

# Kevin Werbach

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## EDUCATION

**Harvard Law School, J.D.**, magna cum laude, 1994  
*Publishing Editor*, Harvard Law Review; *Publisher*, Harvard Law Record

**University of California at Berkeley, B.A.**, with highest distinction, 1991  
*Phi Beta Kappa*; *Emerging Leader Scholarship*; *Chancellor's Scholarship*; *National Merit Scholarship*; *Highest Honors in Slavic and Social Science majors*

## EMPLOYMENT HISTORY

**The Wharton School, University of Pennsylvania**, Associate Professor (*July 2004-present*)  
Tenured faculty member in Legal Studies and Business Ethics Department. Engage in research and write on topics including communications policy, business implications of emerging technologies, gamification, and Internet policy. Teach MBA and undergraduate courses on legal and business issues.

**Federal Communications Commission**, Advisor (*2009-2010*)  
Provided legal and policy analysis to aid in development of significant broadband and Internet initiatives.

**National Telecommunications & Information Admin., US Dept. of Commerce**, Advisor (*2009*)  
On a part-time basis, assisted the in development of the Broadband Technology Opportunities Program, a major stimulus initiative. Recommended policy options and coordinated with other federal agencies.

**Obama-Biden Transition Project**, FCC Agency Review Co-Lead (*November 2008-January 2009*)  
Evaluated the major substantive and process challenges facing the FCC, in order to develop options and recommendations for the incoming Obama Administration. Participated in development of administration technology policy initiatives, personnel decisions, and overall strategy.

**Supernova Group LLC**, Founder (*July 2002-present*)  
Serve as a technology analyst and consultant for corporations and government agencies on strategy and regulatory issues. From 2002-2010, organized Supernova, a leading executive conference on the business, technology, and public policy implications of the Network Age.

**EDventure Holdings**, Editor (*1998-2002*)  
Responsible for all content in Release 1.0: Esther Dyson's Monthly Report, an influential publication on emerging technologies and their business implications. Analyzed trends, business models and companies. Co-organized annual PC Forum, a top technology industry conference.

**Federal Communications Commission**, Counsel for New Technology Policy (*1994-1998*)  
Coordinated FCC's Internet policy efforts. Advised FCC Chairman and Commissioners on technology-related issues. Authored Digital Tornado, the first comprehensive analysis of the Internet and telecommunications. Organized FCC's first-ever broadband forum. Helped develop Clinton Administration's Framework for Global Electronic Commerce. Drafted numerous FCC orders.

## PUBLICATIONS

### Working Papers

*The Business Ethics of Big Data*

*On the Application of Blockchains to Spectrum Sharing (with Martin Weiss, Douglas Sicker, and Amer Malki)*

*A Question of Trust*

*Blockchain Implications for Financial Markets (with Colleen Baker)*

### Books

*THE BLOCKCHAIN AND THE NEW ARCHITECTURE OF TRUST* (MIT Press, forthcoming 2018)

*AFTER THE DIGITAL TORNADO: NETWORKS, ARCHITECTURE, HUMANITY* (edited volume) (Cambridge University Press, forthcoming 2019)

*THE GAMIFICATION TOOLKIT: DYNAMICS, MECHANICS, AND COMPONENTS FOR THE WIN*, with Dan Hunter (Wharton Digital Press, 2015)

*FOR THE WIN: HOW GAME THINKING CAN REVOLUTIONIZE YOUR BUSINESS*, with Dan Hunter (Wharton Digital Press, 2012)

### Scholarly Articles

Trust, But Verify: Why the Blockchain Needs the Law, 32 *BERKELEY TECH. L.J.* \_\_\_ (forthcoming 2018)

Contracts Ex Machina, 67 *DUKE L.J.* 101 (2017), with Nico Cornell

The Song Remains the Same: What Cyberlaw Might Teach the Next Internet Economy, 69 *FLA. L. REV.* 887 (2017)

A Capabilities Approach to Communications Equity, 16 *COLO. TECH. L.J.* 101 (2017)

More Than Just a Game: Ethical Issues in Gamification (with Tae Wan Kim), 18 *ETHICS IN INFO. TECH.* 157 (2016)

Is Uber a Common Carrier?, 12 *I/S: J. LAW & POL'Y FOR INFO. SOC'Y.* 135 (2015)

Reflections on Network Transitions and Social Contracts for a Broadband Era, 13 *COLO. TECH. L.J.* 101 (2014)

No Dialtone: The End of the Public Switched Telephone Network, 66 *FED. COMM. L.J.* 203 (2014)

The Death and Life of a Great American Agency, 31 *CRIT. STUD. MEDIA COMM.* 160 (2014)

(Re)Defining Gamification: A Process Approach, *Persuasive 2014*, LNCS 8462, pp. 266-272 (A. Spagnoli et al, eds. 2014)

The Spectrum Opportunity, 8 *INT'L J. COMM.* 128 (2014), with Aalok Mehta (peer reviewed)

The Network Utility, 60 *DUKE L.J.* 1761 (2011)

The Wasteland: Anticommons and the Fallacy of Spectrum, 53 *ARIZ. L. REV.* 213 (2011)

Castle in the Air: A Domain Name System for Spectrum, 104 *NW. U. L. REV.* 613 (2010)

Off the Hook, 95 *CORNELL L. REV.* 535 (2010)

Higher Standards: Regulation in the Network Age, 23 *HARV. J. L. & TECH.* 179 (2009)

Connections: Beyond Universal Service in the Digital Age, 7 *J. TELECOMM. & HIGH TECH. L.* 67 (2009)

The Centripetal Network: How the Internet Holds Itself Together, and the Forces Tearing it Apart, 42 *UC DAVIS L. REV.* 343 (2009)

Only Connect, 23 *BERKELEY TECH. L. J.* 1234 (2008)

Sensors and Sensibilities, 28 *CARDOZO L. REV.* 2321 (2007)

The Federal Computer Commission, 84 *N.C. L. REV.* 1 (2005)

Breaking the Ice: Rethinking Telecommunications Law for the Digital Age, 4 *J. TELECOMM. & HIGH TECH. L.* 59 (2005)

Supercommons: Toward a Unified Theory of Wireless Communication, 82 *TEXAS L. REV.* 863 (2004)

A Layered Model for Internet Policy, 1 *J. TELECOMM. & HIGH TECH. L.* 37 (2002)

Looking it Up: Dictionaries and Statutory Interpretation, 107 *HARV. L. REV.* 1437 (1994)

### **Book Chapters and Essays**

Reflecting on Twenty Years Under the Telecommunications Act of 1996, 68 *FED. COMM. L. J.* 73 (2016)

*Gamification and the Enterprise*, in *THE GAMEFUL WORLD* (Steffan Walz & Sebastian Deterding, eds., 2015), with Ethan Mollick

*Telecommunications: Network Strategies for Network Industries?*, in *NETWORK-BASED STRATEGIES AND COMPETENCIES* (Wharton School Publishing 2009)

*The Implications of Video P2P on Network Usage*, in *PEER TO PEER VIDEO AS A MASS MEDIUM* (Columbia Institute for Tele-Information 2009)

*Steering to the Edge of Trust*, *The Publius Project*, Harvard University Berkman Center, at <http://publius.cc/2008/05/13/kevin-werbach-steering-to-the-edge-of-trust/>.

*Open Spectrum: The Great Wireless Hope*, in *BROADBAND EXPLOSION* (Harvard Business School Press 2005)

Using VOIP to Compete, *HARVARD BUSINESS REVIEW* (September 2005)

The Coming Spectrum Explosion: A Regulatory and Business Primer, *ABA COMMUNICATIONS LAWYER*, Fall 2003 (with Greg Staple)

*Syndication: The Emerging Model for Business in the Internet Era*, *Harvard Business Review* (May/June 2000)

### **White Papers and Reports**

*The Development of Fixed Broadband Networks* (Organization for Economic Cooperation and Development, June 2014)

*The Development and Diffusion of Digital Content* (Organization for Economic Cooperation and Development, December 2012)

*Radio Revolution: The Coming Age of Unlicensed Wireless* (New America Foundation and Public Knowledge, December 2003)

*Open Spectrum: The New Wireless Paradigm* (New America Foundation Spectrum Series Working Paper No. 6, October 2002)

*Digital Tornado: The Internet and Telecommunications Policy* (FCC Office of Plans and Policy Working Paper No. 29, March 1997)

### **General and Trade Press Publications**

- The Assault on the Open Internet Rules, *American Constitution Society Blog*, July 24, 2017 (with Gigi Sohn)
- Slack Makes the World Go Round, *Backchannel*, June 6, 2016
- Here We go Again: Regulation, Disruption, and the Internet of Everything, *Wharton Magazine* (Summer 2015)
- Gamification Harnesses the Power of Games to Motivate, *The Conversation*, March 19, 2015
- Playing Politics With the Internet?, *Huffington Post*, February 20, 2015 (with Phil Weiser)
- The Perfect and the Good on Network Neutrality, *Huffington Post*, April 27, 2014 (with Phil Weiser)
- Sharing Spectrum to Fuel Growth and Opportunity, *The Hill Online*, January 30, 2014
- Why the Court's Net Neutrality Decision is Not So Bad, *The Atlantic Online*, January 15, 2014
- Don't Call Us Rock Stars, *Chronicle.com*, October 25, 2013
- MOOCs: A View from the Digital Trenches, *PandoDaily*, April 15, 2013
- Turn Your Customers into Players, *Think With Google*, November 2012
- Why Network Neutrality is Good for Business, *Harvard Business Review Blog*, August 18, 2010
- The Microsoft of VOIP?, *VON Magazine*, February 2005
- The Surging Tides of a Digital Torrent, *BusinessWeek Online*, January 26, 2005
- Controlling VOIP, *VON Magazine*, January 2005
- Tip-Toeing On Top of VOIP?, *VOIP Central*, December 3, 2004
- The Year of Living Dangerously, *VON Magazine*, November/December 2004
- Hail to the VOIP, *VOIP Central*, October 29, 2004
- Wireless Cities, *The Feature*, October 26, 2004
- The First Virtual Telco, *VON Magazine*, September/October 2004
- The Race for White Space, *The Feature*, September 23, 2004
- VOIP and Internet Freedom, *VOIP Central*, September 10, 2004
- Not Your Parents' Phone System, *VOIP Central*, August 25, 2004
- The Real Future of Mobile Video, *The Feature*, August 23, 2004
- Wiretapping and the Politics of Fear, *VOIP Central*, August 19, 2004
- The VOIP Train Has Left the Station, *VOIP Central*, August 2, 2004
- Icebergs Dead Ahead, *VON Magazine*, July/August 2004
- Will the FCC Let VOIP Flourish?, *VOIP Central*, July 27, 2004
- Tune In, Turn On, Skype Out, *VOIP Central*, July 1, 2004

Bad Signs on the Horizon, *VOIP Central*, June 17, 2004

VoWLANS Go to Work, *The Feature*, June 17, 2004

In the Land of the One-Eyed Men, *VON Magazine*, May/June 2004

A New Day for Voice, *VOIP Central*, April 26, 2004

The End of Spectrum Scarcity, *IEEE Spectrum*, March 2004 (with Greg Staple)

A Fine Mesh, *The Feature*, March 30, 2004

What Should Michael Do, *VON Magazine*, March/April 2004

You Can Take it With You, *The Feature*, February 16, 2004

Telecom's Red Pill, *VON Magazine*, January/February 2004

Time to Regulate VOIP, *VON Magazine*, November/December 2003

Goodbye Spectrum, *Telephony*, November 2003

The Triumph of Good Enough, *The Feature*, November 18, 2003

U.W.Be Careful What You Wish For, *The Feature*, October 22, 2003

Microsoft and the Future of Internet Chat, *Philadelphia Inquirer*, October 16, 2003

The End of Spectrum, *The Feature*, October 2, 2003

FCC Bakes Up Free WiFi Connections, *The Feature*, August 19, 2003

Anticipating a Post-Web, Post-PC World, *CNet News.com*, May 22, 2003

The Real Michael Powell, *Slate*, February 19, 2003

AOL Knocked Out?, *Philadelphia Inquirer*, January 19, 2003

Party Like It's 1995, *Slate*, January 2, 2003

Full Spectrum: Why There Need Never Be a Tragedy of the Radio Commons, *Wired*, January 2003

Tapping into Grid Computing, *Release 1.0*, November 2002

Death by Spam, *Slate*, November 18, 2002

Tech's Big Challenge: Decentralization, *CNet News.com*, October 24, 2002

It's in the Chips, *The Feature*, July 8, 2002

Amazon's Secret Sauce, *Business 2.0*, June 2002

Who Controls Information? *Release 1.0*, May 2002

Optimizing the Internet From the Edges, *Release 1.0*, April 2002

The End of an Error, *CNet News.com*, April 30, 2002

Back to the Frontier: The 2002 PC Forum Roundup, *Release 1.0*, March 2002 (with Esther Dyson)

Bringing it all Together: Infrastructure for Collaboration, *Release 1.0*, February 2002

Distributed Distribution: Here, There, Everywhere, *Release 1.0*, January 2002

Monster Mesh: Decentralized Wireless Broadband, *The Feature*, January 21, 2002

Realtime Computing: Beyond the Refresh Button, *Release 1.0*, December 2001

Spectrum of the World Unite! *The Feature*, December 3, 2001

Open Spectrum: The Paradise of the Commons, *Release 1.0*, November 2001

Here's a Cure for the Bandwidth Blues, *ZDNet News*, November 28, 2001

Web Services, Part II: New World Order, *Release 1.0*, October 2001

Web Services Part 1: Back to the Future of Software, *Release 1.0*, September 2001

In Search of Broadband: To the Last Mile and Beyond, *Release 1.0*, July/August 2001

The Webification of TV is Happening, *CNet News.com*, July 26, 2001

Postmodern Knowledge Management, *Release 1.0*, June 2001

Why the Next Best Thing May Be the Next Big Thing, *The Feature*, June 21, 2001

Mapping the Net: Revenge of the Physical World, *Release 1.0*, May 2001

Glimpses of the New Network: The Real Convergence Story, *Release 1.0*, April 2001

Define Yourself! 2001 PC Forum (n.) –, *Release 1.0*, March 2001 (with Esther Dyson)

*How Safe is Your Site? Turning Security Inside Out*, *Release 1.0*, February 2001

One Device or Many?, *The Feature*, February 8, 2001

From User Confusion to User Inclusion: Online Customer Experience, *Release 1.0*, January 2001

The Phone Network as an Application Platform, *The Feature*, January 8, 2001

Peering into the World of Peer-to-Peer, Part II, *Release 1.0*, December 2000

Peering into the World of Peer-to-Peer, Part I, *Release 1.0*, November 2000

Wireless Peer to Peer, *The Feature*, November 27, 2000

What Wall Street Can Learn From Greenspan, *Fortune*, November 13, 2000

Let Them Eat Cable, *Industry Standard*, November 6, 2000

E-Commerce Enablers: What it Takes to Make a Market, *Release 1.0*, October 2000

Life After Wires, *Industry Standard*, October 16, 2000

Clicks and Mortar Meets Cap and Gown: Higher Education Goes Online, *Release 1.0*, September 2000

Mobile Interfaces of Tomorrow, *The Feature*, September 4, 2000

It's not Dead Yet, *Industry Standard*, August 14, 2000

Following the Money: Financial Services and the Net, *Release 1.0*, July/August 2000

Location-Based Computing: Wherever You Go, There You Are, *Release 1.0*, June 2000

Look Who's Talking: Voice-Based Services Arrive, *Release 1.0*, May 2000

Data Soup: The Client is the Server, *Release 1.0*, April 2000

Making the Virtual Real and the Real Virtual: PC Forum 2000, *Release 1.0*, March 2000 (with Esther Dyson)

Innovation and Large Companies, *Release 1.0*, January 2000

Meta Service Providers: The Internet's SS7 Network, *Release 1.0*, December 1999

Cable Operators vs. ISPs, *Internet World*, December 15, 1999

The Next Medium, *Release 1.0*, November 1999

Now in Syndication, *Red Herring*, November 1999

How to Make a Buck on the Internet, *Release 1.0*, October 1999

Is the Price Right?, *Industry Standard*, October 1, 1999

E-merging Markets, *Release 1.0*, September 1999

Body LANguage, *Business 2.0*, August 1999

The Web Goes Into Syndication, *Release 1.0*, July/August 1999

Living on the Web: The Rise of Post-Groupware, *Release 1.0*, June 1999

IPv6: The Net Grows Up, *Release 1.0*, May 1999

The Final Frontiers of Networking, Part 2: You Are the Network, *Release 1.0*, April 1999

Back to Reality: The 1999 PC Forum Prospectus, *Release 1.0*, March 1999 (with Esther Dyson)

The Architecture of Internet 2.0, *Release 1.0*, February 1999

Search and Searchability, *Release 1.0*, January 1999

The Final Frontiers of Networking, Part 1: Home at Last, *Release 1.0*, December 1998

Making Software Work Better, *Release 1.0*, October 1998

Closing the Interactive Loop, *Release 1.0*, September 1998

How to Get Ahead in Washington, *Business 2.0*, September 1998

How to Price a Bit, *Release 1.0*, June 1998

Levels and Boundaries: Another Look at Internet Content, *Release 1.0*, May 1998

**SERVICE AND UNIVERSITY-AFFILIATED ACTIVITIES**

*Governing Board, Green-Wind Interdisciplinary Marketing Program, The Wharton School (2017-present )*

*Dean's Strategic Advisory Council, The Wharton School (2014-16)*

*Faculty Fellows (inaugural class), The Wharton School (2016)*

*Co-host, The Digital Show on SiriusXM Business Radio (2014-2017)*

*Faculty IT Advisory Committee, The Wharton School (2013-present)*

*Faculty Affiliate, Penn Wharton Public Policy Initiative (2013-present)*

*Faculty Affiliate, Warren Center for Network and Data Sciences (2013-present)*

*Instructor, Coursera Massive Open Online Course (MOOC) on Gamification (2012-present)*

*Scholarly Commons Advisory Committee, University of Pennsylvania (2012-present)*

*Editorial Board, Wharton Digital Press (2011-present)*

*Dean's Advisory Council, The Wharton School (2010-2011)*

*Faculty Affiliate, Penn Center for Technology, Innovation, and Competition (2010-present)*

*Editorial Board, Info: The Journal of Policy, Regulation and Strategy for Telecommunications, Information and Media (2010-present)*

*Editorial Board, Journal of Information Policy (2010-present)*

*Chair, Faculty Committee on Open Access Publishing, University of Pennsylvania (2009-2010)*

*Global Advisory Board, Future of Advertising Project, The Wharton School (2008-2018)*

*Faculty Advisory Council, SEI Center for Advanced Studies in Management (2007-2018)*

*Editorial Board, I/S: A Journal of Law and Policy for the Information Society (2006-present)*

*Advisory Board, Knowledge@Wharton (2005-present)*

**PROFESSIONAL AFFILIATIONS**

*Fellow, Columbia University Institute of Tele-Information (2016-present)*

*Co-Chair, Federal Communications Bar Association Mid-Atlantic Chapter (2014-present)*

*Advisory Council, Institute for the Future (2012-present)*

*Director, Public Knowledge (2011-present; Treasurer, 2013-present)*

*Advisory Board, Just Press Play Project, Rochester Institute of Technology (2011-present)*

*Advisory Board, Open Spectrum International (2004-present)*

*Fellow, Global Institute for Communications (GLOCOM), Japan (2002-present)*

*Director, TPRC Conference on Communication, Information and Internet Policy (2003-2009)*

*Advisory Board, Genesys Angelbridge Fund (2000-2009)*

*Advisory Board, Socialtext (2003-2008)*

*Advisory Board, Nokia Innovent (2003-2006)*

*Co-Founder, Open Park Project (2003-2005)*

#### **INVITED TESTIMONY**

*US House Judiciary Committee, Hearing on Cloud Computing and the Electronic Communications Privacy Act, September 23, 2010*

*National Telecommunications and Information Administration, US Department of Commerce, Roundtable on Broadband Stimulus Grants, March 23, 2009*

*US Senate Commerce Committee, Hearing on Voice Over Internet Protocol, February 24, 2004*

*Federal Communications Commission, Voice Over Internet Protocol Forum, December 1, 2003*

#### **TEACHING AWARDS**

*Wharton MBA Program, Teaching Commitment and Curricular Innovation Award (2011-12)*

#### **INDUSTRY AWARDS**

*Gamification Summit, Special Achievement Award for Greatest Contributions to the Field of Gamification (2013)*

#### **DISSERTATION COMMITTEES**

*Konstantinos Stylianou (S.J.D., University of Pennsylvania Law School, 2015)*

*Deke Kassabian (Ed.D., University of Pennsylvania Graduate School of Education, 2014)*

#### **WHARTON CASES DEVELOPED**

*65: NTP versus Research in Motion (2011)*

*81: Foursquare Labs (2012; updated 2014), with Justin Dunham*

*82: Club Psych (2012), with Justin Dunham*

*83: Evo Media Group (2012), with Justin Dunham*

*94: Objective Logistics (2014), with Komal Rath*