

NETFLIX KILLED THE CABLE TV STAR: Cable TV is Definitionally Disadvantaged for Use of Artificial Intelligence

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I. INTRODUCTION

It is a Friday night and you were stuck late at the office yet again, meaning that you had to race through the streets of Washington and the crowds on the Metro to make it home in time for the season finale of your favorite TV show. However, you got home ten minutes after the episode began, and you had no idea what was going on. Now, imagine if your TV knew that your boss keeps you late most Fridays and that the Metro tends to not run on time, resulting in your getting home just after the beginning of the episode of your favorite show on Friday nights. What about if your TV allowed you to time-shift the beginning of the episode to the time when you got home and settled in for a Friday night on the couch? Would this satisfactorily draw your attention away from Netflix shows you've seen ten times before?

While your TV is unlikely to know the reasons *why* you turn your TV on at a certain time, the cable TV industry has considered time-shifting as an option for TV consumers based on the mass amount of data each household produces daily that can be computed to take on a form of intelligent information.¹ Artificial Intelligence (“AI”) is likely to become increasingly present in the entertainment and technology industries.

It is worthwhile for the cable TV industry to begin investing in and expanding the use of AI in the face of decreased advertising revenue and increased costs passed on to consumers, especially due to competitors such as Netflix or Hulu. The use of AI requires the use of personally identifiable information (“PII”), which is regulated more strictly for cable TV as compared to its streaming-based competitors, which are regulated under the Video Privacy Protection Act (“VPPA”).² This disparity poses a threat to the quality and cost of cable TV service, and thus, ultimately, the survival of cable TV in the future of the entertainment industry.

To ensure that cable TV remains competitive, the courts and Congress have various options. The courts could interpret the definitions of PII under the VPPA in a stricter manner on par with the interpretation of PII in the cable TV realm. Because the definition of PII for cable TV is more restrictive, as it includes more data than its counterpart under the VPPA, a solution would be to change the VPPA definition of PII to be as restrictive as that for cable TV.³ The courts could also read the definition in a liberal manner for cable TV PII, so it would be interpreted in the same way as PII under the VPPA has been. This solution would shift the cable TV definition to the less restrictive VPPA definition.⁴ Legislative options include Congress re-defining PII in a way either more in line with PII under the VPPA or more in line with PII for cable TV. Ultimately, either the courts or Congress should utilize their roles to put

1. Diogo Gonçalves et al., *A Flexible Recommendation System for Cable TV*, 3 (2016) (explaining that “catch-up TV” allows users to time-shift previously broadcast programs so that consumers can watch them at a later date).

2. 18 U.S.C. § 2710.

3. *Compare* 47 U.S.C. § 551(b), *with* 18 U.S.C. § 2710(a)(3).

4. *Id.*

platforms regulated under the VPPA and cable TV on equal footing when it comes to PII, as this is essential to the integration and use of AI.

This Note will address the innovation of use of AI in the entertainment industry to fuel the use of consumer data to customize advertising, content, and timing of viewership. Section II discusses the new reality facing the cable TV industry as well as how and why AI and PII are essential to the industry remaining competitive. Section II outlines the ways in which the cable TV industry could utilize AI and PII to provide better services and content to consumers. Section III explains how the use of AI plays out differently for cable TV as compared to other entertainment sources because the use of PII is treated differently in definition and in disclosure requirements. Section III.A establishes why this dichotomy is important.

Section III.B proposes four solutions to this problem, which would ensure that the cable TV industry would not be at a disadvantage when it comes to AI advancements. Some options better protect consumer privacy and others better allow for competition and thus lower prices and better innovation in the entertainment industry. Ultimately, to ensure a competitive entertainment market in terms of cost and content, the cable TV industry and those regulated under the VPPA must be regulated in the same manner. Without a level playing field, there is a risk that cable TV will be unable to innovate and compete with other entertainment options, such as streaming and other online services, ultimately resulting in reduced competition, lower quality content, and higher prices for consumers.

II. A NEW REALITY FOR CABLE TV: HURTING ADVERTISERS AND HURTING VIEWERS

Cable TV is facing a new reality in the face of strong competitors such as Netflix and Hulu. This Section will discuss the current competitive environment that cable TV faces. One key to success for cable TV in this new competitive market will be effectively using consumer data and the PII of viewers to effectively advertise and develop new business models. This is important to the cable TV industry as it navigates the changing entertainment industry. It is no secret that the cable TV industry is competing for viewers and thus for income from advertising.⁵ Current options for TV viewing include traditional cable TV services such as Comcast and DirecTV and streaming services such as Netflix and Hulu.⁶ Cable TV is also facing competition from new forms of media that keep consumers entertained such

5. See Derek Thompson, *TV's Ad Apocalypse Is Getting Closer*, THE ATLANTIC (Aug. 10, 2017), <https://www.theatlantic.com/business/archive/2017/08/tvs-ad-apocalypse-is-coming/536394/> [perma.cc/7CFS-QKTA]; Gerry Smith & Lucas Shaw, *Fed-Up Advertisers Stop Paying More for Smaller TV Audiences*, BLOOMBERG (May 5, 2017, 12:46 PM), <https://www.bloomberg.com/news/articles/2017-05-05/fed-up-advertisers-stop-paying-more-for-declining-tv-audiences> [https://perma.cc/T59V-RYT2]; *Cutting the cord – The future of television*, THE ECONOMIST (July 16, 2016), <https://www.economist.com/news/business/21702177-television-last-having-its-digital-revolution-moment-cutting-cord> [perma.cc/C5LY-VKEK] [hereinafter *Cutting the cord*].

6. Thompson, *supra* note 5.

as social media.⁷ On Netflix, “the number of hours of video entertainment consumed has grown by about 700%” between 2010 and 2016, particularly for young adults.⁸

About six in 10 young adults primarily use streaming services to watch TV.⁹ For viewers ages 18–29 years old, 61% watch TV through online streaming services, compared with 31% of that same age group watching via cable or satellite subscription.¹⁰ Compare this to the percentages for all adults in the U.S. in which 28% of adults watch TV primarily via online streaming services and 59% watch via traditional cable or satellite subscriptions.¹¹ TV ratings for viewers of all ages dropped 33% between 2013 and 2017, while TV ad prices increased 20% in that time.¹² In recent years, there has been a common trend of ad buyers shifting their TV ad budgets to the Internet.¹³ For example, in 2016, one ad-buying agency announced it would move \$250 million of its clients’ TV budgets to YouTube.¹⁴

Not only has the cost of cable TV ads risen in recent years; the cost of cable TV for consumers continues to rise every year.¹⁵ So far, the use of streaming services has acted as a supplemental way to watch TV, rather than completely replacing cable TV with a streaming service.¹⁶ However, this means that Americans are paying more than ever for TV, and this is unlikely to last much longer.¹⁷ The average cost of cable TV rose to \$103.10 per month in 2016.¹⁸ From 2011 to 2015, cable TV subscription rates rose 39%; this is about eight times the rate of inflation.¹⁹ Compare this with the prices for Netflix, which rose in 2017 to \$10.99 a month for the standard plan and \$13.99 a month for the premium plan.²⁰ Therefore, the standard Netflix subscription costs roughly 9% of the monthly cable TV subscription and only about \$29 more for a whole year’s worth of Netflix compared with one month of cable TV.

In addition to the increased cost consumers are paying for TV each month, consumers are also becoming less loyal.²¹ Two factors have substantially contributed to the increased numbers of “cord cutters,” or

7. *Id.*

8. *Id.*

9. Lee Rainie, *About 6 in 10 young adults in the U.S. primarily use online streaming to watch TV*, PEW RES. CTR. (Sept. 13, 2017), <http://www.pewresearch.org/fact-tank/2017/09/13/about-6-in-10-young-adults-in-u-s-primarily-use-online-streaming-to-watch-tv/> [<https://perma.cc/XGP8-92LZ>].

10. *Id.*

11. *Id.*

12. Smith & Shaw, *supra* note 5.

13. *Id.*

14. *Id.*

15. *Cutting the cord*, *supra* note 5.

16. *Id.*

17. *Id.*

18. Aaron Pressman, *The Average Cable TV Bill Has Hit a New All-Time Record*, FORTUNE (Sept. 23, 2016), <http://fortune.com/2016/09/23/average-cable-tv-bill/> [<https://perma.cc/2HSC-7GYV>].

19. *Id.*

20. Don Reisinger, *Netflix Raises Its Subscription Prices*, FORTUNE (Oct. 5, 2017), <http://fortune.com/2017/10/05/netflix-plan-prices-increase/> [<https://perma.cc/CVR8-KQCG>].

21. *Cutting the cord*, *supra* note 5.

consumers who are opting to get rid of cable TV—the increased cost of cable TV and the alternate options available in streaming services and other entertainment platforms.²² These trends seem to be increasing over time—in 2013 and 2014, about 500,000 of 101 million subscribers were lost; however, in 2015, “traditional pay TV suddenly lost 1.1 m[illion] subscribers.”²³

Cable TV needs to find a way to compete with the Internet, technology companies, and social media. The first major challenge is that consumers are limited to the subscription they purchase.²⁴ This means there is no information about a specific consumer’s household preferences with regard to content that is not in the households’ chosen subscription package.²⁵ Cable TV providers and advertisers may assume that when a consumer does not subscribe to a channel, they are indicating that they do not like that content.²⁶ However, this is related to the second major challenge, that bundle packages offered by cable providers are inherently constrained.²⁷ In choosing a cable TV package, consumers are forced to choose a package that has the most channels they like.²⁸ However, this also means packages often contain channels that the consumer does not like.²⁹ The inverse is likely to be true as well; if consumers like a channel but the bundle they are willing to pay for or that best suits their consumer needs does not include a channel they like, there is no data showing consumer support.³⁰ Thus, cable TV is hurting for customers as well as revenue from advertising, the cost of which has been increasing over time.³¹

A. Personally Identifiable Information is Essential to the Use of Consumer Data and Thus the Ability to Be Competitive in the Entertainment Industry

Currently, cable TV advertising is affected by the difficulty in “targeting ads effectively” and “deliver[ing] ads that engage consumers and convey to them the experience of a product or service.”³² 21st Century businesses have increased competition like never before and must distinguish themselves from the vast variety of other options that consumers are now privy to with the advent of the Internet.³³ Consumer Relationship

22. *Id.*

23. *Id.*

24. Bing Tian, *How Can Consumer Preferences Be Leveraged for Targeted Upselling In Cable TV Services?* Singapore Management University 4–5 (2014).

25. *Id.*

26. *Id.*

27. *Id.*

28. *Id.*

29. *Id.*

30. *Id.*

31. Smith & Shaw, *supra* note 5.

32. Matt Fay, *Artificial Intelligence Addresses Ineffective Ad Targeting and Engagement*, BROADCASTING CABLE (Aug. 1, 2017, 10:30 AM), <http://www.broadcastingcable.com/blog/bc-guest-blogs/artificial-intelligence-addresses-ineffective-ad-targeting-and-engagement/167586> [<https://perma.cc/X33F-JTGJ>].

33. Chris Rygielski et al., *Data mining techniques for customer relationship management*, 24 TECH. IN SOCIETY 484 (2002).

Management (“CRM”) has been more and more valuable to nearly every industry.³⁴ CRM requires four elements: “Know, Target, Sell, Service.”³⁵ These elements are then used to effectively master real-time consumer management and remain valuable to the consumer.³⁶ To remain competitive in the present-day marketplace, cable TV must target advertisements across the entire consumer experience, in real-time and to a specified degree for each consumer household.³⁷

An effective way to do this is through “systems that can interact precisely and consistently with customers.”³⁸ A basic requirement for user-specific or targeted marketing is customer demographics and behavior data.³⁹ This consumer information can be obtained in two different ways: explicit and implicit techniques.⁴⁰ Explicit techniques require users to take initiative to explicitly identify their interests.⁴¹ Implicit techniques look to the viewing history and data that users have created.⁴² Explicit techniques place the burden on the consumer to make their preferences known, and this method is relatively static.⁴³ While implicit techniques require the use of data mining to obtain consumer data, which may be complex, time-consuming, and expensive, this data will evolve over time along with the consumers’ tastes and habits.⁴⁴ Studies have identified that the combination of implicit and explicit methods produce the best results in terms of targeted marketing reaching the best demographics.⁴⁵

Explicit techniques are more like traditional marketing methods, utilized to determine what questions to ask and how to use that information to establish demographics and make good personalized representations.⁴⁶ A Harvard Business Review article evaluated how to understand what customers value.⁴⁷ The authors saw “a market offering as having two elemental characteristics: its value and its price.”⁴⁸ One method of assessing value that the article discusses is using customer focus groups.⁴⁹ The authors explain that “gathering data firsthand whenever possible . . . is the most common way to build customer value models” and “the only way to obtain information for a value model is to rely on customer perceptions.”⁵⁰ Focus group studies by definition require studying a response from a small group of

34. *Id.*

35. *Id.* at 491.

36. *Id.* at 492.

37. *Id.* at 483.

38. *Id.* at 484.

39. *Id.*

40. See Kaushal Kurapati et al., *A Multi-Agent TV Recommender* 7 (2001).

41. See *id.* at 7.

42. See *id.* at 2.

43. See *id.* at 4.

44. See *id.*

45. See *id.* at 7.

46. See *id.* at 4.

47. James C. Anderson & James A. Narus, *Business Marketing: Understand What Customers Value*, 76 HARV. BUS. REV. 6 (1998), <https://hbr.org/1998/11/business-marketing-understand-what-customers-value> [<https://perma.cc/6NC8-5AN7>].

48. *Id.*

49. *Id.*

50. *Id.*

people and a using that response to determine what response can be expected of the larger population.⁵¹ In terms of explicit techniques employed in the context of individual cable TV consumers, the determination would be geared toward the responses to similar content for that consumer or consumer household.⁵²

On the other hand, the value of implicit techniques rests with the quantity and quality of data utilized in targeted ads to cable TV consumers.⁵³ This is best done through data mining, which is a method that utilizes “statistical algorithms to discover patterns and correlations in data.”⁵⁴ Data mining is used in a variety of contexts and for a variety of purposes, which fall into three general categories: discovery, predictive modeling, and forensic analysis.⁵⁵ The two categories that are relevant to targeting advertising for cable TV are discovery and predictive modeling. Discovery concerns conditional logic, affinities and associations, and trends and variations.⁵⁶ Predictive modeling deals with outcome prediction and forecasting.⁵⁷ These pattern and relationship evaluation tools are used to turn data into useful information that can be used to target cable TV consumers in a better and more personalized way.⁵⁸

Cable TV, in order to remain competitive for coveted advertising revenue, has turned to artificial intelligence (“AI”).⁵⁹ Artificial intelligence is being used by the cable TV industry to “better understand the consumer, enhance user advertising experiences, extend the reach and effectiveness of ads . . . generate more advertising revenues,” and ultimately provide a better and more competitive service for consumers.⁶⁰

B. Artificial Intelligence Is Important to the Entertainment Industry in Order to Make Meaningful Use of PII to Enhance Consumer Experience

What exactly is AI? Matthew Scherer explained, in the *Harvard Journal of Law & Technology*, that there is not yet a widely accepted definition of AI, even among experts in the field.⁶¹ There are many definitions for AI, most of which use terms such as “consciousness, self-awareness, language use, the ability to learn, the ability to abstract, the ability to adapt, and the ability to reason.”⁶² AI gets its power and application from the evolution of technology, and as a result, computers are now able to perform

51. *Definition of Focus Group*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/focus%20group> [<https://perma.cc/D6KP-96YM>].

52. Kurapati et al., *supra* note 40.

53. *Id.* at 5–6.

54. Rygielski et al., *supra* note 33, at 485.

55. *Id.* at 487–88.

56. *Id.* at 487.

57. *Id.*

58. *Id.* at 484.

59. Fay, *supra* note 32.

60. *Id.*

61. Matthew U. Scherer, *Regulating artificial intelligence systems: risks, challenges, competencies and strategies*, 29 HAR. J.L. & TECH. 359 (2016).

62. *Id.* at 360.

tasks that previously were considered “indelible hallmarks of intelligence.”⁶³ *The New York Times* describes AI as taking vast amounts of information and using that information to make a decision regarding a specialized goal.⁶⁴

AI involves a variety of things, each not always necessary to the use of AI in every industry or for every purpose. However, most industries and experts consider machine learning (“ML”) to be an essential part of AI.⁶⁵ Machine learning is used as part of the analysis and synthesis of big data collection and can improve over time to increase the efficiency of big data analysis.⁶⁶ Presently, other industries have gathered mass amounts of data and have used this information to determine various characteristics associated with customers.⁶⁷ The telecommunications and Internet industries routinely use consumer data to analyze a consumer’s “attributes, terminals, call behavior, order, location, Internet behavior, social and other full-dimensional data . . . with authenticity, integrity, real-time advantage.”⁶⁸ Other technology companies have already committed to integrating AI into their business models.⁶⁹ For example, Microsoft is embedding AI into almost every new product or service as well as using AI as the foundation for its internal applications.⁷⁰ Cable TV, on the other hand, has gradually collected consumers’ data; however, this clearly lacks the real-time advantage and efficient processing that would be associated with an industry that has embraced AI.⁷¹ The cable industry has just begun to seriously consider utilizing AI, and once the industry collectively embraces AI as a business model, they will have to fight to gain and retain employees able to advance AI from technology-focused competitors such as Google, Amazon, Facebook, and streaming services such as Netflix and Hulu.⁷² As a CNBC columnist explained, “[t]o use [a] baseball analogy, it’s like steroids—once somebody

63. *Id.*

64. See Kai-Fu Lee, *The Real Threat of Artificial Intelligence*, N.Y. TIMES (June 24, 2017), <https://www.nytimes.com/2017/06/24/opinion/sunday/artificial-intelligence-economic-inequality.html> [<https://perma.cc/CLH3-EPXC>].

65. See *id.*; see also Rygielski et al., *supra* note 33, at 487.

66. Junjie Huang et al., *The Reply and Development Strategy of Cable TV industry in the era of big data*, 16TH INT’L CONFERENCE, IEEE COMPUT. SOC’Y 563 (2017).

67. Rygielski et al., *supra* note 33.

68. *Id.* at 564.

69. Lee, *supra* note 64.

70. *Id.*; see also Frederic Lardinios, *Microsoft launches new AI applications for customer service and sales*, TECH CRUNCH (Sept. 9, 2018), <https://techcrunch.com/2018/09/18/microsoft-launches-new-ai-applications-for-customer-service-and-sales/> [<https://perma.cc/JEP5-9GM5>]; Jordan Novet, *Microsoft is building out AI, but here’s what it thinks could go wrong*, CNBC (Aug. 3, 2018 4:28 PM), <https://www.cnbc.com/2018/08/03/microsoft-warns-about-risks-related-to-ai-web-connected-devices.html> [<https://perma.cc/2ATX-WNP8>].

71. Huang et al., *supra* note 66, at 564.

72. See Jeff Baumgartner & Leslie Ellis, *A Look Ahead in Cable Tech*, BROADCASTING CABLE (Oct. 16, 2017, 8:05 AM), <http://www.broadcastingcable.com/look-ahead-cable-tech/169353> [<https://perma.cc/QE8S-LGLC>].

starts juicing, anyone who wants to remain competitive has to jump on the bandwagon . . . [AI] is like steroids for your business.”⁷³

1. Programmatic Advertising Will Enhance Targeted Advertising and Improve Consumer Experience Because It Allows for Advertising Companies to Utilize Specific Consumer Data to Provide Relevant Content

When and if the cable TV industry fully embraces AI and retains the requisite technological experts savvy enough to ensure the industry remains competitive, cable TV has various options for the use of AI. AI can be used to bridge the gap in content discovery and aid content marketers.⁷⁴ AI and ML are used in the context of marketing from the beginning of content creation in order to increase the chances of the content being discovered by the targeted audience.⁷⁵ This technology is also used to target the advertisements in real-time and with a more precise customization, effectively removing the guesswork.⁷⁶ Lastly, this technology will keep marketers up to date on changes in the relevant industry.⁷⁷ The form of these benefits would result in programmatic TV advertising.⁷⁸ AI can allow for advertisers to better target advertising to consumers at a whole new level of personalization, based on AI systems that use data to make decisions about when to purchase ads, at what times, for how much, and for which audience in real time.⁷⁹ Programmatic ads rely on big data and the habits that a TV learns about the consumer household.⁸⁰ The result of programmatic ads is that consumers will see fewer repetitive ads that they do not care about and will have unique advertising experiences.⁸¹ One consumer compared with their neighbor watching the same TV show will be shown different advertisements.⁸² Programmatic ads provide ad companies with better statistics regarding the

73. See Elizabeth Gurdus, *Cramer Remix: Forget millennial cord-cutters, this entertainment stock wins long term*, CNBC (Sept. 29, 2017, 7:00 AM), <https://www.cnbc.com/2017/09/29/cramer-remix-forget-cord-cutters-this-stock-wins-long-term.html> [<https://perma.cc/VAM3-3J6T>].

74. See Abbi Whitaker, *Artificial Intelligence Makes For Savvy Content Marketers*, FORBES (Oct. 6, 2017, 9:00 AM), <https://www.forbes.com/sites/forbesagencycouncil/2017/10/06/artificial-intelligence-makes-for-savvy-content-marketers/#6712105777d8> [<https://perma.cc/6FJX-CDWT>].

75. See *id.*

76. Rygielski et al., *supra* note 33, at 486.

77. See *id.*

78. See Allie Shaw, *AI could save television advertising with advanced personalization*, VENTURE BEAT (Oct. 28, 2017, 4:41 PM), <https://venturebeat.com/2017/10/28/ai-could-save-television-advertising-with-advanced-personalization/> [<https://perma.cc/L3PS-EJA8>] (stating that programmatic TV advertising “draw[s] from data pools to make decisions about where and when to buy or sell ad space according to demographic and cost-versus-benefit information”).

79. See *id.*

80. See *id.*

81. See *id.*

82. See *id.*

effectiveness of their advertisements and who a specific ad reaches, making the investment in programmatic ads two-fold.⁸³

2. Dynamic Channels and Personal Video Recorders Are Methods of Enhanced Customizable Advertising and Thus Able to Create a Better Consumer Product

Another likely use of AI in the cable TV industry is to establish dynamic channels. Dynamic channels are available through cable TV providers and allow for “a new [cable] content category that offers a personal user experience blending the convenience of linear viewing with the flexibility of on-demand programming.”⁸⁴ For example, this concept is embraced by zone-tv, which offers 14 dynamic channels that utilize AI to “consumer-control” the programming.⁸⁵ Zone-tv uses AI not only for channel programming but also for suggesting additional shows a consumer is likely to enjoy and making them easier to find.⁸⁶ Other ideas involve more modest programs that use AI to better generate recommendations for TV viewers, to keep them watching cable TV and enjoying the experience.⁸⁷

Cable TV may also embrace personal video recorders (“PVRs”) that record thousands of shows each week.⁸⁸ “PVRs are tapeless, hard disk equipped devices that let TV viewers record shows via an attractive screen based user-interface . . . put[ting] users in control.”⁸⁹ PVRs help to allow consumers to always have something “good” to watch and thus not be tempted to switch over to their preferred streaming service.⁹⁰ For these systems to be successful, they require sophisticated recommender systems that track and recognize the preferences of the consumer household.⁹¹ The recommender systems are largely dependent on AI and ML to provide the best options for each consumer.⁹² It appears clear that members of the cable industry have identified the need for innovation and the potential that introducing new technology into their business models will help them remain competitive in the present entertainment era. However, the cable industry is not only at a disadvantage in being behind telecommunications and Internet companies in gathering, analyzing, and using big data, they are also regulated differently

83. *See id.*; *see also* Tian, *supra* note 24, at 3.

84. *See* Jeff Weber, *Why Dynamic Channels Will Be Transformative to TV As We Know It*, MULTICHANNEL NEWS (Oct. 17, 2017), <http://www.multichannel.com/news/newbay-plus/why-dynamic-channels-will-be-transformative-tv-we-know-it/415989> [<https://perma.cc/8Q4E-TEH2>].

85. *See generally*, zone.tv, <https://zone.tv/channels> [<https://perma.cc/285C-U2M3>].

86. *See* Weber, *supra* note 84.

87. *See* Kurapati et al., *supra* note 40, at 2.

88. *See id.* at 1.

89. *See id.*

90. *See id.*

91. *See id.*

92. *See id.* at 2.

and thus constrained by various statutory provisions that do not apply to their tech counterparts.

C. Personally Identifiable Information Is Essential to the Use of Programs That Provide Consumers With the Content They Want and Advertisements That Suit Them

The use of AI is essential to the use of programmatic advertising, dynamic channels, and personal video recorders.⁹³ By their nature, the use of these methods to better reach consumers with targeted advertising requires information unique to the consumer or consumer household.⁹⁴ This information is also known as personally identifiable information (“PII”). However, PII is defined differently for the statutory provisions governing cable TV and those governing streaming services.⁹⁵

For the abovementioned methods to work for the cable TV industry, the relevant statutes must allow for access to the consumer data required for various AI-oriented programs to work.⁹⁶ There is a compelling policy argument toward protecting consumer data; however, this argument falls short when there are fewer protections afforded the consumer in other areas of entertainment.⁹⁷ There is an equally important policy interest in preventing a monopoly that could be the outcome of the death of Cable TV, which could lead to the dominance of streaming services as the singular way to watch TV. Cable TV is a staple in American entertainment and is important to a diverse entertainment market to keep consumer costs low, as costs generally rise when an industry gains monopoly power; therefore it is likely that streaming services would raise prices in the event they became the sole resource for consumers to watch TV.

Cable TV is regulated by 47 U.S.C.A. § 551, which requires consumer consent prior to the use of PII.⁹⁸ Under § 551, the collection of personally identifiable information using a cable system is regulated as the following:

93. See Shaw, *supra* note 78; see also Tian, *supra* note 24; See Weber, *supra* note 84; See Kurapati et al., *supra* note 40, at 2.

94. Kurapati et al., *supra* 40, at 2.

95. Cf. 47 U.S.C. § 551 (limits the collection of PII to information necessary to render a cable service or other service provided by the cable operator to the subscriber or to detect unauthorized reception of cable communication); 18 U.S.C. § 2710(a)(3) (defining PII as information which identifies a person as having requested or obtained specific video materials or services from a video tape service provider).

96. Rygielski et al., *supra* note 33; Kurapati et. al, *supra* note 40.

97. See 18 U.S.C. § 2710(a)(3).

98. 47 U.S.C. § 551(b).

Cable operator[s] shall not use the cable system to collect personally identifiable information concerning any subscriber without the prior written or electronic consent of the subscriber concerned . . . A cable operator may use the cable system to collect such information in order to . . . obtain information necessary to render a cable service or other service provided by the cable operator to the subscriber; or . . . detect unauthorized reception of cable communications.⁹⁹

Section 551(a)(2)(A) defines the PII as not including any record of aggregate data that does not identify particular persons.¹⁰⁰ Information that is not identifiable as having been created by a particular person, or likely a household of persons, is thus not regulated under § 551(a)(2)(A).¹⁰¹ Information has been considered personally identifiable when the information contains the customer's "name, address[,] or any information regarding the customer."¹⁰² Courts consider when the information is necessary to perform essential functions, for example if it would be necessary to connect a converter box's unit address with a specific subscriber.¹⁰³ Using information such as private programming selections, credit card information, social security numbers, and driver's license numbers is considered PII.¹⁰⁴

However, other video content such as the content provided by streaming services' use of PII is regulated under the Video Privacy Protection Act ("VPPA"), 18 U.S.C. § 2710(a)(3). This subsection defines PII as "information which identifies a person as having requested or obtained specific video materials or services from a video tape service provider."¹⁰⁵ Although originally written to regulate brick-and-mortar video rental stores like Blockbuster, the VPPA also applies to streaming services like Hulu or Netflix.¹⁰⁶ This significant difference in definition has led to different outcomes in the regulation of cable TV and streaming services with regard to PII. PII in the VPPA context has been found not to apply to search engines using "encrypted serial number of digital media-streaming device and consumer's viewing history, disclosed by entertainment company to third party."¹⁰⁷

For example, the Cartoon Network app that accesses a complete record of the user's video history along with the user's Android ID, which is transmitted to a third party called Bango, was found not to constitute PII.¹⁰⁸ The court held, "where a plaintiff does not allege the disclosure of [PII] to a

99. *Id.*

100. *Id.* § 551(a)(2)(A).

101. *Id.*

102. *Pruitt v. Comcast Cable Holdings, LLC*, 100 F. App'x 713, 716 (10th Cir. 2004).

103. *Id.* at 717.

104. *Parker v. Time Warner Entm't. Co.*, No. 98 CV 4265 (ERK), (E.D.N.Y. Nov. 8, 1999).

105. 18 U.S.C. § 2710(a)(3).

106. *See generally*, *In re Hulu Privacy Litig.*, No. C 11-03764 LB, (N.D. Cal. Apr. 28, 2014).

107. *Robinson v. Disney Online*, 152 F. Supp. 3d 176, 176 (S.D.N.Y. 2015).

108. *Ellis v. Cartoon Network, Inc.*, No. 1:14-CV-484-TWT, (N.D. Ga. Oct. 8, 2014), *aff'd on other grounds*, 803 F.3d 1251 (11th Cir. 2015), at 2.

third party, that plaintiff's claim must be dismissed."¹⁰⁹ Finding PII under the VPPA seems to be difficult to do, especially due to the requirement of naming the third party to whom the possible PII was disclosed.

1. Disclosure Requirements for Personally Identifiable Information Pose More Restrictive Regulations on the Cable TV Industry Than on Those Regulated Under the VPPA

The restrictions on disclosure of PII differ for cable TV and services regulated under the VPPA, resulting in different opportunities for video service providers as compared with cable TV in utilizing PII. The regulation of Cable TV under § 551 provides for the disclosure of PII only with the customer's consent.¹¹⁰ 47 U.S.C.A. § 551(c)(1) states that "a cable operator shall not disclose personally identifiable information concerning any subscriber without the prior written or electronic consent of the subscriber concerned . . ." ¹¹¹ Disclosure is, however, allowed under § 551 if the disclosure is necessary to render a legitimate business activity related to cable service.¹¹² The cable TV industry has not tried to argue for this exception to the prohibition on disclosure of PII in order to utilize AI, and thus the industry has been limited in its use of PII.

The VPPA provision for disclosing PII provides "[a] video tape service provider who knowingly discloses, to any person, [PII] concerning any consumer of such provider shall be liable to the aggrieved person . . ." ¹¹³ The United States District Court for the Southern District of New York has found the "most natural reading" of this subsection to suggest that information actually disclosed by a video tape service provider "must itself do the identifying that is relevant for purposes of the VPPA (literally, 'information which identifies')—not information disclosed by a provider, *plus* information collected elsewhere by non-defendant third parties."¹¹⁴

This means that as long as the information collected by the provider does not clearly identify the person or is coupled with information collected by a third party, the disclosure of that information is not in violation of the VPPA. This essentially puts PII for streaming services under § 2710 and cable TV services under § 551 in roughly the same place.¹¹⁵ The difference lies in the definition of PII, and courts have been reluctant to find information to qualify as PII for the purposes of the VPPA, under which streaming services are regulated.¹¹⁶

109. *Id.*

110. 47 U.S.C. § 551(c)(1).

111. *Id.*

112. *Id.* § 551(c)(2)(A).

113. 18 U.S.C. § 2710(b)(1).

114. *Robinson v. Disney Online*, 152 F. Supp. 3d 176, 182 (S.D.N.Y. 2015) (emphasis added).

115. *Id.*

116. *See* 47 U.S.C. § 551(b) *compared with* 18 U.S.C. § 2710(a)(3).

2. Policy Implications for Consumer Protection and Competitive Entertainment Industry Play a Role in Defining PII Regulations

PII is treated differently for streaming services and other video service providers compared with cable TV services. The relevant statute, 47 U.S.C. § 551, fails to completely describe how it would apply to the cable TV industry's use of AI and ML. The possible mischief addressed by this statute is the monitoring of subscriber viewing habits and the disclosure of PII without consent.¹¹⁷ The policy behind the statute may offer some guidelines as to how a court could interpret how AI could fit into this regulation in the future. The legislative history for § 551 shows Congress's concern with protecting consumers from invasions of privacy by cable operators.¹¹⁸

In *Parker v. Time Warner Entertainment Company*, the court mentions “[t]he House Committee report reflects a broader concern with balancing the privacy rights of consumers of all types of cable systems against operators’ need to provide adequate services to their consumers”¹¹⁹ These are important security and policy concerns but, as the House Committee Report stated, “such a policy must also recognize and not unnecessarily or unreasonably impede those flows of information necessary to provide the service to the subscribers.”¹²⁰ The underlying policy for consumer protection should be weighed against the necessity of cable operators to provide content to subscribers. No matter how the FCC decides to interpret § 551, it should do so in a way that allows the cable TV industry to use consumer data in the same ways as entities regulated under the VPPA.

III. PII FOR CABLE TV COMPARED WITH PII FOR SERVICES REGULATED UNDER THE VPPA SHOWS STRICTER REGULATION FOR CABLE TV

The types of information required for the various AI programs that the cable TV industry could utilize—namely dynamic channels, programmatic advertising, and personal video recorders (PVRs)—would be considered PII under § 551.¹²¹ As mentioned in Section II, consumer information that includes the consumer name, address, private programming selections, credit card information, social security number, driver's license number, or “any information about the subscriber” is considered PII.¹²² At the very least, the relevant information for dynamic channels, programmatic advertising, and PVRs are the consumer's address for geographical profiling and time zone

117. See *Parker v. Time Warner Entm't Co.*, No. 98 CV 4265 (ERK), at *4.

118. See *id.*

119. *Id.*

120. *Id.* (quoting H.R. REP. NO. 98-934, at 29-30 (1984), reprinted in 1984 U.S.C.C.A.N. 4655, 4666-67).

121. 47 U.S.C. § 551(b).

122. See *Parker v. Time Warner Entm't Co.*, No. 98 CV 4265 at *6 (ERK), (E.D.N.Y. Nov. 8, 1999); *Pruitt v. Comcast Cable Holdings, LLC*, 100 F. App'x 713, 716 (10th Cir. 2004).

information and private programming selections to determine the variety of genres of TV shows the consumer household watches.¹²³ This emphasizes the importance of AI for the cable TV industry to ensure its place as a competitor in the entertainment industry.

However, information considered PII under the VPPA includes only “information which identifies a person as having requested or obtained specific video materials or services from a video tape service provider.”¹²⁴ This was found not to apply to information about a consumer’s viewing history when transmitted to a third party.¹²⁵ A party bringing a claim of a violation of the use of PII under the VPPA must name the third party who obtained the information.¹²⁶ This limits the cases in which a VPPA provider will be considered to wrongfully have utilized PII. Additionally, there have not been many cases in which a court has come out strong finding PII even where there was use of encrypted serial numbers of a digital media-streaming device or a consumer’s viewing history.¹²⁷ VPPAs have a decided advantage over cable TV in terms of their understanding of what data the courts will consider to be PII, whereas the cable TV industry lacks that knowledge.¹²⁸ This is an issue because the use of data that may or may not be considered PII is necessary for the utilization of AI.

The use of PII is important to advanced AI programs that would create custom channels and advertising, meaning that the disparate treatment of PII for cable TV and VPPAs could lead to a disparity in parties’ abilities to utilize AI as a solution to the current climate in which competition for advertising revenue and viewer eyes is intense. This is particularly true in the Consumer Relationship Management (“CRM”) realm, which focuses on integrating this information into real-time consumer management, which brings custom content to consumers in a consistent and precise manner.¹²⁹ As mentioned above, customer demographics and behavior data can be obtained in two different ways: through explicit and implicit techniques.¹³⁰

Explicit techniques require the consumer to take initiative to expressly identify their interests.¹³¹ This could be from a survey or profile building system that the user chooses to fill out. The Harvard Business Review discussed at length the use of traditional marketing methods to determine

123. Kurapati et al., *supra* note 40.
12418 U.S.C. § 2710(a)(3).

125. *See Robinson v. Disney Online*, 152 F. Supp. 3d 176, 182 (S.D.N.Y. 2015).

126. *Ellis v. Cartoon Network, Inc.*, No. 1:14-CV-484-TWT, (N.D. Ga. Oct. 8, 2014), *aff’d on other grounds*, 803 F.3d 1251 (11th Cir. 2015), at 3.

127. *See Ellis v. Cartoon Network, Inc.*, No. 1:14-CV-484-TWT, at 2 (finding an Android ID is not PII); *Robinson*, 152 F. Supp. 3d at 176 (finding encrypted serial number of digital media-streaming device and consumer’s viewing history, disclosed by entertainment company to third party was not personally identifiable information);

In re Hulu Privacy Litig., No. C 11-03764 LB, (N.D. Cal. Apr. 28, 2014) (granting summary judgement for Hulu in finding the disclosure is that Hulu coded the hulu.com watch pages to cause the users web browser to send comScore a “comScore ID” that was unique to each registered user and there is a VPPA violation only if that tracking necessarily reveals an identified person and his video watching).

128. *See id.*

129. Rygielski et al., *supra* note 33, at 492.

130. *See Kurapati et al.*, *supra* note 40.

131. *See id.*

what questions or information a company should be looking for from consumers.¹³² There are some negative aspects, such as the fact that the company must invest resources to determine the *right* questions to ask.¹³³ However, explicit techniques are not likely to keep up with changing preferences, and thus they could fail to offer entirely accurate and consistent customizations for each consumer household.¹³⁴ Another shortcoming of the explicit technique is that it could be a requirement of setting up the consumer's cable TV package, or it could be entirely voluntary, in which case the consumer might not take the time to complete the profile or survey.¹³⁵ Additionally, data that comes from answering questions in the format of a survey or questionnaire or from completing a profile is different and likely of lesser quality than that which can be mined by using other techniques.¹³⁶

Implicit techniques utilize user history to develop consumer data profiles.¹³⁷ This technique utilizes information that is not expressly provided by the consumer; rather it comes from the computation of data produced by the consumer's use and habits.¹³⁸ The benefit of this technique is that the data will evolve over time because the data compilation will grow as the AI system utilizes data that is created each time a consumer watches cable TV.¹³⁹ The clear benefit of this technique over the explicit technique is that it evolves over time and allows for the most up-to-date utilization of AI; however, this method requires an investment in an advanced AI system to access to all types of user data and an algorithm to make use of that data in a beneficial way.¹⁴⁰

The use of both of these techniques together produces the best results; however that would include the negative aspects of both techniques, as well as the positives.¹⁴¹ Thus, utilizing both explicit and implicit techniques would require an investment in advanced AI systems that could effectively use data collected from consumers and internalize the chances that consumers would not take the time to complete profiles or questionnaires.¹⁴² These are the ways to utilize the PII through AI systems by the cable TV industry. This emphasizes the importance of a variety of consumer data, namely, implicit and explicit data, in an effective AI system.

A. PII Disclosure Differences for Cable TV and VPPA Systems Are Significant Enough to Put the Cable TV Industry at a Competitive Disadvantage

The definition of PII as applied to cable TV as opposed to VPPA systems is essential to the relevance of AI to the cable TV industry.

132. See generally Anderson & Narus, *supra* note 47, at 6.

133. See *id.*

134. See Kurapati et al., *supra* note 40.

135. See *id.*

136. See *id.*

137. See *id.*

138. See *id.*

139. See *id.*

140. See *id.* at 2.

141. See *id.*

142. See *id.* at 5-6.

Section 551 requires cable operators to obtain written or electronic consent prior to disclosing any PII.¹⁴³ Despite a potential carve out which allows for disclosure when it is necessary to conduct a legitimate business activity,¹⁴⁴ the cable TV industry has not used this as an argument in any cases regarding PII. With a lack of case law on the matter, the cable TV industry is effectively at a loss as to the actual limits of the use of PII. This argument that cable TV is at a disadvantage will likely get stronger as the ability for the cable companies to provide service is hindered by the industry's inability to use AI programs such as programmatic advertising, dynamic channels, and personal video recorders, while other direct competitors are able to offer those benefits to consumers. However, at present, the cable TV industry has been prohibited from disclosing PII except in rare circumstances.¹⁴⁵

Additionally, PII in the cable TV industry has been found to exist in most cases where *any* information was obtained from the consumer, and this establishes a fairly low bar, making it likely that information that would allow a cable TV provider to identify which individual household was associated with raw data would be considered PII.¹⁴⁶ It is unclear how the courts would interpret the use of PII for AI programs under § 551. Further, PII disclosure regulations as applied to the VPPA differ.¹⁴⁷ Liability will only occur for those regulated under the VPPA if any information that is disclosed *itself* identifies the user.¹⁴⁸

The VPPA definition is far more open to the use or sharing of summarized data that would be used by an algorithm or the results of an algorithm.¹⁴⁹ However, because it is unclear how disclosure of PII would play out under § 551 for the cable TV industry, it is not evident whether cable TV and those regulated under the VPPA would be in the same position in a case when it comes to PII, or whether one has an advantage over the other. The fact that cable TV's use of PII is not solidified in the legal community likely means that the industry may be hesitant to invest in AI and the requisite data collection without any assurance as to the disclosure requirements.

The cable TV industry may be able to request express consent to overcome these statutory challenges. There is the potential that this consent

143. 47 U.S.C. § 551(c)(1).

144. *Id.* § 551(c)(2)(a).

145. *See In re Application of United States of Am. for an Order Pursuant to 18 U.S.C. § 2703(D) Directed to Cablevision Sys. Corp.* 1111 Stewart Ave. Bethpage, New York 11714, 158 F. Supp. 2d 644 (D. Md. 2001) (holding that a cable operator could be ordered to disclose to the government PII about its subscribers or customers without first notifying customers of the existence of the order).

146. *See Pruit v. Comcast Cable Holdings, LLC*, 100 F. App'x 713 (10th Cir. 2004) (distinguishing information in converter boxes from that contained in a billing system and finding that the converter box code alone provides nothing but a series of numbers and thus is not PII); *See generally, See Parker v. Time Warner Entm't Co.*, No. 98 CV 4265 (ERK), (E.D.N.Y. Nov. 8, 1999).

147. *See Ellis v. Cartoon Network, Inc.*, No. 1:14-CV-484-TWT, (N.D. Ga. Oct. 8, 2014), *aff'd* on other grounds, 803 F.3d 1251 (11th Cir. 2015); *See generally Robinson v. Disney Online*, 152 F. Supp. 3d 176; *In re Hulu Privacy Litig.*, No. C 11-03764 LB, (N.D. Cal. Apr. 28, 2014).

148. *See id.*

149. 18 U.S.C. § 2710; *see also Ellis*, No. 1:14-CV-484-TWT; *See generally Robinson*, 152 F. Supp. 3d 176; *In re Hulu Privacy Litig.*, No. C 11-03764 LB.

could be obtained through the terms and conditions of service as mentioned above; however, if courts would consider that insufficient to serve as legitimate consent, there could be varied impacts of the disclosure of PII on various data collection techniques. As discussed earlier in Section III, such methods include implicit and explicit techniques.

Explicit techniques, which require efforts by the consumer to express their viewing habits through surveys or profile-building systems that illustrate viewing preferences, would likely not be impacted by a strict PII disclosure interpretation. This is because explicit techniques inherently fulfill the consent requirement, as the consumer must make an express effort to fill in the data.¹⁵⁰ Focus groups are a subset of explicit techniques, and similarly, they would likely not be affected by disclosure requirements because those who attend focus groups consent to the use of the data extracted from the study.¹⁵¹ Explicit techniques can be useful, but implicit techniques offer the opportunity for better and more well-rounded and useful data.¹⁵² Implicit techniques are likely to be the most impacted by a strict reading of PII disclosures requiring express consent.

The catch-22 is that consumers may be willing to expressly consent to mining of their information in order to customize their viewing experience *if* there is a legitimate system in place that could make effective use of that information in a way that benefits the consumer. The cable TV industry, however, will likely be hesitant to invest in advanced AI systems and the requisite programs that make use of the customizations established by AI. Consumers may be willing to consent to the use of their information if it truly means that they will have a better consumer experience; however, right now it may be easier to watch Netflix or Hulu, which provide more choice in what to watch at a reasonably low cost.

A liberal reading of PII disclosures would likely result in the same outcome for both implicit and explicit techniques, including the use of focus groups. If a court were to find that the PII disclosure requirement is repealed by implication, is not to be enforced, or is replaced by a similar protective statute, there would likely be sufficient access to data for both explicit and implicit techniques to be utilized by cable TV companies. Without the express consent requirement, implicit and explicit techniques and focus groups would likely not be limited, and cable TV companies would be able to access all this information unhindered.

If the cable TV industry knew that they would be on a somewhat equal playing field with those regulated under the VPPA like Netflix and Hulu, the industry could go full force toward integrating AI into every realm of the cable TV service. Thus, the cable TV industry would be in a better position to remain competitive in an industry that has made consumers used to on-demand, customized options for entertainment. This is a clear and important impact of the way that the disclosure of PII requirement is interpreted by the courts or defined by Congress.

150. See Kurapati, et al., *supra* note 40, at 4.

151. See *id.* at 5.

152. See *id.* at 7.

B. Possible Solutions for The Cable TV Industry and the Likelihood of Success for Each Option in Terms of Practicability and Effectiveness

Due to the different treatment of PII for cable TV and VPPA services, cable TV could be at a clear disadvantage by having to require consent for the use of consumer data when it comes to integrating AI systems to remain competitive. There are four opportunities for the courts or Congress to put cable TV in the best position to compete with the likes of Hulu or Netflix. First, the courts could use a strict reading of § 551 disclosure requirements for cable TV and enact an equivalent requirement for the VPPA to effectively replace § 2710(b)(1).¹⁵³ Second, the courts could use a liberal reading of § 551 disclosure requirements for PII to effectively bring the cable TV industry closer to a level playing field with VPPA systems.¹⁵⁴ Third, Congress could enact a different definition of PII to replace § 551, which would be equivalent to the PII definition provision for VPPA systems.¹⁵⁵ Lastly, the courts could re-define PII in § 2710 to be a stricter and more limited definition equivalent to PII under § 551.¹⁵⁶

1. Express Consumer Consent Requirement Option

The first option is that courts could interpret § 551 to always require express consumer consent, and they could also interpret the requisite provision for those regulated under the VPPA to require prior written or electronic consent.¹⁵⁷ We'll call this option the "express consumer consent option." This means that the most likely technique that would be utilized would be explicit techniques or traditional focus group-style techniques, because access to the type of data that would be utilized by implicit techniques is less likely to be attainable when stricter express consent requirements are in place.

However, if a similar express consent regulation were imposed on the VPPA industry, Hulu, Netflix, and other similar programs would be limited in the same way as the cable TV industry. Beyond the obvious advantages to similar entertainment platforms being confined to similar regulations in terms of competitive advantage, there is the possible advantage of normalizing explicit techniques as a part of the TV-watching experience. If consumers had to take active steps to fill out viewing-preference surveys or consumer profiles in order to watch cable TV or for their Hulu and Netflix profiles, then no platform would be more or less demanding or time-consuming, and no platform would be more or less effective or accurate.

153. 18 U.S.C. § 2710(b)(i).

154. 47 U.S.C. § 551(b).

155. *Id.* §§ 551(b); 2710(a)(3).

156. *Id.* §§ 551; 2710(a)(3).

157. *Id.* §§ 551(b); 2710(b)(2)(B).

This option comports with the underlying policy considered by Congress in formulating § 551.¹⁵⁸ These considerations recognize that there may be a reasonable tradeoff between consumer privacy rights and the ability of cable operators to provide service to their customers.¹⁵⁹ A balancing test could allow cable operators to work within goals of consumer privacy and their need to compete with other entertainment and technology industries, and it could allow cable operators to strike a balance between consumer protection and their interest in keeping cable TV alive and competitive. This balance is this option, where consumer privacy is maintained on both the cable TV and VPPA providers' ends, and the cable TV industry is not systematically put at a disadvantage by being treated differently in terms of PII disclosure requirements.

The problem with this option is that the use of AI in the entertainment industry would be limited. While under this option the use of AI would be more fairly limited on both fronts, this could detrimentally affect the development of AI, a development that could create an ultimately improved viewing experience for the consumer. However, this would be a reasonable option for protecting consumer privacy interests and protecting against unfair competition in the entertainment industry.

2. Liberal Reading of § 551 Option

The second option is a liberal reading of § 551, so that it would be interpreted similarly to the PII disclosure requirement in § 2710(a)(3) of the VPPA, which only finds PII to mean information that identifies a person.¹⁶⁰ We'll nickname this option the "liberal § 551 option." The courts have interpreted § 2710(a)(3) not to apply even to the use of a consumer's viewing history or encrypted social serial numbers of consumer devices.¹⁶¹ The courts or the FCC could liberally interpret the relevant § 551 language allowing cable operators to "use the cable system to collect information . . . necessary to render a cable service or other service provided by the cable operator to the subscriber."¹⁶²

This option would find that the use of consumer data in the way that would allow for AI programs is necessary to render a cable service to the subscriber. An argument can be made in favor of this reading, especially considering the increasing need for cable TV to compete with non-traditional content providers. This liberal reading of § 551 would allow the cable TV industry to utilize both implicit and explicit techniques for developing better consumer experiences.¹⁶³

158. See *Parker v. Time Warner Entm't Co.*, No. 98 CV 4265 (ERK) at 4; 47 U.S.C. § 551(b).

159. H.R. REP. NO. 98-934, at 29-30 (1984), *reprinted in* 1984 U.S.C.C.A.N. 4655, 4666–67 (highlighting the policy of balancing the privacy rights of consumers of all types of cable systems against operators' need to provide adequate services to their consumers).

160. 18 U.S.C. § 2710(a)(3).

161. See *Ellis v. Cartoon Network, Inc.*, No. 1:14-CV-484-TWT; See generally, *Robinson v. Disney Online*, 152 F. Supp. 3d 176; *In re Hulu Privacy Litig.*, No. C 11-03764 LB, (N.D. Cal. Apr. 28, 2014).

162. 47 U.S.C. § 551(b).

163. *Kurapati et al.*, *supra* note 40; see also § III.

Effectively, this option would mean that cable TV and those covered by the VPPA could utilize both forms of data collection, and the cable TV industry would be free to move into integrating AI without fear that the collection of data from consumers would be unlawful. The problem with this option is that it only fulfills the policy consideration of ensuring that cable operators be able to provide adequate services to their consumers.

3. Rewritten Definition of PII Under § 551 Option

The third option would be for Congress to enact a different definition of PII under § 551 to be more similar to the PII definition in the relevant provision applying to VPPA systems.¹⁶⁴ Let's call this option the "rewritten PII § 551 option." If the cable TV industry were only limited by PII defined as information that identifies a consumer as having requested or obtained specific content, then the industry would effectively be treated the same as VPPAs.¹⁶⁵ Under this option, both cable TV and VPPAs would be able to utilize implicit and explicit techniques to gather consumer data. The up side to this option, as compared with the second option, is that this option better fulfills policy objectives.¹⁶⁶ If Congress were to enact a new definition, it would allow for the opportunity to write a definition that protects consumer privacy and allows the cable TV industry to have leeway in providing better service to customers through AI.

4. Rewritten Definition of PII Under § 2710 Option

In the last option, Congress would re-define PII within the meaning of § 2710 to be equivalent to PII as defined under § 551.¹⁶⁷ We'll nickname this option the "rewritten PII § 2710 option." This option is essentially the inverse of the third option. This would require Congress to alter the definition of PII as applied to VPPA systems to be limited in the way in which cable TV is limited under § 551. This would render the relevant case law for § 2710 interpretations to be void and effectively result in VPPA systems' and cable TV's use of PII to be regulated identically.¹⁶⁸

This means that both cable TV and streaming services would be limited in the same way, and consumers would only be tailored to and targeted through explicit techniques. This is arguably worse for consumers because it would mean that the cost of streaming services could increase because the ability to utilize consumer PII would be detrimentally affected. Thus, VPPA services would be unable to raise additional revenue from the sale or other use of this information.

164. 47 U.S.C. § 2710(a)(3).

165. See generally, Ellis, No. 1:14-CV-484-TWT; *Robinson*, 152 F. Supp. 3d 176; In re Hulu Privacy Litig., No. C 11-03764 LB.

166. H.R. REP. NO. 98-934, at 29-30 (1984), reprinted in 1984 U.S.C.C.A.N. 4655, 4666-67 (highlighting the policy of balancing the privacy rights of consumers of all types of cable systems against operators' need to provide adequate services to their consumers).

167. 47 U.S.C. § 551(b).

168. See generally, Ellis, No. 1:14-CV-484-TWT; *Robinson*, 152 F. Supp. 3d 176; In re Hulu Privacy Litig., No. C 11-03764 LB.

C. *The Rewritten Definition of PII Under § 551 or Rewritten Definition of PII Under § 2710 Option Presents the Best Opportunity for a Competitive Industry and Better Prices and Services for Consumers*

The cable TV industry is hurting for viewers and thus advertising money, resulting in higher prices for cable subscriptions.¹⁶⁹ The more expensive and less on-demand cable TV becomes in comparison with VPPAs such as Hulu or Netflix, the more consumers are moving to VPPAs.¹⁷⁰ The cable TV industry is a staple in the American entertainment industry, and there are policy considerations to be made to ensure that cable TV remains competitive. One important way in which the cable TV industry is at a disadvantage is in terms of the treatment of PII as compared with the treatment of PII for VPPAs.¹⁷¹ PII is important to implicit techniques of data gathering and use in AI systems.¹⁷² Implicit and explicit techniques are considered most effective when used together.¹⁷³ There are four options for different ways to interpret or change the relevant provisions so that cable TV and VPPAs are on a level playing field when it comes to PII, which is important to the use of implicit techniques, which are limited by PII provisions.¹⁷⁴

The options most likely to occur could be the third and fourth options, the “rewritten definition of PII under § 551 option” and “rewritten definition of PII under § 2710 option,” respectively, because the provisions regulating VPPA systems are arguably outdated. Consumers under the VPPA are defined as any renter, purchaser, or subscriber of goods or services from a video tape service provider.¹⁷⁵ This largely points to video rental stores like Blockbuster, or at the very least stores that sold video *tapes*. These types of businesses are no longer relevant or are closed for good, which indicates that this provision is largely outdated.¹⁷⁶ This may inspire Congress to make the aforementioned changes, be it to re-define PII under the VPPA or under § 551.¹⁷⁷

However, the best two options are the second and third options as laid out above, otherwise known as the “liberal reading of § 551 option” and the “rewritten definition of PII under § 551 option.” The second option is the one in which the § 551 PII disclosure requirement would be liberally construed so that it would be similar to the reading of the PII disclosure requirement for

169. *See generally*, § II.

170. *See id.*

171. 18 U.S.C. § 2710(a)(3).

172. Kurapati, et al., *supra* note 40.

173. *Id.* at 7.

174. *See id.*

175. 18 U.S.C. § 2710(a)(1).

176. Jessica Campisi & Samira Said, *America has just one Blockbuster left*, CNN (July 13, 2018 3:46 AM), <https://www.cnn.com/2018/07/13/us/last-blockbuster-america-trnd/index.html> [https://perma.cc/RXC7-J7TQ].

177. 47 U.S.C. § 551(b).

VPPAs.¹⁷⁸ The third option is where Congress would enact a different definition of PII to be more similar to the PII definition in the relevant provision applying to VPPAs.¹⁷⁹ The second option, the “liberal reading of § 551 option,” is preferable because it would allow for both cable TV and VPPAs to engage in AI to improve the consumer viewing experience and ensure that cable TV is not at a disadvantage in competition.

As outlined above, however, the second option fails with regard to the policy consideration of ensuring privacy rights for consumers.¹⁸⁰ The third option is preferable because it places cable TV and VPPAs on the same playing field and allows for each to use both implicit and explicit techniques. Both policy considerations would be fulfilled in this case, in that consumers would be protected, and cable operators would be able to remain competitive and provide content to subscribers.¹⁸¹

The only negative to this third option, the “rewritten definition of PII under § 551 option,” is that it would require Congress to redefine a term in the codified statute, which would likely be more difficult to effectuate than a court interpretation. Ultimately, however, there is a compelling need for some judicial, administrative, or legislative intervention into the disparate treatments of the cable TV industry and VPPA systems in order to ensure that the American tradition of cable TV persists by allowing cable TV to invest into the use of AI and give consumers the viewing experience they receive from other entertainment sources.

IV. CONCLUSION

The policy considerations of consumer information protection and maintaining competition within the cable TV industry in order to keep prices low and encourage innovation point to several options that stand out as the best suited to meet these goals. These options are the “liberal reading of § 551 option” and “rewritten definition of PII under § 551 option.” Neither of these options would put cable TV consumer information more at risk than the government has considered reasonable, as evidenced by the way PII is utilized under the VPPA. These options thus would not offend the consumers’ privacy interests in their information and the information they create. Additionally, these options would assist with putting the cable TV industry in a position to effectively compete with video service providers. Competition is important to the consumer interest in having low cost entertainment options as well as in innovation in entertainment services. These options are the best way to fix a legal and definitional dichotomy that effectively hinders the cable TV industry and thus impacts the consumer’s entertainment options in both cost and quality.

178. 18 U.S.C. § 2710(a)(3).

179. *Id.*

180. H.R. REP. NO. 98-934, at 29-30 (1984), *reprinted in* 1984 U.S.C.C.A.N. 4655, 4666-67 (highlighting the policy of balancing the privacy rights of consumers of all types of cable systems against operators’ need to provide adequate services to their consumers).

181. *Id.*