://www.washingtonpost.com/news/act-four/wp/2014/06/25/how-the-television-industry-should-respond-to-the-aereo-ruling> (“But that cable companies are hugely frustrating does not mean that Aereo was not a workaround, or a cable-like attempt to profit off content that is supposed to be available for free.”). Chief Justice Roberts zeroes in on this important nuance when he says, “[Aereo’s] technological model is based solely on circumventing prohibitions that [they] don’t want to comply with . . .” *Id.* See also Adam Liptak, *Justices Skeptical of Aereo’s Business*, N.Y. TIMES (Apr. 22, 2014), <http://www.nytimes.com/2014/04/23/business/media/supreme-court-hears-arguments-in-aereo-case.html> (“Judge Denny Chin [of the U.S. Court of Appeals for the Second Circuit] wrote that the service was ‘a Rube Goldberg-like contrivance, over-engineered in an effort to avoid the reach of the Copyright Act and to take advantage of a perceived loophole in the law.’”).

153. Fung, *supra* note 37 (“By accepting the label of [cable company], Aereo would also need to start negotiating with broadcasters over content, or ‘retransmission’ fees — which is precisely what Aereo’s original business model was designed to avoid.”). See also Alex Barinka, *Aereo Asks FCC to Change Definition of Video Distributor*, BLOOMBERG (Oct. 13, 2014), <http://www.bloomberg.com/news/articles/2014-10-13/aereo-asks-fcc-to-change-definition-of-video-distributor> (discussing the fact that Aereo’s CEO met with FCC Chairman Tom Wheeler after the company had said it “was unlikely to survive unless it’s allowed to operate like a cable-TV service and resume operations”).

154. See *Aereo*, 134 S. Ct. at 2510.

their equivalents, did not intend to discourage or to control the emergence or use of different kinds of technologies.”¹⁵⁵ On the contrary, much of the cloud-computing industry, most notably services such as Amazon Prime and iTunes, succeed by obtaining licenses in the first place.¹⁵⁶ As I noted above, there is nothing to suggest that cloud-computing technology operates in any way similar to a traditional cable operator.

4. Without a “Performance,” There Is No Need to Analyze the “Public” Prong

If it is true that the service operator in the case of cloud computing is not “performing” under the Copyright Act—regardless of whether the *Aereo* opinion distorts copyright law—then the question of whether the “performance” is a “public” one no longer comes to bear.

CONCLUSION

Regardless of whether the *Aereo* majority or Justice Scalia in his dissent has the more compelling argument, the *Aereo* decision should neither stand in the way of future innovation, nor question the analysis afforded to copyright infringement claims of the present infrastructure with respect to cloud computing. Instead, well-established principles, such as the ones set forth in *Grokster* and *Betamax*, should continue to govern any such claims. To start, I question Justice Scalia’s claim that the majority distorts copyright jurisprudence by ignoring the “volitional conduct” requirement for direct infringement. Instead, I contend that perhaps *Aereo*’s volitional conduct was implicit in the majority’s analysis of the unique set of facts that *Aereo* presented. Yet, even accepting Justice Scalia’s argument as true, the *Aereo* decision still does not threaten the cloud because the technologies are fundamentally different. First, it is probable that while *Aereo*’s model took advantage of a potential loophole in copyright law to function without having to pay the broadcasters’ retransmission fees, the cloud-computing industry is, in contrast, full of instances of successful licensing schemes. Only remote storage lockers, the subsection of the cloud industry where the service provider cannot practicably determine if the files uploaded are licensed, would be susceptible to a potential *Aereo* distortion of copyright law. However, the significant structural differences between the infrastructure of cloud-based storage devices and *Aereo* make the

155. *Id.* (emphasis added) (“*Aereo* and many of its supporting *amici* argue that to apply the Transmit Clause to *Aereo*’s conduct will impose copyright liability on other technologies, including new technologies, that Congress *could not possibly have wanted to reach.*”) (emphasis added).

156. Katyal, *supra* note 22.

reasoning used in *Aereo* inappropriate with respect to remote storage. Specifically, the user provides the cloud with all content in the first instance with cloud-based storage systems. On the other hand, Aereo provided its users with all content in the first instance (even though the service remained passive when not called upon). Where there was ambiguity as to “who performs” pursuant to the Transmit Clause in *Aereo*, with respect to cloud storage, only the user controls content. The cloud provider has no participation in what the user uploads. Thus, there is no ambiguity that only the user performs, and as a result, Justice Scalia’s worry that the majority’s “look-alike” doctrine would confuse copyright analysis seems overly cautious. Instead, I believe that the majority’s assertion that *Aereo*’s holding will be a narrow one is correct. The opinion was, on some level, the Court’s way to prevent the company from escaping the well-established retransmission fees that cable broadcasters have come to expect when others redistribute their content.

Ironically, if anything, *Aereo* may spur future innovation, not arrest it. By enjoining the service from operating without retransmission consent, Aereo was faced with a decision—close its doors or seek a cable operating license. As discussed above, Aereo chose the latter. While it was unsuccessful in this pursuit, perhaps the company’s brief existence signals the next wave of television that will some day operate exclusively online, increasing competition among the traditional cable providers and pushing a new distribution model into the next century.