

**THE TELECOMMUNICATIONS ACT AND STATUTORY
INTERPRETATION: *NATIONAL CABLE & TELECOMMUNICATIONS
ASSOCIATION v. BRAND X INTERNET SERVICES***

I. INTRODUCTION

In the ten years since the Telecommunications Act of 1996¹ was signed into law, technology in the telecommunications industry has exploded. New technologies have supplanted old technologies, and further complicating matters, technologies and platforms have merged.² This has made it difficult for the Federal Communications Commission (the Commission) and the courts to determine how the Act applies to new technology in the telecommunications field.³ Though some scholars have argued that the Telecommunications Act of 1996 is outdated and should be revised by Congress,⁴ the fact remains that

1. 47 U.S.C. §§ 151–615b (2000).

2. See Kevin Werbach, *Breaking The Ice: Rethinking Telecommunications Law for the Digital Age*, 4 J. TELECOMM. & HIGH TECH. L. 59, 61 (2005) (noting that historical distinctions between communications networks are melting away due to convergence).

3. Former Federal Communications Commission Chairman Michael Powell has stated: [The Commission is] increasingly being asked to answer questions that are not really questions, but identification of issues. The FCC is in essence being asked to write the new rule. Even when it is interpreting a rule in a statute, rarely is the statute offering anything clear. So even if you are just fighting over ambiguity, you are really writing new law. . . . This is beginning to be a warning sign to the Congress because something has to be changed . . . because more and more of the agency is being forced to do the Congress' job and the organic statute is losing its applicability and relevance.

Michael K. Powell, *The Digital Migration: Toward a New Telecom Act*, 4 J. TELCOMM. & HIGH TECH. L. 5, 14–15 (2005). Powell has also stated that the current Telecommunications Act is “broken,” and that as the statute becomes more ambiguous, interpreting the statute becomes more politicized. *Id.* at 21.

4. Konrad L. Trope & Paula K. Royalty, *Current Legal Issues Surrounding the Regulation of Voice Over Internet Protocol*, J. PROPRIETARY RTS., May 2004, at 10, 13 (“If consumers and providers alike want the courts to provide consistent decisions, then Congress may need to approach a complete overhaul of the Communications Act. . . . [T]he FCC, at the moment, are ‘stuck’ with applying potentially outdated definitions, codified in the Communications Act, to rapidly changing technological paradigms.”); see also Jared S. Dinkes, *Rethinking the Revolution: Competitive Telephony In a Voice Over Internet Protocol Era*, 66 OHIO ST. L.J. 833, 838 (2005) (arguing that “the future of telephony must not lie within the regulatory framework of the past. . . . [I]t is time for a new act addressing the realities of the telecommunications industry.”); Powell, *supra* note 3, at 21 (proposing that instead of rewriting the Telecommunications Act of 1996, Congress should draft a separate statute dedicated to the regulation of Internet Protocol).

until Congress acts, the Commission and the courts must wrestle with the statutory language they have been given. As a result, the statutory approach chosen by the courts to interpret the Telecommunications Act plays an important role for the future of the telecommunications industry. This was demonstrated in *National Cable & Telecommunications Association v. Brand X Internet Services (Brand X)*.⁵

In September of 2000, the Commission initiated a rulemaking proceeding to determine whether cable companies that offer broadband Internet service should be subject to regulation under the Telecommunications Act of 1996.⁶ The Commission was faced with the issue of whether, according to the language of the Act, cable modem service was a “telecommunications service,” which is subject to regulation, or an “information service,” which is not subject to regulation.⁷ In March of 2002, the Commission reached the conclusion that cable modem service providers were not subject to regulation because they offer an information service, not a telecommunications service.⁸ Subsequently, in *Brand X*, the Supreme Court of the United States upheld the Commission’s ruling.⁹

In *Brand X*, the Court was faced with the issue of whether the Commission’s conclusion that cable modem service providers are “information service” providers and not “telecommunications service” providers was a lawful construction of the Telecommunications Act of 1996.¹⁰ The Court held

Congress has recently proposed a bill that would lift regulations of the Telecommunications Act for broadband technology, which suggests that the legislature favors deregulation. See Martha McKay, *Verizon Praises Broadband Bill; Plan Would Lift Regulations of Telecommunications Act*, THE RECORD, July 28, 2005, at B1 (arguing that “silos of regulation” have hampered the growth of broadband).

5. Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs., 545 U.S. 967 (2005).

6. *Id.* at 977.

7. In re Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, 17 F.C.C.R. 4798, 4799–800 (2002) [hereinafter Declaratory Ruling].

8. *Id.* at 4802.

9. *Brand X*, 545 U.S. at 980. The Court of Appeals for the Ninth Circuit had previously overturned the Commission’s statutory construction. *Brand X Internet Servs. v. Fed. Comm’n*, 345 F.3d 1120, 1132 (9th Cir. 2003). The Court of Appeals held that the Commission could not permissibly construe the Telecommunications Act to exempt cable companies providing Internet service from regulation. *Id.* However, rather than analyzing the Commission’s statutory construction under *Chevron*, the Court of Appeals based its decision on the stare decisis effect of *AT&T Corp. v. Portland*, 216 F.3d 871 (9th Cir. 2000), in which the court held that cable modem service was subject to regulation. *Id.*

10. *Brand X*, 545 U.S. at 974.

that the *Chevron* doctrine¹¹ applied, that the statute was ambiguous, and that the Commission's interpretation was reasonable.¹²

In deciding that the Act was ambiguous, the Court looked at the ordinary meaning and regulatory history of the relevant statutory language.¹³ However, rather than relying on ordinary meaning and regulatory history to interpret the Telecommunications Act, the better approach is to interpret the Telecommunications Act dynamically. A dynamic approach is best because in addition to statutory text and legislative history and purpose, it considers current context and understandings. This is particularly important for the telecommunications industry, where old technology and old understandings of the Act quickly become obsolete.

Part II of this casenote introduces the background of the *Brand X* decision, including the case's factual background, the relevant statutory provisions of the Telecommunications Act, the Commission's ruling, the Court's analysis, and the dissent's analysis. Part III critiques the Court's reasoning and suggests alternative statutory approaches, including purposivism, originalism, and dynamism. This casenote concludes by explaining that dynamism is the best approach for interpreting the Telecommunications Act because in the telecommunications field, where technology is constantly evolving, the meaning of the Telecommunications Act necessarily changes over time. As such, its application and interpretation should reflect this change.

II. BACKGROUND

A. *Factual Background*

1. Internet Technology

In an effort to attract new customers, companies that provide telecommunications and Internet service are constantly improving

11. The *Chevron* doctrine provides that unless a statute is unambiguous, courts must defer to the agency's interpretation as long as it is a reasonable policy choice. *Id.* at 982; *Chevron U.S.A., Inc., v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843 (1984).

12. *Brand X*, 545 U.S. at 981.

13. *Id.* at 989.

technology.¹⁴ However, with new technology comes questions of how to regulate it.¹⁵

When the Internet was first introduced to the public, it was offered in the form of “dial-up” service. When a consumer uses dial-up service, his computer modem “dials-up” an Internet service provider (ISP) and connects to the ISP via local telephone wires. The ISP then links the consumer’s computer to the Internet. Most ISPs that offer dial-up services are “non-facilities based” ISPs, meaning they do not own the facilities that transmit the data, i.e., the telephone wires and interconnection devices. America Online is an example of a non-facilities based ISP. Dial-up connections transmit data slowly because of the technological limitations of local telephone wires.¹⁶ Thus, dial-up has been known as “narrowband,” in reference to the narrower capabilities of the data communication wires.¹⁷ Dial-up is regulated by the Telecommunications Act of 1996.¹⁸

Broadband Internet technology allows much higher data transfer speeds than dial-up.¹⁹ There are two principal types of broadband services: cable modem service, which is offered over cable networks, and Digital Subscriber Line (DSL), which is offered over telephone lines. For cable modem service and DSL, cable companies and telephone companies, respectively, can act as ISPs themselves or can lease their transmission facilities to non-facilities based ISPs.

14. New technology allows broadband Internet access to be offered over wide-area wireless networks, fiber-optic cable, powerlines, and Ka-band satellite. See Brief for Wash. Legal Found. as Amici Curiae Supporting Petitioners at 2–4, *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967 (2005) (Nos. 04-277, 04-281); see also Angele A. Gilroy & Lennard G. Kruger, Cong. Res. Serv., *Broadband Internet Access: Background and Issues*, at 2–4 (Dec. 5, 2003), available at <http://usinfo.state.gov/usa/infousa/tech/tech/broadband.pdf> (explaining new broadband technology).

15. For a discussion of “broadband over power lines” and a proposal for its regulation, see generally Erik S. Johnson, “*It’s Electric!*”: *An Argument for Certainty and Parity in Regulation to Welcome the New Age of Broadband Delivery—Broadband Over Power Lines*, 39 GA. L. REV. 1401 (2005).

16. *Brand X*, 545 U.S. at 975.

17. *Id.*

18. 47 U.S.C. § 151 (2000).

19. In 2004, “President Bush set a national goal of making affordable broadband available to all Americans by 2007,” but as of April 2005, “the United States had slipped from 13th to 16th place among nations globally in broadband penetration.” Bill Owens, *Broaden Broadband: U.S. Losing Ground to Other Countries on High-Speed Internet Access*, PITT. POST-GAZETTE, June 14, 2005, at E2. For the benefits of broadband technology, see Brief for the Respondents States and Consumer Groups in Opposition to Petitioners, *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.* at 1–2, 545 U.S. 967 (2005) (Nos. 04-277, 04-281). See also Gilroy & Kruger, *supra* note 14, at 1–2 (explaining why broadband is important).

Currently, DSL is subject to regulation under the Telecommunications Act of 1996,²⁰ which means that DSL providers, i.e., telephone companies, must provide access to their facilities, charge reasonable fees for such access, interconnect their facilities, and contribute to the universal service fund.²¹ The primary justification for the regulation of DSL is that historically, “the telephone network was the primary, if not exclusive, means through which information service providers can gain access to their customers.”²²

Unlike dial-up and DSL, cable modem service is not subject to regulation. The decision not to regulate cable companies was made by the Commission²³ in *In re Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*²⁴ (the *Declaratory Ruling*). This decision not to regulate cable modem service providers has serious implications for the future of the telecommunications field, including growth, competition, pricing, accessibility, and innovation.²⁵

2. The Parties in *Brand X*

The petitioners to the Supreme Court in *Brand X* were the parties opposed to regulation of cable modem service.²⁶ The petitioners included the Commission, cable companies, telecommunications companies, and telecommunications associations.²⁷ The respondents included the parties in

20. But see *In re Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities*, 17 F.C.C.R. 3019, 3030, ¶ 20 (2002) (stating that the Commission has tentatively concluded that DSL service provided by facilities-based telephone companies should be classified solely as an information service).

21. 47 U.S.C. §§ 201, 202, 251, 254 (2000).

22. Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967, 1001 (2005) (quoting Declaratory Ruling, *supra* note 7, at 4825, ¶ 44) (emphasis omitted).

23. The Commission is the administrative body authorized to interpret the Telecommunications Act. See 47 U.S.C. §§ 151, 201(b) (2000).

24. Declaratory Ruling, *supra* note 7, at 4798.

25. Werbach, *supra* note 2, at 60 (stating that “[d]ecisions about telecommunications policy are crucial.”).

26. *Id.* at 14.

27. See Brief for the Federal Petitioners at II, Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967 (2005) (Nos. 04-277, 04-281). The entire list of petitioners included: Brand X Internet LLC, the National League of Cities, the National Association of Telecommunications Officers and Advisors, the United States Conference of Mayors, the National Association of Counties, the Texas Coalition of Cities for Utility Issues, Earthlink, Inc., Verizon Internet Solutions d/b/a Verizon.net, Center for Digital Democracy, People of the State of California ex rel. Bill Lockyer, the Public Utilities Commission of the State of California, Buckingham Township, Conestoga Township, East Hempfield Township, Martic Townships, and Providence Township. *Id.*

favor of regulation of cable modem service, such as non-facilities based ISPs, telecommunications companies, and public interest groups.²⁸

In general, the petitioners did not want regulation because they did not want to be required to offer access to non-facilities based ISPs, which would hinder their competitive advantage.²⁹ The respondents, on the other hand, wanted regulation because it would allow them to access the cable companies' transmission facilities, which would allow them to offer cable modem service.³⁰ The respondents argued that this would benefit consumers by increasing competition, which would decrease price.³¹

B. *The Telecommunications Act of 1996*

In *Brand X*, the two relevant statutory definitions in the Telecommunications Act of 1996 were "telecommunications service" and "information service."³² The Act defines "telecommunications service" as "the offering of telecommunications for a fee directly to the public . . . regardless of the facilities used."³³ According to the Act, "telecommunications" is "the transmission, between or among points specified by the user, of information of the user's choosing, *without change* in the form or content of the information as sent and received."³⁴ The Act defines "information service" as "the offering

28. See *id.* at II–III. The entire list of respondents included: National Cable & Telecommunications Association, SBC Communications Inc., World-Com, Inc., Cox Communications, Inc., AT&T Corp., Competitive Telecommunications Association, Vermont Public Service Board, the Information Technology Association of America, Focal Communications Corporation, Charter Communications, Inc., Vermont Public Service Board, the State of Vermont, the Vermont Department of Public Service, the Utility, Cable & Telecommunications Committee of the City Council of New Orleans, Association of Communications Enterprises, Time Warner, Inc., Time Warner Cable, the City and County of San Francisco, BellSouth Corporation, and BellSouth Telecommunications, Inc. *Id.*

29. See Brief for the Federal Petitioners, *supra* note 27; Brief for Wash. Legal Found. as Amici Curiae Supporting Petitioners, *supra* note 14.

30. See Brief for the Respondents States and Consumer Groups in Opposition to Petitioners, *supra* note 19.

31. There are strong arguments for both sides of the debate. See generally RICHARD A. EPSTEIN, PRINCIPLES FOR A FREE SOCIETY 279–318 (1998); Brief of AARP, Free Press and Nat'l Internet Alliance, as Amici Curiae Supporting Respondents at 7–21, Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967 (2005) (Nos. 04-277, 04-281) (arguing in favor of regulation). But see Brief for the Federal Petitioners at 14, Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967 (2005) (Nos. 04-277, 04-281) (arguing against regulation). The Court's ultimate holding was seen by some as a "win for cable companies and a loss for consumers" due to decreased competition. *Supreme Court Decision Seen As Boon to Cable Companies*, ANDREWS COMPUTER & INTERNET LITIG. REP. (July 12, 2005).

32. Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967, 986 (2005).

33. 47 U.S.C. § 153(46) (2000).

34. § 153(43) (emphasis added).

of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.”³⁵

The Act regulates telecommunications service providers as common carriers, but does not regulate information service providers as common carriers.³⁶ Every “telecommunications carrier”—defined to mean “any provider of telecommunications services”—is “treated as a common carrier . . . to the extent that it is engaged in providing telecommunications services.”³⁷ As a result, telecommunications service providers are subject to several regulations that information service providers are not.³⁸ Like other common carriers, a telecommunications carrier is required “to furnish such communication service upon reasonable request therefor”³⁹ and may not discriminate in its sales of telecommunications services.⁴⁰ Telecommunications carriers are also required to interconnect their facilities⁴¹ and to contribute to the federal “universal service” fund.⁴² Meanwhile, when a communications service constitutes an “information service,” it is presumptively unregulated.⁴³

C. The Commission’s Interpretation

In the *Declaratory Ruling*, the Commission conceded that cable modem service had a telecommunications component, but ultimately determined that cable modem service providers did not “offer” this telecommunications component because the telecommunications component of cable modem service was fully integrated and inseparable from the information service component.⁴⁴ First, the Commission addressed whether cable modem service is an information service.⁴⁵ The Commission found that cable modem service providers offered customers Internet functionality services, like access to e-

35. § 153(20).

36. *Brand X*, 545 U.S. at 975.

37. § 153(44).

38. Although the regulation of common carriers is mandatory, “the Commission must forbear from applying [the provisions] if it determines that the public interest requires it.” *Brand X*, 545 U.S. at 976 (citing Telecommunications Act §§ 160(a), (b)).

39. 47 U.S.C. § 201(a) (2000).

40. § 202.

41. § 251.

42. § 254.

43. Although the Commission determined that cable modem service providers did not offer a telecommunications component and therefore “declined to apply mandatory Title II common-carrier regulation to cable companies, it invited comment on whether under its Title I jurisdiction it should require cable companies to offer other ISPs access to their facilities on common-carrier terms.” *Brand X*, 545 U.S. at 979.

44. *Declaratory Ruling*, *supra* note 7, at 4822–23, ¶ 40.

45. *Id.* at 4820–21, ¶¶ 34–35.

mail and use of the cable company's Domain Name Service (DNS), which allows customers to browse the World Wide Web and to transfer files on the Internet.⁴⁶ The Commission held that these services were information services because they involved the manipulation of information.⁴⁷ In particular, the Commission found that DNS matched a third-party Web-site address with the IP address of the third party's host server.⁴⁸ This suggested to the Commission that the viewing of third party Web-sites involved the alteration of information by the cable company's DNS.⁴⁹ Thus, the Commission concluded that DNS was an information service.⁵⁰ It was because of DNS and the other Internet functionality services that the Commission determined that cable modem service providers offered an information service.⁵¹

Next, the Commission addressed whether, in addition to information services, cable modem service providers offered telecommunications.⁵² The Commission conceded that the physical connection to the Internet was a telecommunications component and that cable modem service providers used this telecommunications component to transmit Internet service to their customers.⁵³ However, the Commission determined that whether cable modem service providers "offer" telecommunications "turn[ed] on the nature of the functions the end user is offered."⁵⁴ The Commission found that the high-speed wire was always used in connection with the information processing capabilities that were provided by Internet access.⁵⁵ In other words, the connection between end-users' computers and cable modem service providers was used to access the World Wide Web, e-mail, and other services "rather than 'transparently' to transmit and receive ordinary-language messages without computer processing or storage of the message."⁵⁶ Hence, the Commission concluded that the transmission component of cable modem service was not offered in a manner that was separate from the data-processing capabilities of cable modem service.⁵⁷ Rather, the Commission determined, "[a]s provided to the end user[,] the telecommunications is part and parcel of cable modem service and is integral to its other capabilities."⁵⁸ Further, the Commission reasoned that the type of facility used was not a dispositive factor

46. *Id.* at 4821, ¶ 37.

47. *Brand X*, 545 U.S. at 999.

48. *Id.*

49. *Id.*

50. *Id.*

51. *Id.* at 1000.

52. Declaratory Ruling, *supra* note 7, at 4823, ¶ 39.

53. *Id.* at 4823, ¶ 40.

54. *Id.* at 4822, ¶ 38.

55. *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 988 (2005).

56. *Id.*

57. Declaratory Ruling, *supra* note 7, at 4823, ¶ 39.

58. *Id.*

for determining the statutory definition of “telecommunications service” and thus, it was irrelevant that cable modem service providers used their own facilities.⁵⁹

D. The Majority Applied Chevron to the Commission’s Construction

The *Brand X* Court held that *Chevron* applied to their review of the Commission’s construction of the Telecommunications Act.⁶⁰ Under the *Chevron* doctrine, if a statute is ambiguous, and if the implementing agency’s construction is reasonable, a federal court must accept the agency’s construction of the statute, even if the court does not believe that it is the best statutory interpretation.⁶¹

In reaching the determination that *Chevron* applied, Justice Thomas, writing for the Court, noted that “Congress has delegated to the Commission the authority to ‘execute and enforce’ the Communications Act, § 151, and to ‘prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions’ of the Act, § 201(b).”⁶² The Court reasoned that these provisions gave the Commission the authority to develop binding legal rules, which it properly did in the *Declaratory Ruling*.⁶³ Therefore, the Court concluded, the *Chevron* doctrine applied.⁶⁴

The Court noted that *Chevron* is a two-step procedure for evaluating whether an agency’s interpretation of a statute is lawful.⁶⁵ The first step is whether the statute’s plain terms “directly address[] the precise question at issue.”⁶⁶ If the statute is ambiguous, then the second step is whether the agency’s construction is “a reasonable policy choice for the agency to make.”⁶⁷ If it is a reasonable policy choice, then the court must defer to the agency’s interpretation.⁶⁸

1. The Court Concluded that the Terminology of the Telecommunications Act is Ambiguous

The Court held that the term “offering” as used in the definition of “telecommunications service”⁶⁹ could have several reasonable interpretations

59. *Id.* at 4821, ¶ 35; see 47 U.S.C. § 153(46) (2000) (providing that the definition of “telecommunications service” applies “regardless of the facilities used”).

60. *Brand X*, 545 U.S. at 980.

61. *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843 (1984).

62. *Brand X*, 545 U.S. at 980.

63. *Id.* at 980–81.

64. *Id.* at 981.

65. *Id.* at 986.

66. *Chevron*, 467 U.S. at 843.

67. *Id.* at 845.

68. *Id.*

69. 47 U.S.C. § 153(46) (2000).

based on the “ordinary meaning of the word ‘offering,’”⁷⁰ and the regulatory history of the Telecommunications Act.⁷¹ Therefore, the Court concluded, the statutory provisions were not unambiguous.⁷²

a. The “Ordinary Meaning” of the Term “Offering”

The Court reasoned that although cable modem service providers offer consumers an information service via telecommunications, it did not follow “as a matter of ordinary language that they also ‘offe[r]’ consumers the high-speed data transmission” as a separate component.⁷³ To explain its conclusion, the Court analogized cable modem service providers to car dealerships.⁷⁴ It reasoned that based on ordinary language, a car dealership “offers” cars, but it does not “offer” the integrated components of a car, i.e., the engine and chassis.⁷⁵ For example, a consumer would say that he had bought his car from a car dealership, but not that he had purchased an engine, chassis, steering wheel, seats, etc. from the car dealership.⁷⁶ Though the Court conceded that while it was linguistically permissible to say that a car dealership “offers” the integrated components, it was not the common understanding.⁷⁷ The Court noted that this discrepancy between the common understanding and the linguistic permissibility further supported its conclusion that the term “offer” was ambiguous.⁷⁸

The Court determined that based on the Commission’s findings, the telecommunications component of the Internet service offered by cable modem service providers was fully integrated into the finished product.⁷⁹ The Court

70. *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 989 (2005).

71. *Id.* For example, the respondents argued that cable modem service providers necessarily “offer” the underlying telecommunications by transmitting services via telecommunications. *Id.* However, the Court held that “offering” could also mean a discrete, stand-alone offering of telecommunications, “i.e., an offered service that, from the user’s perspective, transmits messages unadulterated by computer processing.” *Id.*

72. *Id.* The Court did not reflect much on the legislative history of the Telecommunications Act to interpret the statute. Perhaps the Court purposefully refrained from doing so because the legislative history is arguably convoluted and inconclusive. See generally John D. Podesta, *Unplanned Obsolescence: The Telecommunications Act of 1996 Meets the Internet*, 45 DEPAUL L. REV. 1093 (1996) (arguing that Congress had two competing goals when it created the Act—deregulation and promoting competition).

73. *Brand X*, 545 U.S. at 989.

74. *Id.* at 990.

75. *Id.*

76. *Id.*

77. *Id.*

78. *Brand X*, 545 U.S. at 990.

79. *Id.* As summarized by the Court, the Commission concluded that cable modem service is fully integrated because “[a] consumer uses the high-speed wire always in connection with the information-processing capabilities provided by Internet access, and because the transmission is a necessary component of Internet access.” *Id.* (internal quotations omitted).

reasoned that like a car dealership, cable modem service providers offer a product, but do not “offer” the individual components of the Internet service.⁸⁰ The Court noted that the question of whether a component is fully integrated was a factual inquiry that was not always straightforward.⁸¹ The Court reasoned that this lent further credence to its conclusion that “the statute fails unambiguously to classify the telecommunications component of cable modem service as a distinct offering.”⁸²

b. The Regulatory History of the Telecommunications Act

The Court held that the regulatory history of the Telecommunications Act confirmed that the term “telecommunications service” was ambiguous.⁸³ The Court found that preceding the Telecommunications Act of 1996, the Commission had used the terminology of “basic” and “enhanced” to determine whether a certain type of service should be regulated.⁸⁴ This terminology derived from a ruling by the Commission in 1980 known as *Computer II*.⁸⁵ The Court found that Congress had substantially incorporated the meaning of the terms “basic” and “enhanced” into the Act’s definitions of “telecommunications service” and “information service.”⁸⁶ Thus, the Court reasoned, “basic service” is the analog to “telecommunications service,” and “enhanced service” is the analog to “information service.”⁸⁷ The Court noted that “the Commission defined those terms functionally, based on how the consumer interacts with the provided information.”⁸⁸ The Commission did not categorically label a service as “basic” or “enhanced,” but rather conducted a factual inquiry.⁸⁹ The Court reasoned that this regulatory history suggested

80. *Id.*

81. *Id.* at 991. “[T]he question may not always be straightforward whether, on the one hand, an entity is providing a single information service with communications and computing components, or, on the other hand, is providing two distinct services, one of which is a telecommunications service.” *Id.* (quoting *In re Federal-State Joint Board on Universal Service*, 13 F.C.C.R. 11501, 11530, ¶ 60 (1998) [hereinafter *Universal Service Report*]).

82. *Id.* at 992.

83. *Brand X*, 545 U.S. at 992.

84. *Id.* at 976.

85. *In re Amendment of Section 64.702 of the Commission’s Rules and Regulations (Second Computer Inquiry)*, 77 F.C.C.2d 384 (1980) [hereinafter *Computer II*].

86. *Brand X*, 545 U.S. at 992. “Congress passed the definitions in the Telecommunications Act against the background of this regulatory history, and we may assume that the parallel terms ‘telecommunications service’ and ‘information service’ substantially incorporated their meaning, as the Commission has held.” *Id.* (citing *In re Federal-State Joint Board on Universal Service*, 12 F.C.C.R. 8776, 9179–80, ¶ 788 (1997)); see also Scott Blake Harris et al., *Regulating Broadband*, 23 COMM. LAW. 1, 34 (2005) (noting that the Telecommunications Act of 1996 did not change the regulatory framework developed in *Computer II*).

87. *Brand X*, 545 U.S. at 977.

88. *Id.* at 993.

89. *Id.*

that the Telecommunications Act did not unambiguously classify services as either “telecommunications services” or “information services.”⁹⁰

The Court also noted that the Commission had previously held that “all those who provide some form of transmission services are not *necessarily* common carriers.”⁹¹ For example, the Commission had previously classified non-facilities based Internet service providers as pure information service providers who were not subject to common carrier regulation, even though non-facilities based Internet service providers transmit their services via telecommunications.⁹² This conflicted with the respondents’ argument that the 1996 Act unambiguously classified all entities that use telecommunications inputs to provide information service as telecommunications carriers.⁹³

The respondents also argued that under the *Computer II* rules the Commission had regulated facilities-based providers more heavily than non-facilities based providers.⁹⁴ While the Court conceded that this was true, it reasoned that the Commission had done so because it was concerned that local telephone companies would abuse their monopoly power.⁹⁵ The Court reasoned that this policy had not carried over to the Telecommunications Act of 1996.⁹⁶ Thus, it did not follow from the respondents’ argument that the Telecommunications Act unambiguously regulated facilities based providers.⁹⁷

2. The Court Concluded that the Commission’s Construction was a Reasonable Policy Choice

After the Court concluded that under Step One of *Chevron* the statutory language was ambiguous, the Court then addressed Step Two of *Chevron*: whether the Commission’s interpretation was a reasonable policy choice.⁹⁸ The respondents had argued that the Commission’s construction of the Telecommunications Act was unreasonable because it could potentially allow any communications provider to evade common-carrier regulation by bundling

90. *Id.*

91. *Id.* (quoting *Computer II*, *supra* note 85, at 431, ¶ 122 (emphasis added)); *see also* *Computer II*, *supra* note 85, at 435, ¶ 132 (“acknowledg[ing] the existence of a communications component” in enhanced service offerings).

92. *Brand X*, 545 U.S. at 993; Universal Service Report, *supra* note 81, at 11530, ¶ 60, 11540, ¶ 81.

93. *Brand X*, 545 U.S. at 994–95.

94. *Id.* at 995 (noting that the Commission required “local telephone companies that provided enhanced services to offer their wires on a common-carrier basis to competing enhanced-service providers”) (citing *In re Amendment of Sections 64.702 of the Commission’s Rules and Regulations (Third Computer Inquiry)*, 104 F.C.C.2d 958, 964, ¶ 4 (1986)).

95. *Id.* at 996.

96. *Id.*

97. *Id.*

98. *See Brand X*, 545 U.S. at 997.

its telecommunications with an information service.⁹⁹ For example, the respondents had argued that a telephone company could bundle an information service like voice mail together with telephone service, and thus avoid common-carrier regulation of its telephone service.¹⁰⁰ However, the Court determined that the Commission's holding was much narrower than argued by the respondents and that a telecommunications service provider could not avoid regulation by simply packaging the telecommunications offering with an information service offering.¹⁰¹ The Court interpreted the Commission's construction as saying that where a telecommunications input is fully integrated, is not separable from the information service, and is integral to the capabilities of the information service, it is not a telecommunications offering.¹⁰² For example, the Court reasoned that when a person makes a telephone call, the additional capability of voice-mail would only trivially affect the person's ability to convey and receive information.¹⁰³ By contrast, the Court reasoned, "the high-speed transmission used to provide cable modem service is a functionally integrated component of that service because it transmits data only in connection with the further processing of information and is necessary to provide Internet service."¹⁰⁴ Hence, the Court concluded that the adverse consequences cited by the respondents did not follow from the Commission's construction because "the Commission did not say that any telecommunications service that is priced or bundled with an information service is automatically unregulated."¹⁰⁵

In addition, the Court noted that the Commission had provided sufficient reasoning for its conclusion that DNS was an information service rather than a telecommunications service.¹⁰⁶ Because the Commission had provided sufficient reasoning for its construction and the potential adverse consequences were minimal, the Court held that the Commission's construction was reasonable.¹⁰⁷ Therefore, the Court determined that the second step of *Chevron* was met and affirmed the Commission's ruling.¹⁰⁸

99. *Id.*

100. *Id.* at 997.

101. *See id.*

102. *Id.* (citing Declaratory Ruling, *supra* note 7, at 4823, ¶ 39).

103. *Brand X*, 545 U.S. at 997.

104. *Id.* at 998.

105. *Id.* at 997.

106. *Id.* at 1000–01.

107. *Id.* at 1000.

108. *Brand X*, 545 U.S. at 997.

E. Justice Scalia's Dissent Focused on "What" is Being Offered

Justice Scalia argued in the dissent that the Commission's reading of the statute was implausible.¹⁰⁹ In his analysis, Justice Scalia focused on *what* cable modem service providers offered, rather than the *meaning* of the term "offer," which the majority had analyzed.¹¹⁰ Justice Scalia determined that the issue was "whether the individual components in a package being offered still possess sufficient identity to be described as separate objects of the offer, or whether they have been so changed by their combination with the other components that it is no longer reasonable to describe them in that way."¹¹¹ Ultimately, the dissent found that the telecommunications component of cable modem service was not so changed by its combination with the information service components and that it was in fact a separate object of the offer.¹¹²

First, Justice Scalia reasoned that while some joint offerings constitute one singular offering, like a car dealership offering a car, "it is ridiculous to deny that one part of a joint offering is being offered merely because it is not offered on a 'stand-alone' basis."¹¹³ Justice Scalia used the example of a pizzeria that offered pizza and delivery.¹¹⁴ He reasoned that even though the two services were packaged together, it was unreasonable to conclude that they were inseparable.¹¹⁵ Rather, a reasonable person would conclude that the pizzeria was in fact offering two services: (1) pizza and (2) delivery.¹¹⁶

Justice Scalia reasoned that, like the pizzeria, cable modem service providers offer two jointly packaged components: (1) the physical connection to the Internet (the telecommunications component) and (2) the Internet functionality services (the information service component).¹¹⁷ Justice Scalia came to this conclusion by viewing cable modem service from the consumer's point of view.¹¹⁸ He noted that aside from cable modem service, the two most common forms of Internet service were dial-up and DSL.¹¹⁹ The dissent found that in both dial-up and DSL, "the physical transmission pathway to the Internet is sold—indeed, *is legally required* to be sold—separately from the Internet functionality."¹²⁰ For example, for dial-up, the telephone company provides the physical connection and a separate Internet service provider

109. *Id.* at 1005 (Scalia, J., dissenting).

110. *Id.* at 1006.

111. *Id.* at 1006–07.

112. *Id.* at 1008.

113. *Brand X*, 545 U.S. at 1007.

114. *See id.*

115. *See id.*

116. *See id.*

117. *Id.* at 1009.

118. *See Brand X*, 545 U.S. at 1008–09.

119. *Id.* at 1008.

120. *Id.*

provides the functionality.¹²¹ Similarly, for DSL the physical component for Internet access is not provided by the Internet service provider.¹²² Thus, the dissent concluded, a consumer would assume that cable modem service, like dial-up and DSL, consisted of two components: the physical connection to the Internet and Internet functionality.¹²³

Next, the dissent addressed whether the two jointly packaged components were inextricably linked or whether they were separable.¹²⁴ Justice Scalia disputed the Court's conclusion that consumers' use of the cable companies' DNS, which allows consumers to access third party websites, suggested that the telecommunications component was inseparable from the information services component.¹²⁵ Justice Scalia found two reasons to conclude otherwise.¹²⁶ First, Justice Scalia argued that DNS "is scarcely more than routing information, which is expressly excluded from the definition of 'information service.'"¹²⁷ Second, Justice Scalia argued that "it is apparently possible to sell a telecommunications service separately from, although in conjunction with, ISP-like services; that is precisely what happens in the DSL context, and the Commission does not contend that it *could* be done in the context of cable."¹²⁸ Justice Scalia concluded that the physical connection to the Internet (the telecommunications component) and Internet functionality (the information services component) were separable, and hence, someone who sells cable-modem service "offers" telecommunications.¹²⁹ Therefore, Justice Scalia concluded, because it was unambiguous that cable modem service providers offered telecommunications, the Act's language was unambiguous and the Commission's construction should have been overruled.¹³⁰

III. AUTHOR'S ANALYSIS

In *Brand X*, the Court determined that under the first step of *Chevron*, it was not clear under the Telecommunications Act whether cable modem service providers offered telecommunications in addition to information services.¹³¹ The Court reached this conclusion by looking at first, the ordinary meaning of the word "offer" and second, the statute's regulatory history.¹³² However, the

121. *Id.*

122. *Id.* at 1009.

123. *Brand X*, 545 U.S. at 1009.

124. *Id.* at 1012–13.

125. *Id.*

126. *Id.*

127. *Id.* (citing 47 U.S.C. § 153(20)).

128. *Brand X*, 545 U.S. at 1013.

129. *Id.* at 1014.

130. *See id.*

131. *Id.* at 986 (majority opinion).

132. *Id.* at 989.

Court's application of these two approaches has its shortcomings. The Court's ordinary meaning analysis is weak because to determine the ordinary meaning of the term "offer" it chooses a hypothetical context that is arbitrary and irrelevant to cable modem service. Second, the Court places too much emphasis on the statute's regulatory history. While regulatory history may be a factor for interpreting the language of the Telecommunications Act, placing too much emphasis on the regulatory history of the Act hinders its applicability to novel technology.

The best approach for interpreting the applicability of the Telecommunications Act to Internet technology and the telecommunications industry in general is the dynamic approach. The dynamic approach is optimal because it allows the meaning of a statute to change where the context has changed, an important feature for the telecommunications field, where technology is ever-changing.

A. Critique of the Court's Analysis

1. The "Ordinary Meaning" Approach

The Court reasons that the term "offer" is not unambiguous because based on ordinary usage and linguistic possibilities, "offer" can have more than one interpretation.¹³³ But general usage and linguistic possibilities simply suggest that a word possibly *could* be interpreted differently, not that it *should* be interpreted differently. Words do not have meaning until they are given a context.¹³⁴ As Professor McGreal has stated, "[A] word's meaning lies in its use. But word usage alone is not enough to *understand* a speaker's words. Oftentimes, ordinary usage will identify a range of *possible* word meanings. . . . [C]ontext helps the listener determine the appropriate usage under the circumstances."¹³⁵ Further, a word may have different meanings based on different contexts.¹³⁶ Thus, the context that is chosen to determine a word's meaning is crucial. However, the *Brand X* Court chose an arbitrary, irrelevant hypothetical context to determine the meaning of "offer."

When words are taken out of context, one "must hypothesize a context to make them fully intelligible."¹³⁷ In *Brand X*, when the Court took the term "offer" out of the context of the statute, it hypothesized the context of a car

133. *Brand X*, 545 U.S. at 990.

134. See generally Paul E. McGreal, *Slighting Context: On the Illogic of Ordinary Speech in Statutory Interpretation*, 52 U. KAN. L. REV. 325 (2004) (arguing that ordinary speech should have no place in statutory language).

135. *Id.* at 335 (emphasis added).

136. *Id.* at 336 (noting that "keep off the grass" can have different meanings in different contexts).

137. *Id.* at 327.

dealership in order to determine its meaning.¹³⁸ It reasoned that a consumer would say that a car dealership offers cars but not the components of the car.¹³⁹ Similarly, the Court reasoned, a consumer would say that a cable modem service provider offers Internet service, but not the components of Internet service.¹⁴⁰ But is a car dealership actually like a cable modem service provider? The Court provides no answer for this question and gives no support for its choice of hypothetical context.¹⁴¹

The Court's analysis of the term "offer" in the context of cars and car dealerships is misplaced because cars and car dealerships are not analogous to cable modem service and cable modem service providers.¹⁴² Internet service is a much newer industry than the automobile industry and is constantly evolving. Whereas the basic components of cars have been around for more than a hundred years, the basic components of Internet service are constantly changing. In fact, this is the very problem the Court is faced with—applying the Act to a technology that is different than any the Court has seen before. Another result of constantly changing Internet technology is that consumers are less familiar with the components of Internet service¹⁴³ than the components of a car,¹⁴⁴ which could suggest that consumers are simply unsure of what Internet service providers truly "offer." Further, unlike the

138. See *Brand X*, 545 U.S. at 990.

139. *Id.*

140. *Id.* at 990–91.

141. McGreal criticizes this approach by arguing that it "effectively says to the reader, 'Trust me. This is the ordinary way people use this word.' If [t]his usage does not resonate with you, there is no way to respond other than, 'No it isn't.' At that point, [the Court's] only response is, 'Yes it is.' We are left with unarticulated intuition, having no grounds for further debate." McGreal, *supra* note 134, at 369.

142. The dissent's hypothetical context shares the same weaknesses as the Majority's analysis. Justice Scalia arbitrarily picks a pizzeria to argue that cable modem service providers offer both a telecommunications service and an information service, like a pizzeria offers pizza and delivery. See *Brand X*, 545 U.S. at 1007 (Scalia, J., dissenting). But Justice Scalia provides no support for why he chose the context of a pizzeria and how it is similar to cable modem service. For criticism of Scalia's use of the ordinary meaning approach in other cases, see McGreal, *supra* note 134, at 355–82.

143. Admittedly, consumers are becoming more familiar with basic computer components that are *tangible*, including the CPU, monitor, keyboard, and mouse, and with the *tangible* components of Internet service, like the modem and the use of the Internet itself. But they are much less familiar with Internet components they cannot see—like the DNS, Internet backbone, and interconnectivity. Furthermore, new technology continues to blur what Internet service consists of. For example, with wireless technology, a consumer is able to access the Internet without having any "physical" connection, making it even less likely that the consumer understands what the components of the Internet are.

144. Though there may be many automobile components that consumers are unfamiliar with, such as U-joints and relays, most consumers are at least familiar with the major components of cars—such as the chassis, steering wheel, battery, air filter, spark plug, and tires—and understand the basics of how a car works.

components of a car, aside from the computer and modem, the components of the Internet are not visible to the consumer, making it difficult for the average consumer to visualize the components of the Internet, especially the DNS.

The Court seems to conclude that because the term “offer” has different ordinary meanings in different contexts, it is ambiguous. But this analysis provides little meaningful insight. Nearly every word in the English language can have more than one ordinary meaning, especially when put into dissimilar contexts.¹⁴⁵ Thus, choosing an appropriate context for determining the ordinary meaning of “offer” should have been a crucial part of the Court’s ordinary meaning analysis.¹⁴⁶

Instead of using a car dealership as its hypothetical context, the Court should have used a context that is more similar to cable modem service. In particular, the *Brand X* Court should have used DSL providers as its hypothetical context. DSL providers are much more similar to cable modem service providers than is a car dealership. Like DSL, cable modem service is a type of broadband Internet service. Like DSL, cable modem service is a new technology. Thus, the context of DSL is relevant to cable modem service providers and would have provided a more meaningful interpretation of the ordinary meaning of “offer.”

After grounding its choice of context by comparing DSL to cable modem service, the Court should have then determined what the ordinary meaning of the term “offer” is for DSL and whether this ordinary meaning sheds any light onto the ordinary meaning of the term “offer” for cable modem service. The Court could have noted that the Commission had previously found that DSL providers “offer” telecommunications as well as information service because DSL travels over telephone lines, which historically have been subject to regulation. Whether or not this proves that the term “offer” is unambiguous is another question, though. One could argue that the term “offer” is ambiguous in these contexts because unlike DSL, cable modem service travels over cable lines, which historically have not been subject to regulation. Therefore, despite other similarities, the term “offer” might have a different meaning for DSL than for cable modem service, and because there could be a difference, the meaning of the term offer is ambiguous. Or, one could argue that even though cable modem service travels over cable as opposed to telephone wire, both mediums are capable of handling different types of data: cable wire can transmit cable modem service signals and cable television signals, while telephone wire can transmit data signals and voice signals. Either conclusion would have been more persuasive than the one chosen by the Court because its

145. McGreal, *supra* note 134, at 331–35.

146. Some scholars have argued that ordinary meaning should play no role in statutory interpretation. See, e.g., *id.*

reasoning would have been grounded in a relevant and meaningful hypothetical context.

2. Criticisms of Regulatory History Analysis

The Court reached the proper conclusion when it determined that the regulatory history of the Act did not suggest that the provisions were unambiguous.¹⁴⁷ However, a regulatory history analysis should not be a predominant consideration when interpreting the Telecommunications Act. The problem with placing too much emphasis on the regulatory history of hybrid services to determine the applicability of the Act to new technology is that the Commission created those rules for technology that is now outdated, or will very soon be outdated,¹⁴⁸ and could be fundamentally different from current technology. Further, the policies that influenced the Commission on a particular decision may have changed. Thus, an analysis of regulatory history prevents the Court from acknowledging the different contexts in which the statutory language may have been interpreted and hinders the statute from adapting to new policies and new technology.

B. Alternative Approaches

Under the first step of *Chevron*, “deference to [an agency’s] statutory interpretation is called for only when the devices of judicial construction have been tried and found to yield no clear sense of congressional intent.”¹⁴⁹ There are three alternatives to the Court’s ordinary meaning approach and regulatory history analysis that were not exhausted: purposivism, originalism, and dynamism. While each of these approaches has its respective strengths and weaknesses, dynamism is the best approach for interpreting the Telecommunications Act because its inquiry is broader than purposivism and originalism. Perhaps most importantly, dynamism considers current context, which is an important factor for a field that is constantly evolving and outgrowing the context in which the statute was originally enacted.

This casenote circumscribes its discussion of statutory interpretation to the Telecommunications Act. It does not address whether the dynamic approach

147. See *Brand X*, 545 U.S. at 992.

148. Gordon Moore, founder of Intel, once asserted that computing power doubles every eighteen months. Podesta, *supra* note 72, at 1095. If this proposition, known as Moore’s Law, holds true, then computing technology has increased nearly sevenfold since the Telecommunications Act was signed into law in 1996.

149. *General Dynamics Land Systems, Inc., v. Cline*, 540 U.S. 581, 600 (2004); see also *Clark v. Martinez*, 543 U.S. 371, 402–04 (2005) (Thomas, J., dissenting). Justice Thomas argued, “Just as we exhaust the aid of the ‘traditional rules of statutory construction’ before deferring to an agency’s interpretation of a statute, so too should we exhaust those tools before deciding that a statute is ambiguous and that an alternative plausible construction of the statute should be adopted.” *Id.* (internal citation omitted).

should be applied to all issues involving technology, partly because “technology” is a fairly nebulous term which can encompass many different areas.¹⁵⁰ Such a discussion is beyond the breadth of this article. Another issue that this casenote does not address is whether the dynamic approach should be used to interpret statutes other than the Telecommunications Act. Again, the answer to this question is beyond the breadth of this note.¹⁵¹

1. Purposivism

For much of United States history, purposivism has been the predominant approach to statutory interpretation.¹⁵² However, it has recently lost ground to other theories of interpretation.¹⁵³ Under purposivism, the interpreter construes the statute broadly to affect its statutory purpose. The steps of purposivism are as follows:

1. Decide what purpose ought to be attributed to the statute and to any subordinate provision of it which may be involved; and then
2. Interpret the words of the statute immediately in question so as to carry out the purpose as best it can, making sure, however, that it does not give the words either—(a) a meaning they will not bear, or (b) a meaning which would violate any established policy of clear statement.¹⁵⁴

Further, purposivism holds that the purpose of a statute “is evidenced in the language of the statute, as read in the light of other external manifestations of purpose.”¹⁵⁵

The fatal flaw for purposivism as an approach to interpreting the Telecommunications Act is that the Act has no clear purpose, especially for

150. For example, “technology” may refer to manufacturing equipment, medical devices in a hospital, or any number of other things.

151. I believe that dynamism deserves due consideration for other statutes as well, particularly for those that involve the consideration of cultural norms because, like the telecommunications field, cultural norms are constantly changing. For example, dynamism may be an effective approach for interpreting obscenity laws because the meaning of “obscene” has changed throughout the years. What a reasonably well-informed person one hundred years ago would have thought was obscene might not be what a person today would think is obscene. For similar reasons, the issue of gay marriage may be suited for the dynamic approach. Society naturally changes and the people of today should not be restricted by past generations separated by time, values, and understandings.

152. John F. Manning, *What Divides Textualists From Purposivists?*, 106 COLUM. L. REV. 70, 71 (2006). The use of purposivism dates back more than a hundred years. See, e.g., *Church of the Holy Trinity v. United States*, 143 U.S. 457, 459 (1892).

153. See Manning, *supra* note 152, at 71–76.

154. Michael Rosensaft, *The Role of Purposivism in the Delegation of Rulemaking Power to the Courts*, 29 VT. L. REV. 611, 612 (2005).

155. *Id.* at 611 (citation omitted). For current trends in purposivism, see generally Manning, *supra* note 152.

Internet technology. The statutory language gives little guidance¹⁵⁶ and the external manifestations of purpose are contradictory.¹⁵⁷ For example, when signing the Telecommunications Act of 1996 into law, President Clinton stated that the new legislation was to “reform our telecommunications laws in a manner that leads to competition and private investment, promotes universal service and open access to information networks, and provides for flexible government regulation.”¹⁵⁸ However, promoting competition and deregulation are competing goals.¹⁵⁹ Because there is no clear statutory purpose, purposivism is not a useful statutory approach for the Telecommunications Act or for the *Brand X* case in particular.

2. Original Meaning Approach

For the purposes of this casenote, “originalism” refers to the original meaning approach, as opposed to the original intent approach. The original meaning approach focuses exclusively on the objective meaning of a statute’s text, while the original intent approach focuses on the subjective intent of the drafters, which may include legislative history and other sources besides the text of the statute.¹⁶⁰ Thus, when this casenote uses the term “originalism,”

it is in reference to the original, non-idiosyncratic meaning of words and phrases in the [statute]: how the words and phrases, and structure (and sometimes even the punctuation marks!) would have been understood by a hypothetical, objective, reasonably well-informed reader of those words and

156. The Act itself reads:

For the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, for the purpose of promoting safety of life and property through the use of wire and radio communications, and for the purpose of securing a more effective execution of this policy by centralizing authority heretofore granted by law to several agencies and by granting additional authority with respect to interstate and foreign commerce in wire and radio communication, there is created a commission to be known as the “Federal Communications Commission”, which shall be constituted as hereinafter provided, and which shall execute and enforce the provisions of this chapter.

47 U.S.C. § 151.

157. See Podesta, *supra* note 72, at 1094.

158. Statement on Signing the Telecommunications Act of 1996, 1 PUB. PAPERS 188, 188 (Feb. 8, 1996).

159. See Podesta, *supra* note 72, at 1094.

160. See Vasan Kesavan & Michael Stokes Paulsen, *The Interpretive Force of the Constitution’s Secret Drafting History*, 91 GEO. L.J. 1113, 1132 (2003).

phrases, in context, at the time they were adopted, and within the political and linguistic community in which they were adopted.¹⁶¹

Further, an originalist would turn to current practices to understand a statute only where (1) the statute's original public meaning is ambiguous and (2) the statute's original public meaning is best understood to designate current practices as the proper means for resolving ambiguity.¹⁶²

Justice Scalia, who has been called the "patron saint" of originalism,¹⁶³ employed the original meaning approach in the *Brand X* dissent. In his dissent, Justice Scalia tried to determine the objective meaning of the provisions by framing the issue as "whether the individual components in a package being offered still possess sufficient identity to be described as separate objects of the offer, or whether they have been so changed by their combination with the other components that it is no longer reasonable to describe them in that way."¹⁶⁴ To determine this objective meaning, Justice Scalia first compared a cable modem service provider to a pizzeria, but like the majority, Justice Scalia's hypothetical context also lacks relevancy. Just because a pizzeria may offer both pizza and delivery does not necessarily mean that a reasonable person would conclude that a cable modem service provider offers both telecommunications and information services. Indeed, the majority criticized Scalia's analogy:

We also do not share the dissent's certainty that cable modem service is so obviously like pizza delivery service. . . . For example, unlike the transmission component of Internet service, delivery service . . . [is] not an integral component[] of the finished product. . . . One can pick up a pizza rather than having it delivered.¹⁶⁵

Justice Scalia's comparison of cable modem service to DSL and dial-up is much more on target than his pizzeria analogy. He grounds the comparison by arguing that a reasonable consumer would compare cable modem service to

161. *Id.*; see also Gary Lawson, *In Praise of Woodenness*, 11 GEO. MASON. L. REV. 21, 22 (1988) ("I use 'wooden originalism' to describe an interpretative method in which one identifies the ordinary meanings that the Constitution's words, read in linguistic, structural, and historical context, had at the time of the document's origin.").

162. Gary Lawson, *On Reading Recipes . . . And Constitutions*, 85 GEO. L.J. 1823, 1829 (1997) (comparing the Constitution to a recipe for fried chicken, and arguing that "the practice of cooks (whether original or modern) is constitutive of the recipe's meaning only (1) when the recipe's original public meaning on some point is ambiguous and (2) the recipe's original meaning is best understood to designate practice (whether immediate or distant) as the proper means for resolving ambiguity").

163. Kesavan & Paulsen, *supra* note 160, at 1139. For Justice Scalia's personal insight into statutory interpretation, see ANTONIN SCALIA, *A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW* (Amy Gutmann et al. eds., 1997).

164. *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 1006-07 (2005) (Scalia, J., dissenting).

165. *Id.* at 992 (majority opinion).

DSL and dial-up in determining whether cable modem service consisted of a separate telecommunications component because those are the services that a reasonable consumer is familiar with.¹⁶⁶ This reasoning provides sufficient grounds for the comparison. Justice Scalia's conclusion—that a reasonable person would determine that like DSL, cable modem service consists of a separate telecommunications component—is similarly well-grounded and objective.

Although Justice Scalia's original meaning approach may have worked well in *Brand X*, its applicability and relevance to future cases involving the Telecommunications Act will diminish in the future. The problem with the original meaning approach is that when the Act was signed into law, Internet technology as well as other technology in the telecommunications field was very new, and many of the legislators who signed it into law were unfamiliar with the Internet.¹⁶⁷ In 1996, there were only 47 million Internet users in the United States.¹⁶⁸ By 2000, only four years later, there were approximately 124 million users, which was about 44.1% of the United States population.¹⁶⁹ And, as of January 2007, there were 210 million users, which is about 70% of the United States population.¹⁷⁰ Needless to say, Internet use and familiarity with the Internet has grown exponentially since 1996. In 1996, the average person's understanding of Internet technology would be primitive compared to the average person of 2007, and this trend will continue. Despite this, the originalist would use the original understanding, albeit primitive and limited, to determine how technology of the future should be regulated. This approach has the dangerous potential of greatly limiting technological advancement by trying to push new technology into a practically obsolete framework. The technology of tomorrow will be vastly different than technology of 1996, and

166. *Id.* at 1008 (Scalia, J., dissenting).

167. See Podesta, *supra* note 72, at 1109.

Congress conceptualized the Net as little more than something that arrives at your e-mail box in a plain brown wrapper. Congress failed to appreciate the power of the Net, the power to enable individuals, the power to democratize, the power to create new publishers and broadband producers, the power to narrowcast and create small but viable audiences, and the power to be interactive. All of these powers were lost on legislators who simply had never been to cyberspace. What is more, Congress failed to understand the potential of the Net to deconstruct the existing industry structure. Aside from hooking up schools and libraries, and with the rather major exception of censorship, Congress simply legislated as if the Net were not there.

Id.

168. See Center Span, What Is the Internet?, <http://www.centerspan.org/tutorial/net.htm> (last visited Feb. 28, 2007).

169. See Internet World Stats, Usage and Population Statistics, <http://www.internetworldstats.com/am/us.htm> (last visited Feb. 28, 2007).

170. See Internet World Stats, Top 20 Countries with the Highest Number of Internet Users, <http://www.internetworldstats.com/top20.htm> (last visited Feb. 28, 2007).

yet, an originalist would try to understand the technology of tomorrow by comparing it to the technology of yesterday even though there may be no meaningful comparison.¹⁷¹ As one scholar has noted, “as the distance between enactment and interpretation increases, a pure originalist inquiry becomes impossible and/or irrelevant.”¹⁷²

In rebuttal, an originalist may argue that the provisions of the Telecommunications Act are terms of art that by their nature change with technology. An originalist might argue that by making the terms “telecommunications” and “information service” fairly ambiguous, it was Congress’s attempt to allow the Act to adapt to new technology. However, an originalist must still acknowledge the possibility that any real distinction between these two terms may cease to exist as the telecommunications field grows and technologies within it continue to merge. In response, an originalist may argue that even if the line between “telecommunications” and “information service” becomes indistinct, it is still the Court’s duty to follow through on the original meaning of the statutory language. If the terms become practically merged, it simply means that Congress chose ineffective terminology. And, if Congress is unsatisfied with the Court’s interpretation, Congress should clean up the Act’s terminology.

Though an originalist should be applauded for his consistency, relying on Congress to fix the Court’s interpretation if Congress is unsatisfied with it ignores one of the basic tenets of the telecommunications industry—that it quickly changes. Congress, on the other hand, acts very slowly. Furthermore, “[e]rror in legislation is common, and never more so than when technology is galloping forward.”¹⁷³ Congress moves too slowly to address present technological issues. In order to encourage advancements in the telecommunications industry, therefore, the Court should consider current context. In contrast, an originalist would rather try to fit a square peg (new technology) into a round hole (original meaning) than acknowledge that the context in which the Act was originally understood has changed so much that the original meaning has become meaningless.

3. Dynamic Interpretation

The dynamic approach was first introduced in 1987 by William N. Eskridge, Jr.¹⁷⁴ Eskridge’s thesis was that statutes should be interpreted

171. However, where there is a meaningful comparison between old technology and current technology and the Court is able to explain why it is meaningful, no problem will arise.

172. WILLIAM N. ESKRIDGE, JR., *DYNAMIC STATUTORY INTERPRETATION* 6 (1994).

173. Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. CHI. LEGAL F. 207, 215 (1996).

174. See William N. Eskridge, Jr., *Dynamic Statutory Interpretation*, 135 U. PA. L. REV. 1479 (1987).

dynamically.¹⁷⁵ The dynamic approach “holds that a statute’s meaning is not tied to the framer’s original understanding but is permitted to evolve in response to both linguistic and social change.”¹⁷⁶ Those in favor of dynamic interpretation argue that statutes should be interpreted in reference to their present societal, political, and legal context.¹⁷⁷ Thus, according to dynamism, “statutory language must grow and adapt in response to changing social conditions.”¹⁷⁸ Dynamism may include consideration of the historical political culture in addition to present circumstances.¹⁷⁹

The dynamic approach stands in stark contrast to the original meaning approach.¹⁸⁰ Originalism addresses the meaning of the text as it was originally understood at the time the statute was enacted,¹⁸¹ while dynamism addresses the meaning of the text as it is currently understood.¹⁸² In other words, “[w]here the originalist sees the [original meaning] as the only legitimate goal of interpretation, proponents of dynamic interpretation . . . feel that a law should be interpreted by reference to contemporary ideals, with little or no attention paid to legislative intent [or original meaning].”¹⁸³

According to Professor Anna Lumelsky, the originalist approach “fails because the drafting legislature cannot consider every issue that may come up in relation to a statute.”¹⁸⁴ As time passes and society changes, new variations of the problem which the statute was meant to address are generated, and unanticipated gaps and ambiguities of the statute proliferate.¹⁸⁵ In turn, these gaps lead an originalist “to produce out-of-date and counter-productive statutory interpretations that do not do justice to the legislature’s interests in enacting the statute.”¹⁸⁶ According to Professor Lumelsky, “[o]nly through

175. See *id.* at 1481. Eskridge has argued both that interpreters have in fact interpreted statutes dynamically and that they should interpret statutes dynamically. See ESKRIDGE, *supra* note 172, at 5–6.

176. Randall N. Graham, *A Unified Theory of Statutory Interpretation*, 23 STATUTE L. REV. 91, 104 (2002) (internal quotation omitted). This thesis was originally asserted by William Eskridge in 1987. See Eskridge, *supra* note 174, at 1484.

177. Eskridge, *supra* note 174, at 1482–83.

178. Graham, *supra* note 176, at 105.

179. “[S]tatutory interpretation is multifaceted and evolutive rather than single-faceted and static, involves policy choices and discretion by the interpreter over time as she applies the statute to specific problems, and is responsive to the current as well as the historical political culture.” ESKRIDGE, *supra* note 172, at 48.

180. See Graham, *supra* note 176, at 92 (reasoning that originalism and dynamism are “mutually contradictory theories of statutory construction”).

181. See Lawson, *supra* note 162, at 1832.

182. See Graham, *supra* note 176, at 92.

183. *Id.* at 104.

184. Anna Lumelsky, *Diamond v. Chakrabarty: Gauging Congress’s Response to Dynamic Statutory Interpretation by the Supreme Court*, 39 U.S.F. L. REV. 641, 673 (2005).

185. *Id.*

186. *Id.*

dynamic statutory interpretation can the judiciary properly advance the legislature's vision and 'contribute to the legitimacy of our government.'"¹⁸⁷

The dynamic approach works particularly well for the Telecommunications Act because technology within the telecommunications field and circumstances surrounding the telecommunications field are constantly changing, rendering old understandings obsolete.¹⁸⁸ However, the theory that the dynamic approach should be used to interpret the Telecommunications Act is not a "Law of the Horse"¹⁸⁹ or a form of Internet exceptionalism.¹⁹⁰ The theory behind Internet exceptionalism is that the Internet is different than other property and that it should operate in its own legal sphere under its own legal theories.¹⁹¹ This casenote is not arguing for or against Internet exceptionalism.¹⁹² Rather, the proposal of this casenote is

187. *Id.* (quoting William N. Eskridge, Jr., *Dynamic Statutory Interpretation*, 135 U. PA. L. REV. 1479, 1480 (1987)).

188. Professor Anna Lumelsky has applied the dynamic approach to bio-medical patent law. Lumelsky analyzed the Supreme Court decision of *Diamond v. Chakrabarty*, in which the Supreme Court held that living organisms can be patented. *Id.* Professor Lumelsky's thesis is that

in science- and technology-related cases in which outdated legal rules could significantly hamper the advancement of the field, the Supreme Court should interpret federal statutes dynamically in response to a changing social context, but should also attempt to conform its interpretations to legislative preferences in order to avoid a legislative override.

Id. at 641.

189. See generally Karl Llewellyn, *Across Sales on Horseback*, 52 HARV. L. REV. 725 (1939) (arguing that the law of Sales should be unified and that specific areas, i.e., the sale of horses, should not have their own unique set of laws); Karl Llewellyn, *The First Struggle to Unhorse Sales*, 52 HARV. L. REV. 873 (1939) (same).

190. Internet exceptionalism is similar to intellectual property exceptionalism. For arguments against intellectual property isolationism, see John F. Duffy, *Intellectual Property Isolationism and the Average Cost Thesis*, 83 TEX. L. REV. 1077, 1089–90 (2005).

191. See John W. Bagby, *Cyberlaw: A Forward*, 39 AM. BUS. L.J. 521 (2002).

192. There are plenty of arguments on both sides of the fence. Bagby notes:

Some scholars argue that cyberspace should be relatively free of legal restraint imposed by traditional law. These Cyberlaw revolutionaries are urging "Internet exceptionalism." They argue that the Internet represents a revolution of even greater impact than the printing press, industrialization, electronic communications or computerization. The Internet, they argue, is different in kind, not merely in degree, so that it deserves revolutionary forbearance from existing law.

Id. at 523. He goes on to explain:

Opponents of . . . revolutionary approaches to Cyberlaw argue that public policy should not exempt cyberspace from social, political and legal/regulatory institutions. They offer three main reasons. First, public-policymaking in Cyberlaw by non-practitioners risks poor results. Second, a separate field of Cyberlaw is unnecessary and unlikely to be rigorous. Third, revolutionary regulation of cyberspace offends libertarian ideals. Opponents also suspect that simply recognizing a new field of Cyberlaw would encourage Internet exceptionalism.

broader than Internet exceptionalism. If anything, it argues for “telecommunications exceptionalism”—that the telecommunications field is a unique industry, and that the law should reflect this uniqueness. By drafting the Telecommunications Act, Congress implicitly supported this notion. Instead of relying on property law or other law to govern the telecommunications field, Congress felt it necessary to create laws specific to the telecommunications industry. Considering that Congress acknowledged the uniqueness of the telecommunications industry, it is not much of a stretch to argue that the framework for interpreting the laws governing the telecommunications industry should also reflect this uniqueness. Furthermore, this casenote is not proposing that dynamism should necessarily be limited to the Telecommunications Act.

New technology in the telecommunications field has blurred the line between whether a service is a “pure” transmission or one that has been altered. Thus, it is necessary to have a certain degree of flexibility, which the dynamic approach allows for. Without flexibility, future technology in the telecommunications industry will cause irresolvable problems for other forms of statutory interpretation, including originalism. For example, in 1996, to the reasonably well-informed person, it was clear that voice data was transmitted only over telephone lines. But ten years later, voice internet protocol (VoIP) has become a reality.¹⁹³

Voice over Internet Protocol (VoIP), is a technology that allows you to make telephone calls using a broadband Internet connection instead of a regular (or analog) phone line.¹⁹⁴

Whether VoIP is a “telecommunications” offering or an “information service” offering must still be decided.¹⁹⁵ If the issue were to reach the courts, an originalist may simply compare VoIP to traditional phone service and to e-mail and determine which service it is more similar to. If it is closer to traditional phone service, then it is a “telecommunications service” and should

Id. at 524; see also Sasha Shepperd & Deborah Charnock, *Against Internet Exceptionalism*, 324 BMJ 556 (2002), available at <http://bmj.com/cgi/content/full/324/7337/556>.

193. There are numerous VoIP companies, including Vonage.com, SunRocket.com, and Covad.com.

194. See Federal Communications Commission, Consumer & Governmental Affairs Bureau, IP-Enabled Services, <http://www.fcc.gov/voip> (last visited Feb. 28, 2007).

195. For a discussion on the regulation of VoIP, see Werbach, *supra* note 2, at 61 (noting that “new technologies such as . . . VoIP create both regulatory uncertainty and significant economic dislocations”).

In many ways, VoIP is a microcosm of the broad array of telecommunications regulatory issues that have been debated since passage of the Telecommunications Act of 1996, including the role of state regulators, the legal classification of services, universal service, access charges, emergency services and access by people with disabilities. Dinkes, *supra* note 4, at 837.

be regulated, and if it is closer to e-mail, it is an “information service” and should not be regulated. But comparisons only to technology that existed when the Act was first signed into law may leave an originalist feeling lost. Like telephone service, VoIP functions as a voice communications medium.¹⁹⁶ Like e-mail, VoIP transmits data packets over the Internet.¹⁹⁷ The originalist approach fails to consider the bigger picture, including that VoIP may be so different from traditional telephone service and e-mail that comparisons are meaningless.¹⁹⁸

Under the dynamic approach, the interpreter may consider current context and current understandings of VoIP to determine if it is a telecommunications or information service. These considerations will make the statutory interpretation not only more relevant to today, but to tomorrow as well. Like VoIP, which merges computer technology and voice data transfer, different mediums will continue to merge, and if current values and understandings are not considered, the Telecommunications Act will be frozen in time, thereby stifling technological advancements.

A potential concern may be that the dynamic approach is too flexible, and that a decision may be rendered based on a judge’s personal policy preferences. However, this concern is minimized by *Chevron*. Under Step One of *Chevron*, the Court’s only role is to determine whether the statutory language is clear.¹⁹⁹ To do this, the Court does not consider policy issues. Under the dynamic approach, the judge could consider a number of factors, including the statutory text itself, specific legislative intent, imaginative reconstruction, legislative purpose, evolution of the statute, and current context and values.²⁰⁰ The most concrete considerations, like text, would outweigh more abstract ones, like the evolution of the statute and current values.²⁰¹ Dynamism is not restricted by focusing solely on the purpose of the statute or on its original meaning. Rather, these two considerations are factors, not the sole sources of analysis. Under Step Two of *Chevron*, the Court considers policy in its analysis,²⁰² but the issue is whether the Commission’s

196. R. Alex DuFour, Comment, *Voice Over Internet Protocol: Ending Uncertainty and Promoting Innovation Through a Regulatory Framework*, 13 COMMLAW CONSPPECTUS 471, 472 (2005).

197. *Id.*

198. Perhaps “VoIP is an innovation superceding current regulations and cannot be shoehorned into one category or meshed into both.” *Id.* Unfortunately, this insight does not help interpret the Act as it is currently written.

199. *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842 (1984).

200. See WILLIAM N. ESKRIDGE, JR., *LEGISLATION AND STATUTORY INTERPRETATION* 250 (2d ed. 2006). But see *id.* at 335–37 (noting that there remains the question of what courts should consult in determining whether a statute is unclear under *Chevron*).

201. See *id.* at 250.

202. *Chevron*, 467 U.S. at 865.

interpretation was reasonable, not whether it was the best interpretation, so the Court's policy analysis is fairly limited.²⁰³

If the *Brand X* Court had interpreted the Telecommunications Act dynamically, the scope of its analysis would have been broader. Under Step One of its *Chevron* analysis, it first would have considered the text of the statute. To interpret the statute's text it would have considered the ordinary meaning of the statutory provisions, similar to the majority. But unlike the majority opinion, the ordinary meaning analysis would not be limited to dictionary definitions and irrelevant comparisons. Rather, it would have considered current context and chosen meaningful comparisons. Like the dissent, it would have compared cable modem service to comparable services, like DSL. Like the dissent concluded, a reasonable person would view DSL and cable modem service as similar services. Thus, under the statutory text factor, it would have determined that the statute called for the regulation of cable modem service. However, under the multi-factor dynamic approach, this factor is not dispositive. The Court also would have looked at legislative intent. As already discussed, this factor would have been fairly inconclusive.²⁰⁴

Next, the Court also would have considered how the enacting legislators would have wanted the statute to apply to the facts of the case.²⁰⁵ This has been called "imaginative reconstruction."²⁰⁶ Again, as already discussed, this factor, as well as the legislative purpose factor, are fairly inconclusive.²⁰⁷ Like the majority's legislative history analysis, the Court would have looked at the evolution of the statute. Unlike the majority's opinion, however, it would have been one of several factors, and, given its lack of concreteness, its persuasiveness would have been minimal. Finally, the Court would have looked at current values, but because this factor leans towards policy, which is circumscribed by Step One of *Chevron*, and because the current values factor is fairly abstract, it would not have provided much guidance for Step One. Thus, the Court would have been left with balancing the unambiguity of the text versus the ambiguity of the other factors for deciding Step One of *Chevron*. Given that the statutory text is not entirely clear, the Court probably would have concluded that that statute was ambiguous under Step One of *Chevron*. Under Step Two, the Court would have considered current values, but given the Court's strong preference under *Chevron* to defer to the

203. Eskridge has noted that "the Supreme Court has given little guidance as to the proper application of Step Two." ESKRIDGE, *supra* note 200, at 338.

204. See *supra* text accompanying notes 155–58.

205. Richard A. Posner, *Statutory Interpretation—In the Classroom and in the Courtroom*, 50 U. CHI. L. REV. 800, 817 (1983).

206. Manning, *supra* note 152, at n.114.

207. See *supra* text accompanying notes 155–58.

Commission, it probably would have concluded the Commission's construction was reasonable.

Though the Court would have come to the same conclusion—that the statutory text was ambiguous—using the dynamic approach would not have been fruitless. Like other Supreme Court decisions, the *Brand X* case provides precedent for courts deciding future cases. As a result of *Brand X*, courts may focus exclusively on the ordinary meaning and legislative history of the Telecommunications Act, rather than taking a broader dynamic approach. As already discussed, these two approaches will provide little guidance as the telecommunications field continues to grow.

The dynamic approach may draw some criticisms. A concern is that it would lead to the judiciary creating law, rather than interpreting law, which could lead to legislative override. While this concern is legitimate, it would be minimized if the Court attempted to conform its interpretation to legislative preferences.²⁰⁸ Another concern is that it could create ambiguities where none originally existed. This result is not necessarily negative, though. If an ambiguity is created where none previously existed, Congress specifically gave the Commission the discretion to determine how the Act should be applied, and under *Chevron*, the Court must defer to an administrative agency's interpretation of an ambiguous statutory provision.

IV. CONCLUSION

Perhaps the Telecommunications Act of 1996 has been passed by technology and needs to be updated by Congress.²⁰⁹ In the meantime, the courts are left to sort out decisions by the Commission and interpret the language of the Act. In *Brand X*, the Court held that under the Telecommunications Act of 1996, it was ambiguous whether cable modem service providers offer a telecommunications component.²¹⁰ The Court reached this conclusion by using an ordinary meaning approach and by looking at the Act's regulatory history.²¹¹ However, these two sources of interpretation

208. Lumelsky, *supra* note 184, at 641.

209. See Scott Blake Harris et al., *Regulating Broadband*, COMM. LAW., Summer 2005, at 1, 39. Harris and his colleagues argue:

The story of broadband regulation is a lesson in how technology can move faster than regulation and how regulation attempts to catch up. It is also a lesson about how long regulatory change can take when the stakes are high. What is even clearer, however, is that we are in a new era defined, at least for now, by great uncertainty.

Id.; see also, Werbach, *supra* note 2, at 78 (arguing that “[t]he root problem the FCC faces . . . is that there is simply no good answer under the current regulatory framework. . . . Either something is ‘telecommunications’—and subject to the full panoply of FCC regulation—or it is information service—and thus in a vaguely defined zone of ‘unregulation’”).

210. Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967, 989 (2005).

211. *Id.*

are weak because the telecommunications industry is constantly changing, as is the context surrounding it. Three alternatives to the Court's approaches include purposivism, originalism, and dynamism. Purposivism fails because the Act has no clear purpose for telecommunications, and in particular for Internet technology. Originalism fails because it is backward-looking and the telecommunications industry is forward-looking. Dynamism is the best approach because like the telecommunications field, it welcomes change.

MARK B. GREBEL*

* J.D. Candidate, Saint Louis University School of Law, 2007. I would like to thank my family for their support, and Professor Eric Claeys for his input on this casenote.

