

The Legal and Policy Road Ahead: An Analysis of Public Comments in NHTSA's Vehicle-to-Vehicle Advance Notice of Proposed Rulemaking

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ABSTRACT

As motor vehicle accidents have overwhelming human and economic costs, policy interventions that lower the risk of accidents have tremendous potential to improve public health and safety. One particularly promising innovation is Vehicle-to-Vehicle (V2V) communication technologies, which transmit information between nearby automobiles in order to warn drivers of an imminent collision. V2V communications may enable drivers to avoid or mitigate harmful accidents, but only if widely adopted. The National Highway Traffic Safety Administration (NHTSA) has begun planning for the implementation of V2V technology, and has recently completed the public comment period of an Advance Notice of Proposed Rulemaking (ANPRM) in preparation for rulemaking in this area.

In this Article, we qualitatively and quantitatively analyze the public comments received by NHTSA in response to its ANPRM concerning V2V communications technologies. Over 800 individuals and groups responded to the ANPRM; almost ninety-five percent of comments were provided by members of the general public. We discuss major considerations articulated by various stakeholder groups, including industry, policy advocacy groups, and the public as a whole. In particular, we focus on three concerns identified by NHTSA as potential

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barriers to acceptance of V2V communications technology by both interested stakeholder groups and the public: implications for privacy, threats to security, and potential liability. We then discuss the implications of our analysis for public acceptance of V2V communications technology and NHTSA's upcoming privacy impact assessment of V2V communications devices.

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INTRODUCTION

The human and financial costs associated with motor vehicle accidents are tremendous. Each year in the United States, motor vehicle accidents cause over 37,000 deaths, 2.35 million injuries, and cost over \$230.6 billion.¹ Given these high costs, any policy intervention that can reduce the number or severity of motor vehicle accidents may greatly improve public safety and health. For example, the National Highway Traffic Safety Administration (NHTSA) has estimated that electronic stability control saved over two thousand lives between 2008 and 2010.² Similarly, while estimates vary, one calculation concludes that approximately 3,000 lives are saved every year by airbags.³

Vehicle-to-Vehicle (V2V) communication is a new technological innovation aimed at further reducing motor vehicle accidents.⁴ V2V technology allows vehicles to transmit a basic safety message about their speed and location to other vehicles in their vicinity.⁵ This transfer of information would allow vehicles to warn drivers of impending accidents, thus allowing the driver to avoid a collision.⁶ The potential benefits of this technology are enormous. By one estimate, V2V communications “could eliminate 81 percent of all crashes where the driver is not impaired, saving lives not to mention billions of dollars in crash-related costs.”⁷ However, adoption of

1. *Road Crash Statistics*, ASS'N FOR SAFE INT'L RD. TRAVEL, <http://asirt.org/Initiatives/Informing-Road-Users/Road-Safety-Facts/Road-Crash-Statistics> (last visited Apr. 8, 2015).

2. Press Release, Nat'l Highway Traffic Safety Admin., New NHTSA Report Shows Federal ESC Requirement Saving Lives (Nov. 30, 2012), available at <http://www.nhtsa.gov/About+NHTSA/Press+Releases/2012/New+NHTSA+Report+Shows+Federal+ESC+Requirement+Saving+Lives>.

3. Kimberley M. Thompson et al., *Validating Benefit and Cost Estimates: The Case of Airbag Regulation*, 22 RISK ANALYSIS 803, 810 (2002).

4. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., VEHICLE-TO-VEHICLE COMMUNICATIONS: READINESS OF V2V TECHNOLOGY FOR APPLICATION xiii (2014) [hereinafter NHTSA READINESS REPORT].

5. *Id.* at xiv.

6. *Id.*

7. *Id.* at 16–21; see Susan Kuchinskas, *Look Out! Ann Arbor Cars to Communicate with One Another to Avoid Crashes*, SCI. AM. (Aug. 23, 2012), <http://www.scientificamerican.com/article/michigan-car-crash-test/>.

the technology must be widespread in order to reap these potential benefits.⁸

In order to promote widespread adoption of V2V technology, NHTSA has recently begun rulemaking efforts to mandate its inclusion in new light vehicles.⁹ As part of this process, NHTSA has identified several key concerns that must be addressed in order for V2V communications to be implemented effectively, including liability, privacy, and security.¹⁰ In this Article, we review public comments received by NHTSA in order to determine who participated in the V2V ANPRM by offering comments and how those comments differ across various stakeholder groups. Our ultimate goal is to analyze whether these public comments fulfill the goals of public participation in administrative rulemaking and assess what they may reveal about public concerns that may influence NHTSA's V2V rulemaking.

We begin by briefly reviewing the technology used to enable V2V communication, the policy concerns created by this technology, and NHTSA's current rulemaking efforts. We then discuss the role that public participation plays in administrative policy-making, in particular describing some characteristics of constructive public participation identified by scholars. We then analyze the public comments received by NHTSA during the V2V ANPRM proceeding, utilizing both the e-docket metadata compiled by NHTSA and the contents of the comments themselves. This analysis explores how participation varied across different types of commenters who contributed to the V2V ANPRM. We then consider how the results of this analysis might contribute to NHTSA policy-making efforts concerning V2V communications technology.

8. See Xue Yang et al., *V2V Communication Protocol for Cooperative Collision Warning*, in PROCEEDINGS OF THE FIRST ANNUAL INTERNATIONAL CONFERENCE ON MOBILE AND UBIQUITOUS SYSTEMS: NETWORKING AND SERVICES (MOBIQUITOUS) 2 (2004) (discussing the requirement that one vehicle be able to send and the other to receive V2V communications in order for a collision to be prevented).

9. Press Release, Nat'l Highway Traffic Safety Admin., U.S. Department of Transportation Issues Advanced Notice of Proposed Rulemaking to Begin Implementation of Vehicle-to-Vehicle Communications Technology (Aug. 18, 2014), available at <http://www.nhtsa.gov/About+NHTSA/Press+Releases/NHTSA-issues-advanced-notice-of-proposed-rulemaking-on-V2V-communications>.

10. NHTSA READINESS REPORT, *supra* note 4, at xix–xx.

I. V2V COMMUNICATIONS TECHNOLOGY AND POLICY

The implementation of V2V communications technologies represents both a remarkable potential innovation and a complex policy problem. We begin by discussing the V2V communications systems from a technological and policy perspective. We first briefly review how V2V communications systems operate. We then consider three prominent concerns regarding the implementation of V2V communications systems: threats to privacy, insufficient security protections, and uncertain liability. We next turn to NHTSA's policy-making efforts in this field, particularly focusing on its recently completed Advance Notice of Proposed Rulemaking.

A. V2V COMMUNICATIONS TECHNOLOGY AND POLICY CONCERNS

V2V communications systems are designed to allow nearby vehicles to communicate data to one another in order to provide a driver with additional information and time to avoid or mitigate a crash.¹¹ The data shared between vehicles would include the vehicles' position and speed,¹² as well as certificate exchange messages that ensure that the information originates from an authentic source.¹³ When the V2V communications system determines that a crash is imminent, the vehicles would alert their respective drivers, most likely by turning on a warning light indicating that a possible crash was imminent.¹⁴ Upon seeing the warning light, a driver could take steps to avoid the crash,¹⁵ perhaps by slowing or stopping his or her vehicle. NHTSA has stated that V2V technology could reduce certain types of car accidents by fifty percent, "prevent[ing] up to 592,000 crashes and sav[ing] 1,083 lives . . . per year."¹⁶

Despite the potential of V2V communications systems to reduce collisions and protect drivers against death and injury, this technology is not uncontroversial. Some commenters have

11. See Panos Papadimitratos et al., *Vehicular Communication Systems: Enabling Technologies, Applications, and Future Outlook on Intelligent Transportation*, IEEE COMM'N MAG., Nov. 2009, at 84, 84–85.

12. Kuchinskas, *supra* note 7 (describing the information shared during a V2V technology pilot program as including "basic safety messages about surrounding automobiles' speed and location").

13. NHTSA READINESS REPORT, *supra* note 4, at 72.

14. Kuchinskas, *supra* note 7.

15. Press Release, Nat'l Highway Traffic Safety Admin., *supra* note 9.

16. *Id.*

voiced concerns about the potential privacy implications of a technology that utilizes information about vehicles.¹⁷ Other observers have suggested that V2V networks could become a target for hackers, terrorists, and other malicious actors.¹⁸ As with most new technologies, the use of V2V communications technologies raises questions about who could be liable in tort for accidents that occur despite the use of this system.¹⁹ We discuss each of these criticisms in turn.

To effectively prevent accidents, V2V technologies must determine a vehicle's location and share that information with other actors. This is particularly problematic from a privacy perspective, since location information can provide a detailed portrait of an individual's life, particularly when aggregated over time. As Supreme Court Justice Sotomayor recently noted, continuous location information monitoring "generates a precise, comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual associations."²⁰ Advocates of V2V technology have suggested that these privacy concerns can be overcome by not collecting, storing, or sharing information other than as necessary to enable crash prevention,²¹ and anonymizing the information that is collected.²² However, privacy advocates have not found these protections reassuring, arguing that additional uses for data collected by V2V devices

17. Barbara Murphy Melby & Christopher C. Archer, *The Internet of Things (Part 2): Vehicle-to-Vehicle Communications*, NAT'L L. REV. 1 (Nov. 27, 2014), <http://www.natlawreview.com/article/internet-things-part-2-vehicle-to-vehicle-communications> (discussing a "recent survey [that] found that consumers are concerned about data privacy in V2V technology, with 45% of new car buyers in the United States strongly agreeing with the statement 'I am reluctant to use car-related connected services because I want to keep my privacy'").

18. Qianhong Wu et al., *Balanced Trustworthiness, Safety and Privacy in Vehicle-to-Vehicle Communications*, 59 IEEE TRANSACTIONS VEHICULAR TECH. 559, 559 (2010).

19. See generally JOHN VILLASENOR, BROOKINGS INST., PRODUCTS LIABILITY AND DRIVERLESS CARS: ISSUES AND GUIDING PRINCIPLES FOR LEGISLATION (2014) (discussing liability issues associated with autonomous vehicles).

20. U.S. v. Jones, 132 S. Ct. 945, 955 (2012) (Sotomayor, J., concurring).

21. NHTSA READINESS REPORT, *supra* note 4, at 144.

22. *Id.* at 146.

may be developed in the future²³ and that NHTSA may not be willing to completely anonymize user data.²⁴

Like all communication technologies, V2V technologies may be vulnerable to hacking and other threats to security. NHTSA has proposed that V2V communications be secured using a Public Key Infrastructure (PKI), which uses a two-phase process to ensure that incoming information has been sent from a legitimate source while encrypting the substance of the information.²⁵ A recent conference paper presented by the “Secure Vehicle Communication” project (SEVECOM) explains that, since there are “no clear scenarios and standardized protocols” for vehicle communications yet, “traditional approaches for security engineering fail, as they usually consider a specific scenario and system.”²⁶ The article describes how vehicle communications technologies encompass “dozens of potential applications with very diverse properties.”²⁷ The research demonstrated that “[a]s the requirements are very diverse and esp. [sic] in security terms sometimes contradicting, any security solution will need to be both very flexible and dynamically configurable to adapt to the applications needs.”²⁸ The article concluded that, “[i]f multiple applications will run in parallel within a node—which will probably be the case—this leads to additional problems, as e.g. authentication and privacy requirements need to be prioritized.”²⁹

V2V communications technologies may create novel issues of legal liability, and these issues may require a response from policy makers. Currently, the law governing responsibility for automobile crashes “is a mixture of state tort law and state financial responsibility laws that mandate insurance for

23. Dorothy J. Glancy & Elec. Frontier Found., *Comments*, REGULATIONS.GOV 5–6 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0331&attachmentNumber=1&disposition=attachment&contentType=pdf>.

24. *Id.* at 7.

25. NHTSA READINESS REPORT, *supra* note 4, at 72.

26. Frank Kargl et al., *Security Engineering for VANETS*, 4 PROC. WORKSHOP EMBEDDED SEC. CARS 1 (2006), available at <http://medien.informatik.uni-ulm.de/forschung/publikationen/escar2006.pdf>.

27. *Id.*

28. *Id.* at 7.

29. *Id.*

drivers.”³⁰ A recent RAND report examined the basic theories of driver liability for new automotive technologies, such as automated and autonomous vehicle technology, and categorized them as traditional negligence, no-fault liability, and strict liability.³¹ If swift and widespread deployment of V2V communications technologies throughout the U.S. automobile fleet is considered a high safety priority, Congress might explore novel ways to address potential liability problems associated with vehicle communications technologies. For example, Congress might initiate a reinsurance scheme for automobile manufacturers modeled on the Terrorism Risk Insurance Act of 2002,³² which created a federal backstop reinsurance program to promote the availability of insurance for terrorist attacks, which became much harder to obtain after September 11, 2001.³³ As further discussed in the RAND report, there are several similar precedents for limitations of liability for specific technology, including the Price-Anderson Nuclear Industries Indemnity Act, passed in 1957, to reduce the liability of the new nuclear energy industry,³⁴ the National Childhood Vaccine Injury Act, passed in 1986, to limit liability for drug companies and create a no-fault compensation system for individuals injured by vaccines,³⁵ and the Oil Spill Liability

30. JAMES M. ANDERSON ET AL., RAND CORP., AUTONOMOUS VEHICLE TECHNOLOGY: A GUIDE FOR POLICYMAKERS 112 (2014), available at http://www.rand.org/content/dam/rand/pubs/research_reports/RR400/RR443-1/RAND_RR443-1.pdf.

31. *Id.* While it is beyond the scope of this article to describe comprehensively how new technologies, such as vehicle communications technologies, might have an impact on tort liability, several others have addressed this issue. See generally NIDHI KALRA ET AL., RAND CORP., LIABILITY AND REGULATION OF AUTONOMOUS VEHICLE TECHNOLOGIES (2009) (considering liability and regulatory schemes for autonomous vehicles); Jeffrey K. Gurney, *Sue My Car, Not Me: Products Liability and Accidents Involving Autonomous Vehicles*, 2013 U. ILL. J.L. TECH. & POL'Y 247 (2013) (considering who should be liable when an autonomous vehicle is in an accident); Gary E. Marchant & Rachel A. Lindor, *The Coming Collision Between Autonomous Vehicles and the Liability System*, 52 SANTA CLARA L. REV. 1321, 1322 (2012) (assessing “the potential interactions between the legal liability and autonomous vehicles”).

32. Terrorism Risk Insurance Act of 2002, Pub. L. No. 107-297, 116 Stat. 2322 (2002).

33. ANDERSON ET AL., *supra* note 30, at 132.

34. Price-Anderson Act, Pub. L. No. 85-256, 71 Stat. 576 (1957).

35. National Childhood Vaccine Injury Act, Pub. L. No. 99-660, 100 Stat. 3755 (1986).

Trust Fund, passed by Congress in 1990, which limits liability for oil companies.³⁶

B. NHTSA'S CURRENT V2V COMMUNICATIONS RULEMAKING EFFORT

On August 18, 2014, NHTSA released an ANPRM³⁷ and an extensive analysis of the current state of V2V technology.³⁸ NHTSA proposed that V2V communications devices be required in all new light vehicles.³⁹ In the ANPRM, NHTSA specifically asked fifty-seven questions related to the implementation of V2V technology, including specific questions on the adequacy of current security protections⁴⁰ and issues related to legal liability.⁴¹ Although NHTSA is planning on conducting an analysis of privacy concerns in a separate Privacy Impact Assessment (PIA), the agency stated that it would “welcome[] privacy-related comments in response to the research report and ANPRM now being issued.”⁴²

In addition, NHTSA expressed its interest in feedback on potential barriers to public acceptance of V2V technology.⁴³ According to NHTSA's report, *Vehicle-to-Vehicle Communications: Readiness of V2V Technology for Application*,

36. Oil Spill Liability Trust Fund, Pub. L. No. 101-380, 104 Stat. 484 (1990).

37. Federal Motor Vehicle Safety Standards: Vehicle-to-Vehicle (V2V) Communications, 79 Fed. Reg. 49270, 49270 (proposed Aug. 20, 2014) (to be codified at 49 C.F.R. pt. 571); see OFFICE OF THE FED. REGISTER, A GUIDE TO THE RULEMAKING PROCESS 3 (2011), available at https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf (“An agency that is in the preliminary stages of rulemaking may publish an ‘Advance Notice of Proposed Rulemaking’ in the *Federal Register* to get more information. The Advance Notice is a formal invitation to participate in shaping the proposed rule and starts the notice-and-comment process in motion. Anyone interested (individuals and groups) may respond to the Advance Notice by submitting comments aimed at developing and improving the draft proposal or by recommending against issuing a rule.”).

38. Press Release, Nat'l Highway Traffic Safety Admin., *supra* note 9.

39. Federal Motor Vehicle Safety Standards: Vehicle-to-Vehicle (V2V) Communications, 79 Fed. Reg. at 49,270 (“NHTSA seeks comment on the research report, and solicits additional information, data, and analysis that will aid the agency in developing an effective proposal to require new light vehicles to be V2V-capable.”).

40. *Id.* at 49,271–75.

41. *Id.* at 49,273.

42. *Id.*

43. *Id.*

security and privacy considerations are the most likely impediments to acceptance by the general public.⁴⁴ Similarly, most industry stakeholders describe legal liability as a likely impediment to acceptance of V2V technology.⁴⁵ Given that both the general public and representatives from industry and manufacturing groups (among others) are expected to be concerned about these key issues, it seems necessary to consider what role these individuals and entities may play in the policy-making process.

II. PUBLIC PARTICIPATION IN ADMINISTRATIVE RULEMAKING

NHTSA has already incorporated public participation in its initial V2V rulemaking efforts by soliciting and receiving public comments on V2V communications through its ANPRM.⁴⁶ However, in order to understand what role the comments received should play in this rulemaking proceeding, it is first necessary to understand what role public participation is expected to play in the administrative policy-making process. We begin by discussing justifications for requiring public participation in the rulemaking process, as well some potential negative consequences of public engagement. Next, we turn to the statutory basis for notice and comment rulemaking, and efforts to facilitate broader public comment through e-rulemaking. We conclude by discussing the characteristics of productive public participation, as identified by scholars.

A. THE VIRTUES AND VICES OF PUBLIC PARTICIPATION

Public participation may lend legitimacy to the administrative rulemaking process.⁴⁷ Laws enacted by Congress and policies advanced by the President both originate from publicly elected decision-makers, which implies public acquiescence even if the policy does not have wide public acceptance.⁴⁸ In contrast, administrative decision-makers are

44. NHTSA READINESS REPORT, *supra* note 4, at 133–36.

45. *Id.* at 136.

46. *See supra* notes 37–42 and accompanying text.

47. Cheryl Simrell King et al., *The Question of Participation: Toward Authentic Public Participation in Public Administration*, 58 PUB. ADMIN. REV. 317, 319 (1998).

48. *See* James A. Gardner, *Consent, Legitimacy, and Elections: Implementing Popular Sovereignty Under the Lockean Constitution*, 52 U.

not publicly elected, and their decisions do not benefit from the same presumption of electoral approval.⁴⁹ Public participation creates a pathway for administrative decision-makers to be responsive to the public will,⁵⁰ “serv[ing], in effect, as a substitute for the electoral process that bestows constitutional legitimacy on legislation.”⁵¹

Public participation may serve as a check on overreaching by administrative agencies.⁵² Although rules promulgated by federal agencies have the effect of law,⁵³ they are developed by unelected officials subject to judicial oversight.⁵⁴ Public participation offers the opportunity for interested parties to directly criticize a proposed rule, opening the agency to scrutiny from both the political branches of government and the public as a whole.⁵⁵ The requirement that agencies provide public notice of pending rulemaking and seek comments on their prospective policy “remains the most basic and important” check on administrative policy-making.⁵⁶

PITT. L. REV. 189, 192 (1990) (“[T]he legitimacy of the United States government—that is, its rule by right rather than by force—rests on the consent of the governed.”).

49. Scott R. Furlong & Cornelius M. Kerwin, *Interest Group Participation in Rulemaking: A Decade of Change*, 15 J. PUB. ADMIN. RES. & THEORY 353, 354 (2005).

50. Nina A. Mendelson, *Rulemaking, Democracy, and Torrents of E-Mail*, 79 GEO. WASH. L. REV. 1343, 1350 (2011).

51. Furlong & Kerwin, *supra* note 49, at 354.

52. Marissa Martino Golden, *Interest Groups in the Rule-Making Process: Who Participates? Whose Voices Get Heard*, 8 J. PUB. ADMIN. RES. & THEORY 245, 246 (1998).

53. Steven J. Balla & Benjamin M. Daniels, *Information Technology and Public Commenting on Agency Regulations*, 1 REG. & GOV. 46, 46 (2007).

54. Under the Administrative Procedure Act, “[a] person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute” is entitled to judicial review unless the action in question is within the agency’s discretion. 5 U.S.C. §§ 701–702 (2012). The Supreme Court has described agency discretion as only providing a “very narrow exception” to judicial review, *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 402, 410, 416 (1971), and held that a court may undertake a “searching and careful” review of the facts before the agency.

55. See generally Mathew D. McCubbins & Thomas Schwartz, *Congressional Oversight Overlooked: Police Patrols Versus Fire Alarms*, 28 AM. J. POL. SCI. 165, 165 (1984) (proposing that the delegation of rulemaking authority by Congress often empowers the public, and is preferred to Congressional “police-patrol” oversight).

56. William West, *Administrative Rulemaking: An Old and Emerging Literature*, 65 PUB. ADMIN. REV. 655, 661 (2005).

In addition to improving the administrative decision-making process, some observers have argued that public participation may improve the rules developed through this process.⁵⁷ Public comments may provide the agency with information that it did not—or could not—obtain through its preliminary policy-making efforts.⁵⁸ Additionally, when the administrative agency must weigh competing values and social goods in order to come to a decision, public participation can provide crucial feedback about whether the agency's conclusions reflect broader societal norms.⁵⁹

However, some scholars have argued that public participation is not, inherently, a good thing. Public commenters are often not disinterested parties; they often comment on policies that they believe will affect them.⁶⁰ Commenters who have sufficient interest—and sufficient resources⁶¹—may co-opt the comment process as a way to ensure that the final rule reflects their interests.⁶² Because administrative decision-making is frequently justified as a way of insulating policy-making from the political process,⁶³ it is particularly problematic that special interest groups may be able to exert significant influence over the administrative process.⁶⁴

57. Roger C. Cramton, *The Why, Where and How of Broadened Public Participation in the Administrative Process*, 60 GEO. L.J. 525, 527–28 (1972).

58. Cynthia R. Farina et al., *Rulemaking vs. Democracy: Judging and Nudging Public Participation that Counts*, 2 MICH. J. ENVTL. & ADMIN. L. 123, 148 (2012).

59. However, it is not clear whether agencies actually use comments as a way of better understanding public norms. Professor Mendelson concluded that, while “[a] significant number of public comments received by agencies seem to relate to . . . questions of value or policy,” agencies do not appear to be using these comments during their decision-making process. Mendelson, *supra* note 50, at 1346.

60. West, *supra* note 56, at 661.

61. Amy McKay & Susan Webb Yackee, *Interest Group Competition on Federal Agency Rules*, 35 AM. POL. RES. 336, 341, 349 (2007) (discussing how the cost of commenting may dissuade some from participating).

62. *Id.* at 336.

63. King et al., *supra* note 47, at 318 (discussing administrative policy-making as situated within a tradition “designed to protect political and administrative processes from a too-active citizenry” while still reflecting the public will).

64. One study found “strong evidence the federal bureaucrats listen to interest groups and tend to favor the more dominant side.” McKay & Yackee, *supra* note 61, at 349; *see also* Susan Webb Yackee, *Sweet-Talking the Fourth*

B. PUBLIC PARTICIPATION UNDER THE ADMINISTRATIVE PROCEDURE ACT

The Administrative Procedure Act (APA) mandates that agencies allow public participation in rulemaking by providing notice of a proposed rule and accepting public comments.⁶⁵ Colloquially referred to as “notice and comment” rulemaking, these procedures allow for the public’s direct involvement in the policy-making process.⁶⁶ Participation is not limited to those who may be affected by the proposed policy; the agency must accept comments from both those who could be impacted by the new regulation and members of the general public with no immediate connection to the policy.⁶⁷ Comments may be made by anyone, including individuals, corporations, advocacy groups, and other governmental agencies.⁶⁸

Even though all may participate in notice and comment rulemaking, public participation in this area was traditionally dominated by organizations with an established interest that could be affected by the proposed policy.⁶⁹ For example, a review of eleven rulemaking efforts conducted from 1993 to 1995 found little to no participation by individual citizens.⁷⁰ Rather, a variety of interest groups provided the vast majority

Branch: The Influence of Interest Group Comments on Federal Agency Rulemaking, 16 J. PUB. ADMIN. RES. & THEORY 103, 119 (2006) (“We now know, however, that the primary participants in rulemaking—interest groups—are often able to contribute to, and have influence over, bureaucratic decision making.”).

65. 5 U.S.C. § 553 (2012).

66. Lisa Blomgren Bingham et al., *Legal Frameworks for the New Governance: Processes for Citizen Participation in the Work of Government*, 94 NAT’L CIVIC REV., Spring 2005, at 54, 55.

67. OFFICE OF THE FED. REGISTER, *supra* note 37 (“Anyone interested (individuals and groups) may respond to the Advance Notice by submitting comments aimed at developing and improving the draft proposal or by recommending against issuing a rule.”).

68. *Id.*

69. West, *supra* note 56, at 661 (“[P]articipation in rulemaking is largely confined to organized interests.”).

70. This study reviewed eleven rulemaking initiatives by the Environmental Protection Agency, National Highway Traffic Safety Administration, and U.S. Department of Housing and Urban Development. They found that individuals left no comments in ten out of eleven rulemaking proceedings, and only accounted for nine percent of the comments received in the only proceeding that received public comment. Golden, *supra* note 52, at 252–55.

of comments, such as corporations and government agencies.⁷¹ Commercial entities were particularly well represented in the rulemaking process; more than fifty percent of comments were made by business organizations in all but two of the rulemaking proceedings studied.⁷²

Scholars attribute the relative dearth of comments from members of the general public to the high barriers to public participation.⁷³ In order to participate in a rulemaking effort, an individual must be aware of ongoing rulemaking in a timely fashion and make the decision to participate. However, there are hurdles in place at every step of the rulemaking process that may prevent awareness or deter participation. Prior to the adoption of e-rulemaking practices, administrative agencies provide notice of impending rulemaking through the Federal Register, which is not commonly read by members of the public.⁷⁴ Additionally, the public notice must contain more than a mere statement that rulemaking is underway; it must also contain a sufficient amount of information for the reader to be effectively advised of the nature of the policy under consideration.⁷⁵ Finally, the individual must be motivated to comment on the procedure, a condition that may not be satisfied if the potential benefits or detriments of a proposed policy do not outweigh the costs of participating.⁷⁶

Given these barriers to participation by members of the general public, there has been ongoing interest in facilitating public engagement through e-rulemaking,⁷⁷ which uses new communication technologies “to help facilitate public access to and participation in agency rulemaking.”⁷⁸ Under the E-Government Act of 2002, federal agencies are required to

71. *Id.*

72. *Id.*; see also West, *supra* note 56, at 661 (“In terms of its frequency, at least, comment is also weighted heavily in favor of business groups.”).

73. *E.g.*, Mendelson, *supra* note 50, at 1357–59 & n.79.

74. West, *supra* note 56, at 661.

75. *Id.* at 662.

76. Cramton, *supra* note 57, at 529 (describing public participation as “irrational behavior” where “the costs of effective participation will be much greater than any benefits [the individual] might hope to obtain”).

77. See Cary Coglianese, *Citizen Participation in Rulemaking: Past, Present, and Future*, 55 DUKE L.J. 943, 944 (2006).

78. Mendelson, *supra* note 50, at 1344.

accept comments and release their documents online.⁷⁹ By including search features and easy commenting mechanisms, these resources have been designed so that it is easy for members of the public to discover impending rules and provide their input.⁸⁰ E-rulemaking has been praised for its potential to improve public involvement in policy-making.⁸¹ Subsequent efforts have focused on further lowering the information barriers to public participation by utilizing new communication technologies.⁸²

However, evidence on whether e-rulemaking has actually resulted in more public comment is decidedly mixed.⁸³ Early on, it appeared that e-rulemaking efforts resulted in very few public comments.⁸⁴ Although the volume of public comments seemed to increase as time went on, it never appeared to be substantial when compared to the volume of proposed rules.⁸⁵ Additionally, some scholars have questioned whether any benefits that have been achieved through e-rulemaking are not

79. 44 U.S.C. § 3501(10) (2012) (describing its purpose to “ensure that information technology is acquired, used, and managed to improve performance of agency missions, including the reduction of information collection burdens on the public”).

80. For a description of the tools agencies have used to facilitate public use of their on-line resources, see David Schlosberg et al., *Democracy and E-Rulemaking: Web-Based Technologies, Participation, and the Potential for Deliberation*, 4 J. INFO. TECH. & POL. 37, 39 (2007). However, note that not all agencies have set up their websites in the same way. Lisa Blomgren Bingham, *The Next Generation of Administrative Law: Building the Legal Infrastructure for Collaborative Governance*, 2010 WIS. L. REV. 297, 314 (2010) (“In contrast to a centralized system overall, designers gave individual agencies autonomy to determine much of the date to enter and what public comment practices to use. As a result, beyond a few categories, the unified system lack common data fields across agencies.”).

81. West, *supra* note 56, at 661.

82. Cynthia R. Farina et al., *Rulemaking in 140 Characters or Less: Social Networking and Public Participation in Rulemaking*, 31 PACE L. REV. 382, 383 (2011) (surveying efforts to increase participation in rulemaking through social media platforms).

83. See Coglianese, *supra* note 77, at 954–55.

84. *Id.* at 954.

85. *Id.* at 955. Professors Balla and Daniels also studied Department of Transportation rulemaking efforts to determine whether implementation of e-docketing had an effect on public participation. They found that “dramatic, across-the-board increases in public involvement did not materialize after the introduction of digital docketing at the DOT.” Balla & Daniels, *supra* note 53, at 58.

outweighed by the costs incurred.⁸⁶ However, there do appear to be particular situations where a large number of comments are received, both from the general public and special interest stakeholders.⁸⁷ According to one analysis, unusually high public participation in e-rulemaking may be seen when a particular rulemaking effort “attract[s] interest group attention.”⁸⁸ For example, the Federal Communications Commission (FCC) received over one million comments during its efforts to make rules regarding media ownership.⁸⁹ Hot button issues not only receive many comments, but also receive an unusually high percentage of comments from members of the general public.⁹⁰ A high level of public comments is often due to an organized effort by a public interest group to encourage public response, and may often be largely comprised of repetitive comments left by different individuals but derived from the same source.⁹¹

C. CHARACTERISTICS OF CONSTRUCTIVE PUBLIC PARTICIPATION

Even if public participation in general may lead to better rulemaking, all comments may not contribute equally to this goal. Professor Farina and her colleagues argue that rulemaking procedures should favor public input that is based on “reason-giving” rather than unfounded gut reactions.⁹² In order to contribute value, public comments should be founded on “some legal, factual, and/or policy bases.”⁹³ For example,

86. Stuart Minor Benjamin, *Evaluating E-Rulemaking: Public Participation and Political Institutions*, 55 *Duke L.J.* 893, 935–36 (2006) (noting that while the benefits may not outweigh the costs, e-rulemaking should continue).

87. John M. de Figueiredo, *When Do Interest Groups Use Electronic Rulemaking?*, in *ERULEMAKING AT THE CROSSROADS* 19–20 (2006), available at <http://people.umass.edu/stu/eRulemaking/Crossroads.pdf>.

88. *Id.* at 19.

89. Mendelson, *supra* note 50, at 1345.

90. *Id.* at 1357 (discussing the “exceptions, where rules are so salient and visible that comments from the lay public make up the vast majority of total comments” (citation omitted)).

91. Farina et al., *supra* note 58, at 130 (“Launched by established advocacy organizations, these calls-to-action can generate tens, even hundreds, of thousands of duplicate or slightly personalized comments. Typically, the initiators are organizations representing regulatory beneficiary interests” (citation omitted)).

92. *Id.* at 135.

93. *Id.* at 136.

public participation by a stakeholder group that may be directly affected by the policy process, but has not yet had the opportunity to voice their concerns, may provide administrative policy makers with valuable information they could not obtain any other way.⁹⁴

However, even if public participation does not result in information that can lead to better policy, it may still yield vital information about public opinion that may lead to better policy implementation. In this sense, public participation can be constructive even if it does not influence the rules promulgated by the agency. For example, in NHTSA's recent rulemaking proceeding concerning Event Data Recorders (EDRs),⁹⁵ the outpouring of public concern about data privacy issues related to EDRs may have alerted NHTSA officials to some unexpected consequences of changes to the data gathered by EDRs prior to vehicle crashes. Although NHTSA might perceive EDRs as a tool to improve vehicle safety, vehicle owners may have serious concerns about EDRs unrelated to their safety benefits.⁹⁶

Some scholars have also argued that public participation serves an important role in facilitating political oversight of administrative agencies.⁹⁷ Congress can only actively police a small percentage of agency activities and may be uninterested in reviewing actions that have not harmed their constituents.⁹⁸ Members of the public who are concerned about an agency action may "sound an alarm," by alerting political actors to proposed policies that could harm their interests⁹⁹ and serving

94. *Id.* at 147.

95. Federal Motor Vehicle Safety Standards; Event Data Recorders, 77 Fed. Reg. 74144, 74150–51 (proposed Dec. 13, 2012) (codified at 49 C.F.R. pt. 563).

96. See, e.g., Elec. Privacy Info. Ctr. et al., *Comments*, REGULATIONS.GOV 2 (Feb. 11, 2013), <http://www.regulations.gov#!documentDetail;D=NHTSA-2012-0177-1006> (arguing that even "NHTSA concedes that there are significant privacy concerns with the collection of this data").

97. West, *supra* note 56, at 656, 662.

98. McCubbins & Schwartz, *supra* note 55, at 168.

99. *Id.* at 175. However, subsequent empirical research has brought this function into question. See generally William F. West, *Formal Procedures, Informal Processes, Accountability, and Responsiveness in Bureaucratic Policy Making: An Institutional Policy Analysis*, 64 PUB. ADMIN. REV. 66, 72–73 (2004).

as a focal point for subsequent response.¹⁰⁰ By soliciting comments from the public, “the agency learns who are the relevant political interests to the decision and something about the political costs and benefits associated with various actions.”¹⁰¹ Under this theory, the public acts as an intermediary between Congress and administrative decision makers, conveying both information about objectionable agency actions to Congress and warnings about potential political obstacles to the agency.¹⁰²

III. ANALYSIS OF PUBLIC COMMENTS IN NHTSA’S V2V COMMUNICATIONS RULEMAKING

Our goal is to analyze the comments received by NHTSA during its initial V2V rulemaking efforts in order to see what these comments might contribute to policy-making in this area. Our analysis attempts to answer two specific questions. First, who participated in the ANPRM comment process and how did they participate? Second, how did different types of commenters vary in their assessment of certain important considerations for the implementation of V2V communications? Based on NHTSA’s assessment of potential complications in the V2V technologies implementation process, we elected to focus on three areas of substantive concern to both policymakers and the public: potential threats to privacy, adequacy of security protections, and implications for liability.

A. DESCRIPTION OF METHODOLOGY

We began by exploring the e-docket associated with NHTSA’s recent ANPRM for *Federal Motor Vehicle Safety Standards: Vehicle-to-Vehicle (V2V) Communications*.¹⁰³ Although the ANPRM comment period officially closed on

100. After studying the notice and comment proceedings in 42 separate rulemaking actions, Professor West concluded that “the role of public notice often is not so much to make affected interests aware of agency initiatives as it is to provide a cue for their mobilization.” West, *supra* note 99, at 73.

101. Mathew D. McCubbins et al., *Administrative Procedures as Instruments of Political Control*, 3 J.L. ECON. & ORG. 243, 258 (1987).

102. *Id.*

103. Nat’l Highway Traffic Safety Admin., *Vehicle-to-Vehicle Communication Research Report*, REGULATIONS.GOV, <http://www.regulations.gov/#!docketDetail;D=NHTSA-2014-0022> (last visited Mar. 29, 2015).

October 20, 2014,¹⁰⁴ the electronic form for public comment has remained open.¹⁰⁵ Since comments made via this form and submitted to NHTSA after the deadline are still included in the e-docket,¹⁰⁶ the content included in the e-docket continued to evolve even after the submission deadline passed.¹⁰⁷ In order to obtain a stable sample for analysis, we limited our analysis to all comments received before the official comment period closed on October 20, 2014.¹⁰⁸

We then downloaded the metadata file associated with the V2V communications proceedings e-docket.¹⁰⁹ The metadata provides information about the individuals and organizations that participated in this rulemaking effort, and the comments they contributed, including the name of the submitter, any organizational affiliation, the date the comment was received, and the length of each comment in pages.¹¹⁰ We were able to use this information to determine whether each commenter was participating anonymously and whether the comments represented an individual or an organization.

We also used the e-docket metadata to categorize commenters based on the type of organizations they represented. Commenters that did not represent a particular organization were categorized as individuals. We categorized the commenters that represented organizations based on each organization's primary mission, as determined by a review of its website. This categorization yielded six types of organizations, summarized in Table 1 below.

104. *Id.*

105. *Id.*

106. For example, an anonymous public comment received on November 7, 2014 was posted to the e-docket on November 12, 2014. *See* Anonymous, *Comments*, REGULATIONS.GOV (Nov. 12, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0954>.

107. *See, e.g.*, Scott Carpenter, *Comments*, REGULATIONS.GOV (Oct. 3, 2014) <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0181> (illustrating the changing nature of the comment submissions).

108. This reduced our available sample from 933 documents (as of January 2015) to 877 documents.

109. The public comment metadata can be accessed by accessing the page associated with all public comments, and exporting the selected docket folder as a .csv file. Nat'l Highway Traffic Safety Admin., *supra* note 103.

110. *See id.*

Table 1. Organizations that Contributed Comments to NHTSA

Type	Description
Advocacy Groups	Entities that promote particular sets of concerns in important policy debates <i>Examples:</i> Electronic Frontier Foundation, ¹¹¹ Electronic Privacy Information Center, ¹¹² Maine Coalition to Stop Smart Meters ¹¹³
Government	Entities associated with federal, state, or local governments <i>Example:</i> Pennsylvania Department of Transportation ¹¹⁴
Individuals	Members of the general public without an organizational affiliation ¹¹⁵
Industry organizations	Entities that produce components used in the manufacture of motor vehicles or groups that represent businesses associated with automobiles <i>Example:</i> Alliance of Auto Manufacturers ¹¹⁶
Manufacturers	Commercial entities that produce finished motor vehicles for private or commercial use <i>Examples:</i> Toyota, ¹¹⁷ Ford Motor Company ¹¹⁸
Nonprofits	Entities that promote general public welfare <i>Examples:</i> American Association of State Highway and Transportation Officials, ¹¹⁹ Information Technology & Innovation Foundation ¹²⁰

111. See Glancy & Elec. Frontier Found., *supra* note 23.

112. See Elec. Privacy Info. Ctr. et al., *supra* note 96.

113. See Ed Friedman, Maine Coal. Stop Smart Meters, *Comments*, REGULATIONS.GOV (Oct. 20, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0222>.

114. Penn. Dep't of Transp., *Docket No. NHTSA-2014-0022*, REGULATIONS.GOV 7 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0371&attachmentNumber=1&disposition=attachment&contentType=pdf>.

115. See, e.g., Mary Himmer, *Comments*, REGULATIONS.GOV (Nov. 10, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0832>.

116. Robert Strassburger, Vice President, Vehicle Safety & Harmonization, Alliance of Auto. Mfr., *Proposed Motor Vehicle Safety Standard No. 150; Vehicle to Vehicle (V2V) Communications*, REGULATIONS.GOV (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?objectId=09000064818e0e23&disposition=attachment&contentType=pdf>.

117. Tom Stricker, Vice President, Technical & Regulatory Affairs, Toyota Motor N. Am., Inc., *Federal Motor Safety Standards: Vehicle-to-Vehicle (V2V) Communications Advanced Notice of Proposed Rulemaking U.S. DOT – National Safety Administration [Docket No. NHTSA-2014-0022]*, REGULATIONS.GOV (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0340&attachmentNumber=1&disposition=attachment&contentType=pdf>.

118. Steven M. Kenner, Global Dir., Auto. Safety Office, Ford Motor Co., *Advanced Notice of Proposed Rulemaking for Federal Motor Vehicle Safety Standard No. 150 Vehicle-to-Vehicle (V2V) Communications*, REGULATIONS.GOV (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0771&attachmentNumber=1&disposition=attachment&contentType=pdf>.

We then used the V2V communications e-docket's search function to determine whether each commenter mentioned privacy, security, or liability. We developed a list of key words associated with each concern, described in Table 2 below. We previewed the use of each search term in each comment in order to eliminate false positives,¹²¹ and recorded those results that related substantively to each topic of interest. We were then able to calculate summary statistics determining the number of comments posted by each group and describing the distribution of comment length, as measured in pages.

Table 2. Keywords Used to Identify Comments Related to Topics of Interest

Topic	Search Terms
Privacy	Privacy, private, surveillance
Security	Secure, security, hack, hacking, unauthorized
Liability	Liability, tort, lawsuit

Finally, we reviewed selected comments from each organization type in order to qualitatively assess and analyze concerns about each topic of interest. For stakeholder groups with fewer commenters (such as nonprofits and manufacturers), we were able to review all comments. Given the large number of comments made by public commenters, we selected a sample from that group at random to review in depth.

119. Bud Wright, Exec. Dir., Am. Ass'n of State Highway and Transp. Officials, *Advanced Notice of Proposed Rulemaking for FMVSS150; Vehicle-to-Vehicle (V2V) Communications; Docket No. NHTSA-2014-0022*, REGULATIONS.GOV (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0420&attachmentNumber=1&disposition=attachment&contentType=pdf>.

120. Doug Brake, Telecom Policy Analyst, Info. Tech. & Innovation Found., *Comments*, REGULATIONS.GOV (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0933&attachmentNumber=1&disposition=attachment&contentType=pdf>.

121. For example, a comment that mentioned the need to protect "private industry" would be included within a search for the word "private" even if it contained no mention of privacy in any other context. We used the preview of each search term in context to eliminate these false positives.

B. RESULTS OF ANALYSIS

1. Who Participated in the V2V Comment Process and How Did Participation Vary Across Groups?

The first step in our analysis was to determine who participated in the V2V technology comment process. Table 3 below describes the number of comments made by each commenter group type. We discovered that the vast majority (94.07%) of comments were made by members of the general public. This is in stark contrast to analyses of comment proceedings completed without e-rulemaking processes, which generally found that most comments were made by interest groups rather than the public.¹²² However, it is more in line with the proportional general public response that would be expected if a public interest group had initiated a response campaign.¹²³

Table 3. Comments Made During V2V Proceeding, by Type of Commenter

Group	Number of Comments	% Total	Number of Pages			
			Mean	Std. Dev.	Median	25/75 percentile
Advocate	7	0.79%	133	305.69	8	3/45
Government	5	0.57%	5.20	4.96	3	3/4
Individual	825	94.08%	3.64	17.12	1	1/1
Industry	23	2.63%	31.17	110.28	8	3/12
Manufacturer	11	1.25%	32.45	65.39	11	3/27
Nonprofit	6	0.68%	5.66	5.12	4.5	2/7
Total	877	100%	5.78	37.81	1	1/1

Most of the remaining comments were made by groups whose members could potentially be regulated by the V2V technology rules promulgated by NHTSA. Comments from industry entities comprised the second largest category

122. See Golden, *supra* note 52, at 252–55.

123. See Farina et al., *supra* note 58, at 123; *supra* notes 89–91 and accompanying text.

(2.62%), while comments from manufacturers comprised the third largest category (1.25%). Nonprofits, advocacy groups, and government entities combined made just over 2% of the comments received by NHTSA.

We were also interested in how participation varied across groups of commenters. In order to explore this issue, we calculated the average length of comments made by each group in pages.¹²⁴ The average number of pages per comment varied widely between groups; while comments made by advocacy organizations were 133 pages on average,¹²⁵ comments made by other groups were much shorter on average. Comments made by manufacturers and industry organizations had similar average lengths; manufacturer comments averaged 32.45 pages, while industry comments averaged 31.17 pages. All other groups generally contributed much shorter comments, with group averages smaller than 6 pages. Comments made by individuals were generally the shortest; these comments averaged 3.64 pages.

In all cases, the median was smaller than the mean, suggesting that the distributions were skewed to the right.¹²⁶ This implies that, within each group, some comments were so long that they brought up the overall average within the group. In fact, although comments made by individuals were 3.64 pages on average, over 90% of the comments made by this group were just one page. This suggests that while the vast majority of individual commenters made only brief remarks, a minority of highly motivated commenters made comments long enough to drive up the overall average.

124. These page counts include attachments included with each comment. While the primary comment was limited to fifteen pages, this limit did not apply to attachments. See Federal Motor Vehicle Safety Standards: Vehicle-to-Vehicle (V2V) Communications, 79 Fed. Reg. 49,270, 49,275 (proposed Aug. 20, 2014) (to be codified at 49 C.F.R. pt. 571).

125. Although the average length of comments made by advocacy organizations was 133 pages, this was due in part to a lengthy comment made by one advocacy group, which skewed the average higher. If this comment is not included in the analysis, the average length of the remaining six comments is 17.67 pages, which is lower than the average length of comments made by manufacturers and industry organizations, but higher than the average length of comments made by other groups.

126. For a more nuanced discussion of the relationship between mean and median, see Paul T. von Hippel, *Mean, Median, and Skew: Correcting a Textbook Rule*, 13 J. STAT. EDUC. (2005), available at <http://www.amstat.org/publications/jse/v13n2/vonhippel.html>.

2. What Did Commenters Have to Say About Key Issues?

We then turned to the content of the comments, focusing in particular on comments mentioning privacy, security, and/or liability.¹²⁷ The results of this analysis are summarized in Table 4 below. As can be seen, all three concerns we identified were only mentioned in a minority of comments: Of those, 15.16% of comments mentioned privacy, 10.49% mentioned security, and only 3.99% mentioned liability. However, this small observed prevalence is due in part to the low incidence of these concerns in comments made by members of the general public, which comprise the majority of overall comments.

When the prevalence within various commenter group types is considered, it becomes clear that these concerns are mentioned frequently within certain groups. For example, over 70% of advocacy organizations and manufacturers mentioned privacy in their comments. Excluding comments made by individuals, over half of all comments made by other stakeholder groups mentioned security as a potential concern—including 100% of manufacturers.¹²⁸ Liability was less frequently mentioned across all stakeholder groups. While a majority (63.63%) of manufacturers mentioned liability as a concern, they were the only stakeholder group in which a majority of comments mentioned this concern.¹²⁹

Table 4. Comments that Referenced Particular Concerns, by Type of Commenter¹³⁰

Group	Privacy	Security	Liability
Advocate	71.42%	71.42%	0%
Government	40.00%	60%	0%
Individual	12.84%	6.30%	2.42%
Industry	43.47%	78.26%	26.08%
Manufacturer	72.72%	100%	63.63%
Nonprofit	33.33%	50%	33.33%

127. This was determined through the searches described in Section III.A.

128. *Infra* Table 4.

129. *Id.*

130. As each commenter may have touched upon more than one concern, or none of the concerns listed, the rows do not sum to 100%.

Total	15.16%	10.49%	3.99%
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However, even if different commenters mentioned the same concern, they may have had different things to say on the matter. After determining the frequency with which different stakeholder groups mentioned each of these concerns, we reviewed the contents of the comments in order to briefly summarize some of the salient points and analyze how the viewpoints vary across stakeholder groups. We discuss our findings for privacy, security, and liability in turn, and then briefly consider some additional trends we noticed during this review.

a. Privacy

Most (71.42%) advocacy groups mentioned privacy;¹³¹ these commenters generally provided both a detailed discussion of how V2V communications technology may threaten privacy and possible methods of mitigating these threats. Writing with the Electronic Frontier Foundation (EFF), Professor Glancy noted that NHTSA's reliance on anonymity as a method of protecting privacy might be misplaced, as messages distributed by V2V communications technologies "can be associated with a person—through visual observation, license plate, or correlation with other information."¹³² Furthermore, even if V2V communications does not threaten privacy as initially designed, the data gathered could eventually be used in a way that does pose a threat to privacy.¹³³ The Electronic Privacy Information Center (EPIC) offered several suggestions for how V2V communications technology could be deployed in a way that minimizes its impact on privacy, including not storing vehicle information in any form,¹³⁴ encryption of information,¹³⁵ and complying with the Consumer Privacy Bill of Rights.¹³⁶

131. *Supra* Table 4.

132. Glancy & Elec. Frontier Found., *supra* note 23, at 4.

133. *Id.* at 5.

134. Marc Rotenberg et al., Elec. Privacy Info. Ctr., *Comments, REGULATIONS.GOV* 5 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0689&attachmentNumber=1&disposition=attachment&contentType=pdf>.

135. *Id.* at 6.

136. *Id.* at 7–8.

Some advocacy groups also offered an astute critique of how NHTSA has undertaken the privacy analysis process.¹³⁷ The EFF argued that privacy should be considered from the beginning of the design process, rather than after major technological decisions have been made.¹³⁸ Without timely consideration of privacy issues, NHTSA “will be unlikely to be able to perform meaningful mitigation of any privacy risks it identifies.”¹³⁹ These concerns were echoed by the Privacy Rights Clearinghouse, which contended that “[t]he fact that the ANPRM provides little information and discourages public comment on privacy considerations at this point is disturbing.”¹⁴⁰

On the whole, non-profit groups were less likely to discuss privacy than advocacy groups. Two out of six (33.33%) of non-profit commenters mentioned privacy, but none provided a substantive discussion of potential problems or solutions. For example, the Information Technology & Innovation Foundation simply mentioned privacy as one of a “host of challenges” associated with V2V communications systems.¹⁴¹

Some (12.84%) individuals expressed a concern about the privacy implications of V2V technology. Many of these comments simply expressed a generalized apprehension about a loss of privacy.¹⁴² Others were more specific about their concerns, discussing the potential for “further tracking of citizens”¹⁴³ and “law enforcement abuse.”¹⁴⁴ Commenters also

137. See Glancy & Elec. Frontier Found., *supra* note 23, at 2–3.

138. “In complex systems, privacy is not akin to a feature that can be added late in the design of a specification. Rather, the privacy implications of systems such as V2V often arise from the choices made in the specification design phase.” *Id.*

139. *Id.* at 3.

140. Beth Givens, Exec. Dir., Privacy Rights Clearinghouse, *Re: Federal Motor Vehicle Safety Standards: Vehicle-to-Vehicle (V2V) Communications: Advance Notice of Proposed Rulemaking (ANPRM)*, REGULATIONS.GOV 2 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0377&attachmentNumber=1&disposition=attachment&contentType=pdf>.

141. Brake, *supra* note 120, at 4.

142. Himmer, *supra* note 115; Greg Krouse, *Comments*, REGULATIONS.GOV (Nov. 4, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0599>.

143. Chris Anderson, *Comments*, REGULATIONS.GOV (Nov. 5, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0757>.

mentioned specific types of data that could create privacy concerns if collected by a V2V communications system, such as “speed, location, and driving habits.”¹⁴⁵ One commenter pointed out the similarity between V2V devices and cell phones, but noted that V2V technologies may be more problematic from a privacy perspective since they cannot be switched off.¹⁴⁶ Even commenters who were generally optimistic about V2V communications technologies expressed the need for “strong educational action about the intentions of the technologies” so that the public understands the information that is being transmitted in a V2V communications system.¹⁴⁷ However, other comments suggest that education alone may not be sufficient to assuage fears about privacy threats,¹⁴⁸ particularly given previous controversies regarding government surveillance.¹⁴⁹

Privacy was a concern for many manufacturers, as 72.72% included some mention of privacy in their comments.¹⁵⁰ Mercedes-Benz, for example, stated “privacy protection is absolutely critical to both the near- and long-term success of connected vehicle technology.”¹⁵¹ Most manufacturers were

144. Anonymous, *Comments*, REGULATIONS.GOV (Oct. 14, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0194>.

145. Marilynne Martin, *Comments*, REGULATIONS.GOV (Oct. 14, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0195>.

146. Andrew Swerling, *Comments*, REGULATIONS.GOV (Nov. 4, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0612> (“There have been numerous examples of citizens being covertly tracked based on cell phones, which presents a similar scenario as the proposed V2V network However, an important difference between personal cell phones and V2V networks is that people can turn off their cell phones if they dont [sic] want to be tracked, whereas the V2V network could presumably not be disabled.”).

147. Carpenter, *supra* note 107.

148. Anonymous, *Comment*, REGULATIONS.GOV (Oct. 30, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0528> (“Despite claims there would be no security risk for users, it is clear from the past that eventually there will be a huge invasion of privacy or a risk thereof with this technology.”).

149. Kurt Snyder, *Comments*, REGULATIONS.GOV (Oct. 14, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0189>.

150. *Supra* Table 4.

151. Julian Soell, Gen. Manager Eng’g Servs., Mercedes-Benz USA, LLC, *Advanced Notice of Proposed Rulemaking for FMVSS150, Vehicle-to-Vehicle (V2V) Communications*; Docket No. NHTSA-2014-0022, REGULATIONS.GOV 9 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=>

concerned with privacy since it may be a major barrier to public acceptance.¹⁵² Some argued that privacy concerns could be mitigated by better informing the public about the protections already incorporated into V2V communications technology.¹⁵³ Toyota stated that, since “V2V communications and safety applications have been designed with privacy in mind,” NHTSA “should use this to their advantage to assure the public that PII will not be compromised.”¹⁵⁴

Almost half (43.47%) of industry groups were concerned about privacy.¹⁵⁵ Some industry groups offered specific methods for reassuring the public about the adequacy of privacy protections, such as public education¹⁵⁶ and engaging a third party to independently review V2V privacy issues.¹⁵⁷ In addition, the American Trucking Association discussed the use of privacy to protect trucker’s proprietary business information.¹⁵⁸

NHTSA-2014-0022-0382&attachmentNumber=1&disposition=attachment&contentType=pdf.

152. Brian Latouf, Dir. Global Vehicle Safety, Gen. Motors LLC, *Advanced Notice of Proposed Rulemaking for FMVSS150, Vehicle-to-Vehicle (V2V) Communications* (Docket No. NHTSA-2014-0022; 79 Fed. Reg. 49270; August 20, 2014), REGULATIONS.GOV 3 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0938&attachmentNumber=1&disposition=attachment&contentType=pdf> (“GM agrees that public awareness of these issues will be critical to achieving the public acceptance required for this technology to reach its full potential.”); Soell, *supra* note 151, at 8.

153. See Latouf, *supra* note 152, at 7.

154. Stricker, *supra* note 117, at 7, attachment 1.

155. *Supra* Table 4.

156. Ragiemra Amato, Dir., Gov’t/Technical Affairs, Delphi Automotive Systems, LLC, *Docket No. NHTSA-2014-0022 Advanced Notice of Proposed Rulemaking on Vehicle-to-Vehicle Communications*, REGULATIONS.GOV 9 (Oct. 16), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0266&attachmentNumber=1&disposition=attachment&contentType=pdf>.

157. “The agency may also consider that the PIA be reviewed by an independent third party on privacy issues, to maximize the public acceptance.” Douglass P. Campbell, President, Auto. Safety Council, *Request for Comment Vehicle-to-Vehicle (V2V) Communications*, REGULATIONS.GOV 4 (Oct. 16, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0511&attachmentNumber=1&disposition=attachment&contentType=pdf>.

158. Ted Scott, Dir. Eng’g, Am. Trucking Assoc., *Comments on National Highway Traffic Safety Administration’s Federal Motor Vehicle Safety Standards: Vehicle-to-Vehicle (V2V) Communications, FMVSS No. 150. DOCKET NO. NHTSA-2014-0022*, REGULATIONS.GOV 3 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022->

Forty percent of government entities mentioned privacy in their comments.¹⁵⁹ The Arizona Department of Transportation was concerned that V2V communications be implemented in a way that protects consumer privacy.¹⁶⁰ Some government entities discussed the role that privacy protections could play in facilitating public acceptance, similar to the discussion undertaken by manufacturing stakeholders. The Pennsylvania Department of Transportation described privacy protections as “key to public acceptance.”¹⁶¹ However, unlike representatives from other stakeholder groups that viewed increased privacy protections as a necessary condition for public acceptance, the Pennsylvania Department of Transportation argued that public acceptance could be gained by better publicizing the advantages of V2V technology.¹⁶²

b. Security

Many (71.42%) of the advocacy groups related their concerns about the security of V2V communications technology to their concerns about the untimely discussion of privacy concerns.¹⁶³ Ensuring the security of V2V communications technology is a “significant challenge[] in developing and implementing effective and reliable [V2V] communications systems.”¹⁶⁴ Despite the importance of this issue, some

0355&attachmentNumber=1&disposition=attachment&contentType=pdf (“To ATA’s members, privacy stands for the protection of such proprietary information as lane density, vehicle specifications, and trip origin and destination among others.”).

159. *Supra* Table 4.

160. John S. Halikowski, Dir., Ariz. Dep’t of Transp., *Docket No. NHTSA-2014-0022*, REGULATIONS.GOV 2 (Oct. 20, 2014), available at <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0641&attachmentNumber=1&disposition=attachment&contentType=pdf>.

161. Penn. Dep’t of Transp., *supra* note 114, at 7.

162. *Id.*

163. *See, e.g.*, Glancy & Elec. Frontier Found., *supra* note 23, at 3 (“In continuing to defer meaningful privacy analysis and suggesting delay in public comment about these issues, the agency may well delay significant discussion of privacy and security issues until public input would have little effect.”).

164. Jennifer Stockburger et al., Consumers Union, *Comments of Consumers Union and Center for Auto Safety to National Highway Traffic Safety Administration on Federal Motor Vehicle Safety Standards for Vehicle-to-Vehicle Communications Docket No. NHTSA-2014-0022*, REGULATIONS.GOV 2 (Oct. 17, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0533&attachmentNumber=1&disposition=attachment&contentType=pdf>.

advocacy groups felt NHTSA's current discussion about security was not meaningful.¹⁶⁵ For example, the EFF argued that, without further discussion of potential data uses, it was difficult to determine whether NHTSA's proposed security protections were adequate.¹⁶⁶ Similarly, some of the additional privacy protections suggested by advocacy groups, such as compliance with the Consumer Privacy Bill of Rights, would also provide additional security protections.¹⁶⁷

Half (50%) of comments left by non-profit entities discussed security as a concern.¹⁶⁸ Most nonprofit comments simply mentioned that V2V communications must be secure,¹⁶⁹ although the Intelligent Transportation Society of America explicitly connected improved security provisions to increased public acceptance.¹⁷⁰

Additionally, 6.30% of individuals expressed a concern about potential security threats to V2V communications systems. Some commenters specifically mentioned their fear that V2V communications technologies could be hacked¹⁷¹ or affected by "[h]ostile parties."¹⁷² Members of the general public also seemed concerned that breaches of security could create threats to public safety; in the words of one commenter, "I do not want my safety compromised as some new virus spreads through the system causing a 100 car pileup."¹⁷³ Some members of the general public drew on their expertise in computer security to propose specific ways of ensuring the

165. Givens, *supra* note 140, at 1.

166. Glancy & Elec. Frontier Found., *supra* note 23, at 5–6.

167. Rotenberg et al., *supra* note 134, at 7–8.

168. *Supra* Table 4.

169. Brake, *supra* note 120, at 4 (discussing security as one of "a host of challenges that will come with implementation of V2V communications").

170. Scott Belcher et al., Intelligent Transp. Soc'y Am., *Comments of Intelligent Transportation Society of America*, REGULATIONS.GOV 7–8 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0379&attachmentNumber=1&disposition=attachment&contentType=pdf>.

171. Anderson, *supra* note 143; Anonymous, *supra* note 106; Kendra L. Zoa, *Comments*, REGULATIONS.GOV (Oct. 21, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0292>.

172. Steve Petrie, *Comments*, REGULATIONS.GOV (Aug. 28, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0049>.

173. Martin, *supra* note 145.

security of V2V communications.¹⁷⁴ Others were less optimistic about ensuring the security of V2V communications systems, noting that even if security mechanisms are used, they may be improperly deployed.¹⁷⁵ According to one commenter, “[t]here are simply too many exploitable security issues to be able to guarantee that the system won’t be hacked.”¹⁷⁶

Manufacturers appeared to consider security of V2V communications as an important concern; 100% mentioned it in their comments. Ford described security provisions as one of the “critical enablers for the deployment of V2V communications.”¹⁷⁷ Other manufacturers were particularly concerned with security given the specific technologies utilized in their vehicles. Tesla, for example, stated “NHTSA must consider and address the possibility that V2V communications provides a potential source of security breach for highly electronic and computerized vehicles.”¹⁷⁸ Security was also seen as an important issue because of its impact on public acceptance.¹⁷⁹

Similar to the proportion of manufacturers that commented on this issue, 78.26% of industry groups commented on security.¹⁸⁰ Delphi specifically discussed the inadequacy of current cellular technology to provide the necessary security for V2V communications.¹⁸¹ The American

174. Rene Struik, *Comments on NHTSA Report DOT HS 812 014*, REGULATIONS.GOV (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0733&attachmentNumber=1&disposition=attachment&contentType=pdf>.

175. Swerling, *supra* note 146 (“While the cryptography is reasonably secure if configured properly, it is often misconfigured, which leads to imperfect security.”).

176. Anonymous, *supra* note 106.

177. Kenner, *supra* note 118, at 2.

178. James Chen, Vice President, Regulatory Affairs, Tesla Motors, Inc., *Comments to Advance Notice of Proposed Rulemaking, Vehicle-to-Vehicle (“V2V”) Communications*, 79 *Fed. Reg.* 49,270 (August 20, 2014); Docket ID No NHTSA-2014-0022, REGULATIONS.GOV 1–2 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0581&attachmentNumber=1&disposition=attachment&contentType=pdf>.

179. Stephen L. Williams, Safety, Compliance, and Product Analysis, Fiat Chrysler Auto, *Advance Notice of Proposed Rulemaking (ANPRM) -Vehicle to Vehicle Communications (V2V)*, REGULATIONS.GOV 2 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0281&attachmentNumber=1&disposition=attachment&contentType=pdf>.

180. *Supra* Table 4.

181. Amato, *supra* note 156, at 7.

Trucking Association was particularly concerned, arguing “a weak cyber-security program may jeopardize the entire program.”¹⁸² Several industry groups also discussed security in the context of encouraging public acceptance of V2V technologies.¹⁸³

A majority (60%) of state agencies discussed security in their comments. Some expressed their agreement that security provisions would be a necessary component of V2V implementation without making specific suggestions for how this goal could be accomplished.¹⁸⁴ State agencies also discussed security in the context of developing public acceptance,¹⁸⁵ similar to their consideration of privacy concerns.

c. Liability

Liability was a concern for a majority (63.63%) of manufacturers. Mercedes-Benz described potential liability concerns as “an onerous topic that requires further attention from the agency.”¹⁸⁶ The Alliance of Automobile Manufacturers provided an extensive discussion of potential liability issues surrounding V2V communications systems,¹⁸⁷ including an in-depth analysis of automobile manufacturers’ potential exposure to liability,¹⁸⁸ and concluded that “[t]he agency’s twin conclusions that the liability risks are not likely to be an impediment to V2V deployment, and that no liability-limiting mechanisms are needed, are both premature.”¹⁸⁹

A minority (26.08%) of industry groups discussed liability.¹⁹⁰ In particular, the Automotive Safety Council discussed the need for additional analysis of liability concerns, particularly in the context of conflicting international law.¹⁹¹ Infineon Technologies identified liability as a potential

182. Scott, *supra* note 158, at 3.

183. *E.g.*, Amato, *supra* note 156, at 9.

184. Wright, *supra* note 119, at 2–3.

185. Penn. Dep’t of Transp., *supra* note 114, at 7.

186. Soell, *supra* note 151, at 10.

187. Strassburger, *supra* note 116, at 6–8.

188. *Id.*

189. *Id.* at 3, attachment B.

190. *Supra* Table 4.

191. Campbell, *supra* note 157, at 7.

stumbling block in the development of automatic vehicle safety technologies.¹⁹²

No commenters from advocacy or government groups provided any discussion of potential liability issues. Similarly, while one third of comments made by non-profit organizations mentioned liability, none provided a substantive or extensive discussion of issues surrounding liability.¹⁹³ A low percentage (2.42%) of individuals also expressed a concern about legal liability associated with V2V technology.¹⁹⁴ One commenter expressed his concern about the “complex legal liability . . . issues to be worked out as a society before such technology is implemented.”¹⁹⁵

d. Other Concerns

The individual comments demonstrate that, although this rulemaking may have served to provide a forum for the public to be heard, this function did not necessarily lead to information that can help with policymaking. One individual comment simply read: “Seriously, enough. I strongly object.”¹⁹⁶ This type of perfunctory commenting from members of the general public is not unique to the V2V communications proceeding, and has in fact been observed both before¹⁹⁷ and after¹⁹⁸ the implementation of e-rulemaking.

192. Joerg Borchert et al., Infineon Techs., *Comments*, REGULATIONS.GOV 5 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0593&attachmentNumber=1&disposition=attachment&contentType=pdf>.

193. See, e.g., Marc Scribner, Research Fellow, Competitive Enterprise Institute, *Comments of the Competitive Enterprise Institute*, REGULATIONS.GOV 4 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0662&attachmentNumber=1&disposition=attachment&contentType=pdf> (discussing implementation of V2V communications systems as creating “large and as yet unanticipated . . . products liability risks”).

194. *Supra* Table 4.

195. Richard Maunder, *Comments*, REGULATIONS.GOV (Nov. 10, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0864>.

196. Heath Heilmann, *Comments*, REGULATIONS.GOV (Oct. 22, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0341>.

197. “Of those comments submitted by citizens, most were only the briefest of letters. Often they were handwritten notes; sometimes they expressed flippant, derogatory remarks towards the agency; and sometimes they were obviously cribbed from a grassroots group’s form letter.” Coglianesi, *supra* note 77, at 951.

198. Mendelson, *supra* note 50, at 1360–62.

We also discovered that a substantial number of individual commenters expressed concerns about health effects of electromagnetic radiation. Individual commenters mentioned health in the text of 41.82% of their comments; 13.40% mentioned both health and a term associated with electromagnetic radiation.¹⁹⁹ Certain commenters were adamant that V2V communications technology could potentially cause catastrophic health effects;²⁰⁰ they did not appear to be open to changing their minds based on findings from federal agencies.²⁰¹ Some of those concerned with the health effects of electromagnetic radiation argued that implementation of V2V technology could cause persons concerned with their health to import foreign cars.²⁰² In addition, some individuals were specifically concerned with liability related to the potential health impacts of V2V communications technology.²⁰³ NHTSA may want to consider how to address concerns about health effects and possibly forestall these commenters from skewing subsequent rulemaking efforts concerning V2V communications technology.

IV. DISCUSSION OF RESULTS

In this section, we discuss three specific questions that may be informed by our analysis. First, what do these comments reveal about public acceptance of V2V technology? Second, how might NHTSA respond to public concerns about the health effects of V2V communications technology? Finally, what lessons can be derived for the upcoming Privacy Impact Assessment?

199. To determine whether a comment discussed electromagnetic radiation or a similar term we searched for: EMR, electromagnetic, and EHS.

200. Snyder, *supra* note 149.

201. Rosemarie Russell, *Comments*, REGULATIONS.GOV (Sep. 26, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0160> (“Federal law is the supreme law of the land, but there is no constitutional provision that says federal facts are the supreme facts of the land The scientific truth, whatever it may be, lies outside of the FCCs regulations about what is safe or unsafe.”).

202. *See, e.g.*, Anonymous, *supra* note 148.

203. Tracy Hendershott, *Comments*, REGULATIONS.GOV (Oct. 22, 2014), <http://www.regulations.gov/#!documentDetail;D=NHTSA-2014-0022-0378>.

A. WHAT, IF ANYTHING, DO THE COMMENTS REVEAL ABOUT PUBLIC ACCEPTANCE OF V2V COMMUNICATIONS TECHNOLOGY?

In general, individual commenters voiced concern about the implementation of V2V technology.²⁰⁴ Some of these comments raised concerns about privacy²⁰⁵ and security²⁰⁶ that NHTSA could—and did—foresee. However, many of these concerns related more specifically to the potential health impacts of electromagnetic radiation associated with V2V communications devices.²⁰⁷ Similar concerns have been voiced in several prior rulemaking proceedings by various federal agencies.²⁰⁸ The public comments filed in response to the ANPRM provide a “red flag” to NHTSA concerning potential public acceptance of V2V communications technologies.²⁰⁹

The fact that most individuals who commented in this proceeding were against V2V communications does not imply that the general public as a whole would not support and adopt this technology. According to some scholars, individuals are only motivated to participate in policy-making where the potential benefits to them outweigh the costs of participation.²¹⁰ Under this theory, individuals would only be induced to undertake the costs of obtaining information about and commenting on NHTSA’s V2V policy-making if they believed they stood to benefit or be harmed by changes to the proposed policy—including forbearance of V2V rulemaking altogether. Consequently, the individuals who elected to leave comments are probably significantly more opposed to V2V technology than the general public as a whole. The V2V comments made by individuals cannot—and should not—be interpreted as representative of general public opinion.

However, these comments still provide important insight into issues NHTSA may face in implementing V2V communications technology. Individuals who were motivated to comment on the rulemaking proceeding may also be motivated

204. See *supra* text accompanying notes 141–48 and 170–75.

205. See Himmer, *supra* note 115.

206. See Martin, *supra* note 145.

207. Snyder, *supra* note 149.

208. See, e.g., Cellular Phone Taskforce, et al. v. Fed. Comm’n Comm’n, 205 F.3d 82, 92 (2000).

209. For further discussion of how NHTSA might respond to the health concerns, see *infra* Part IV.B.

210. Cramton, *supra* note 57, at 529.

to undertake additional actions to block adoption of V2V communications devices—including co-opting subsequent efforts to obtain feedback from the public and filing suit to contest the validity of rulemaking efforts. Additionally, individual commenters who are uneasy about the implications of V2V communications technology may sound an alarm with political actors, who may then seek to influence NHTSA's rulemaking efforts.²¹¹ This may be particularly problematic with respect to privacy concerns, an issue of wide interest to both the public and Congress.²¹²

While individual commenters generally offered broad critiques, comments made by many other stakeholder groups discussed both specific concerns and offered specific solutions. These comments provide NHTSA with a rich overview of potential issues it may face in implementing V2V communications technology. One unforeseen consequence of the ANPRM might be that it could mobilize interests that would oppose implementation of V2V communications technology.²¹³ Since public acceptance is a critical issue in the adoption and deployment of life-saving V2V communications technology, the comments in response to the ANPRM should prove particularly useful to NHTSA.

B. HOW MIGHT NHTSA RESPOND TO PUBLIC CONCERNS ABOUT HEALTH EFFECTS OF V2V COMMUNICATIONS TECHNOLOGY?

The large number of individual comments regarding the potential health effects of electromagnetic radiation caused by V2V communications devices appears to be driven, in part, by concerted efforts by interested groups to solicit public participation.²¹⁴ To the extent that these comments are the

211. See McCubbins & Schwartz, *supra* note 55, at 168.

212. Cf. Glenn Greenwald, *Major Opinion Shifts, in the US and Congress, on NSA Surveillance and Privacy*, GUARDIAN (July 29, 2013), <http://www.theguardian.com/commentisfree/2013/jul/29/poll-nsa-surveillance-privacy-pew> (explaining that Americans are more concerned about civil liberties abuses, including privacy, than terrorism for the first time since September 11, 2001).

213. For a discussion of how public participation may accomplish this role, see West, *supra* note 99, at 73.

214. See, e.g., EMF Refugee, *Take Action: NHTSA Mandating Vehicle to Vehicle Communication in Every Vehicle!*, MICROWAVE FACTOR (Oct. 14, 2014), <http://emfrefugee.blogspot.com/2014/10/take-action-nhtsa-mandating-vehicle-t-o.html>; *Urgent Action Needed: Mandatory Wireless in all American-Made*

result of an organized effort to encourage public comments, this should alert NHTSA to an issue that may need to be addressed in the full NPRM.

NHTSA may choose to address the health-related concerns expressed by commenters to potentially reassure the public of the safety of V2V communications devices. In fact, one group has suggested that concerns about the health impacts of V2V communications devices may pose an unanticipated barrier to implementation and “should be thoroughly researched and addressed prior to deployment” of the technology.²¹⁵ NHTSA has been praised for its ability to respond to contrary public sentiment in past rulemaking efforts.²¹⁶ While, in that instance, the agency did not change the policy in response to public concerns, it made a concerted effort to engage those who were concerned and utilized the information it obtained through this engagement to better educate the public about its policy.²¹⁷ NHTSA could utilize the comments regarding the health effects of V2V communications similarly: explore the issue to fully understand public concerns in this area, and then use that information to craft a public education campaign that would help NHTSA meet its goal of widespread public acceptance.

If NHTSA does choose to explore health issues related to V2V communications technology, the experience of the FCC concerning persistent public concern about the potential negative health effects of the radio frequency (RF) energy emitted by cellular telephones should prove instructive. In March 2013, the FCC undertook a reevaluation of its RF standards for cell phones,²¹⁸ prompted, in part, by the Government Accountability Office, the investigative arm of

Cars, CITIZENS FOR SAFE TECH. (Oct. 18, 2014), <http://citizensforsafetechnology.org/urgent-action-needed-Mandatory-wireless-in-all-American-made-cars,66,4045>.

215. Strassburger, *supra* note 116, at 13, attachment D.

216. Mendelson, *supra* note 50, at 1366 (describing NHTSA’s past effort as “an impressive counterexample to the pattern of agency dismissiveness of public comments”).

217. *Id.*

218. *Radio Frequency Safety*, FED. COMM. COMMISSION, <http://www.fcc.gov/encyclopedia/radio-frequency-safety> (last visited Apr. 9, 2015).

Congress.²¹⁹ The FCC had adopted an RF standard for cell phones in 1996, based on recommendations of a wide variety of organizations.²²⁰ Since 1996, however, public concern about RF emissions from cell phones has continued, and the FCC has created a lengthy section on its website to address these concerns.²²¹

Regardless of whether NHTSA engages with the health concerns expressed by some commenters, the large proportion of comments concerning this issue may serve as potential warning to NHTSA about an unforeseen public concern about introducing V2V communications technology in all new light vehicles. In this sense, these comments have fulfilled an important function of public participation in administrative decision-making by helping NHTSA anticipate potential objections to policy-making in this area.²²² Even if the proposed rule does not undergo substantive changes in response to these comments, policy-making is still improved because NHTSA has become better able to implement its policy.

C. LESSONS FOR THE PRIVACY IMPACT ASSESSMENT

NHTSA has elected to further develop privacy protections for V2V communications systems during a separate Privacy Impact Assessment (PIA).²²³ As part of this process, NHTSA will release a draft PIA “provid[ing] the public with a more detailed basis on which to evaluate potential privacy risks and proposed mitigation controls associated with V2V technology” and solicit additional comments from the public.²²⁴ Given that many commenters have already discussed some of their privacy concerns during the initial policy-making effort,²²⁵ it may be

219. See U.S. GOV'T ACCOUNTABILITY OFFICE, EXPOSURE AND TESTING REQUIREMENTS FOR MOBILE PHONES SHOULD BE REASSESSED 2 (2012), available at <http://www.gao.gov/assets/600/592901.pdf>.

220. *Radio Frequency Safety*, *supra* note 218.

221. *Wireless Devices and Health Concerns*, FED. COMM. COMMISSION, <http://www.fcc.gov/guides/wireless-devices-and-health-concerns> (last visited Jan. 25, 2015).

222. McCubbins & Schwartz, *supra* note 55, at 168.

223. Federal Motor Vehicle Safety Standards: Vehicle-to-Vehicle (V2V) Communications, 79 Fed. Reg. 49,270, 49,273 (proposed Aug. 20, 2014) (to be codified at 49 C.F.R. pt. 571).

224. *Id.*

225. See *supra* text accompanying notes 131–61.

interesting to ask whether NHTSA's PIA may be informed by comments filed in response to the ANPRM.

Some comments included specific and extensive discussions of how V2V communications technology might threaten privacy and what steps might be taken to minimize these threats. In particular, comments from the privacy advocacy groups may provide guidance, as these groups are probably the most likely to pursue legal action after the final rule is promulgated. If NHTSA has already indicated in its analysis of V2V communications technology that it may adopt some of the privacy protections recommended by advocacy groups, emphasizing this agreement in the PIA might help NHTSA highlight its common ground with privacy advocates.

NHTSA may also be able to use the PIA comment process build public trust, possibly leading to increased public acceptance of the final V2V rules.²²⁶ The lack of transparency about data usage is a major concern in the privacy literature;²²⁷ this concern was echoed in many comments in response to the ANPRM.²²⁸ However, according to a survey completed by AAA, individuals may be willing to share information if they understand how it is being used.²²⁹ By providing additional information about potential privacy protections through the draft PIA, NHTSA may demonstrate its willingness to transparently discuss data collection and usage. By acknowledging concerns articulated during the initial V2V comment period, NHTSA may demonstrate that it is willing to

226. Professor Wang and Professor Wart studied the impact of various types of public participation in government, and found that public participation can lead to trust by "by linking participation to improvements in service competence and changes in administrative ethical behavior." XiaoHu Wang & Montgomery Van Wart, *When Public Participation in Administration Leads to Trust: An Empirical Assessment of Managers' Perceptions*, 67 PUB. ADMIN. REV. 265, 276 (2007).

227. See DANIEL J. WEITZNER ET AL., *TRANSPARENT ACCOUNTABLE DATA MINING: NEW STRATEGIES FOR PRIVACY PROTECTION*, MIT COMPUTER SCI. AND ARTIFICIAL INTELLIGENCE LAB. (2006), available at <http://18.7.29.232/bitstream/handle/1721.1/30972/MIT-CSAIL-TR-2006-007.pdf>.

228. See, e.g., Rotenberg et al., *supra* note 134, at 7.

229. Kathleen Bower, Vice President, AAA, *Federal Motor Safety Standards: Vehicle-to-Vehicle (V2V) Communications Docket ID: NHTSA-2014-0022-0002*, REGULATIONS.GOV 2 (Oct. 20, 2014), <http://www.regulations.gov/contentStreamer?documentId=NHTSA-2014-0022-0386&attachmentNumber=1&disposition=attachment&contentType=pdf>.

respond to public fears about potential threats to privacy caused by V2V communications technologies.²³⁰

Finally, it may be that there are no assurances NHTSA can provide that will entirely forestall privacy concerns. Some privacy concerns stem not from what might be done with the information collected by V2V systems today, but rather what might be done with this information in the future.²³¹ If the data recorded is anonymized and quickly destroyed, it is still the creation of data where none previously existed. Policy makers will need to ensure that individual privacy interests associated with these data are protected into the future.

V. CONCLUSION

In this Article, we have examined NHTSA's initial rulemaking efforts concerning V2V communications technology, focusing on how concerns identified in the public comments filed in response to NHTSA's ANPRM may aid agency rulemaking in this important area. To do so, we first examined the virtues and vices of public participation in rulemaking proceedings. We investigated the changes to public participation in rulemaking proceedings following the adoption of e-filing of comments in agency rulemaking. As part of our evaluation of the public participation in response to NHTSA's ANPRM, we assessed the requirements for public participation under the Administrative Procedures Act. This process allowed us to explore the characteristics of constructive public participation generally, then assess whether—and how—these characteristics were present in NHTSA's V2V ANPRM.

To make this assessment, we qualitatively and quantitatively analyzed the public comments received by NHTSA concerning V2V communications technologies. Over 800 individuals and groups responded to the ANPRM; almost ninety-five percent of comments were provided by members of the general public. We discussed major considerations articulated by various stakeholders, focusing primarily on those concerns related to privacy, security, and liability. We found that some of these concerns were mentioned frequently within particular types of stakeholder groups, and that there

230. *Cf.* Mendelson, *supra* note 50, at 1366 (showing NHTSA's ability to do so on a previous issue).

231. *See, e.g.*, Anonymous, *supra* note 148.

were substantial differences in the prevalence of these concerns across stakeholder groups. We then reviewed the content of the comments, and discussed some of the prominent trends within each stakeholder group.

We explored what, if anything, the public comments in the ANPRM could tell NHTSA about public acceptance of V2V communications technologies. In general, individual commenters voiced concern about the implementation of V2V technology. Some of these comments raised concerns about privacy and security that NHTSA could—and did—foresee. However, many of these concerns related more specifically to the potential health impacts of electromagnetic radiation associated with V2V communications devices. The public comments filed in response to the ANPRM provide a “red flag” to NHTSA concerning certain, perhaps unforeseen, barriers to general public acceptance of V2V communications technologies. This advance notice will permit NHTSA to address these issues fully as it proceeds with its rulemaking efforts. For this reason, we conclude that the public comments filed in the ANPRM provided constructive public participation in NHTSA’s rulemaking proceedings.
