SEARCHING FOR BALANCE IN THE USE OF PERSONAL DATA

THE YIN-YANG OF 21ST CENTURY COMMERCE
Executive Summary

Data is neither good nor evil but rather a facilitator of our modern way of life. It drives commerce, creates jobs and helps people live longer, more rewarding lives. Yet, bad actors, questionable uses of the data and the occasional one-sidedness of the dialogue cloud the public’s view. This document presents a case for a balanced approach through which both organizations and individuals benefit enormously.

Achieving balance in using personal data requires a comprehensive commitment to responsible use. Here, Acxiom provides a detailed description of what the balanced world of data looks like, as well as our commitment to its standards.

We also know many are curious about what Acxiom does with data. This paper addresses many common questions and misperceptions about data and our business; and it provides avenues for an open and balanced discussion. In this time of incredible change and innovation, we welcome the dialogue.
Question: what do taxes, credit, the census, photography, telephones, the Internet, mobile communications, surveillance cameras, GPS and marketing all have in common?

Answer: in one way or another, each has sparked questions about what’s proper or improper in the use of personal data.

In the dynamic relationship between commerce, technology and privacy, data’s role in serving humanity has evolved and expanded over the years (see sidebar: Through the Ages.) With each technological or business innovation regarding the use of data, important questions always emerge: Do individuals benefit? Are lives enriched? Is society better off? What are the costs vs. the benefits of regulation?

It is an eternal, evolving yin and yang: not opposing forces but complementary, dynamic needs that interact within a greater whole.

However, today’s dialogue about data use can often be one-sided, underpinned by naïveté, profit motives, mistrust or misperceptions. That’s unfortunate. The use of data can benefit all of us in many ways. It can make life more fulfilling and can advance societal good; but data use also poses legitimate concerns and public policy questions.

We do know this: data is not good or evil, moral or immoral — it is increasingly a product, a facilitator, of our modern way of life, and its importance to both individuals and organizations is intensifying.
Therefore, the dialogue about data use should be open, calm and holistic. Present and future discussions regarding the use of personal data should seek balance … a balance to serve the intersecting needs of the people who live on this planet, the commerce between them and the requirements of their societies.

Axiom is part of an industry that has served both commerce and consumers for more than 100 years. In this paper, we will discuss the balance between the use of personal data and privacy, address some misconceptions, and share our commitment and perspective. Please join the discussion. We welcome your questions and input.

The Engine of Modern Commerce: Vitamin D

Say it fast three times: “hypervitaminosis D.” It is a rare, but potentially serious condition occurring when you have excessive vitamin D in your body.

Vitamin D is also the “happiness vitamin.” It fosters healthy bone growth and maintains the normal functioning of the nervous system. When you are in sunlight, you absorb vitamin D, and it in turn makes you happy. Too little can depress you, but too much is not a good thing either.

Natural ingredients found in grape skins and therefore red wine can prevent heart disease and help destroy pancreatic cancer, but too much red wine can lead to a host of ills. Overindulging in water, food or oxygen is equally problematic, but without each of them, we don’t live.

Our world needs balance.

So it is with data, the vitamin D of business; it too requires balance. Data is the backbone of modern commerce, creating jobs and economic growth. Data and advertising fund much of our entertainment. Government needs data to keep citizens safe. Your health provider needs coordinated data to help you live a longer, richer life. Would Facebook be Facebook if your friends couldn’t find you? The list of ways data enriches business and humanity is endless.

But, not all data use is appropriate, and what is permissible has changed over the years. Data used for marketing purposes has a very different impact than data used for granting credit or determining eligibility for health insurance. And, what is personal is not always private; in fact, much personal information is already a matter of public record, and with every new technological innovation, new questions arise.

Today, consumer advocates, non-profit, business and government leaders are considering the appropriate use of health records, location information and Internet cookies, among other forms of data.

“...data is NOT GOOD OR EVIL, MORAL OR IMMORAL — IT IS INCREASINGLY A PRODUCT, A FACILITATOR, OF OUR MODERN WAY OF LIFE”
In blogs, white papers, books and discussions around the planet, we ask, “Are there uses of data that are actually harmful? Who owns all this data? How do we decide what is appropriate for some without restricting benefit for others? How do we evaluate the cost-benefit tradeoffs?”

In 2011, McCann Truth Central reported on a study conducted across 12 global markets to understand what privacy means to the average consumer. “What emerged was a new understanding of the privacy issue: yes, consumers are concerned about privacy, but privacy is a complex, multi-dimensional issue that encompasses everything from personal, real-world snooping to sharing data online. When it comes to data sharing one must unpack the issue even further as consumers categorize data into different categories, e.g., shopping, location, personal, medical and financial, and have varying degrees of concern with sharing each type.

“In fact, 71% of consumers indicate they are willing to share shopping data with a brand online. 86% of consumers see that there are major benefits associated with sharing data with businesses online, and 65% see one of the top two benefits as better access to discounts and promotions.”

Laura Simpson, Global Director of McCann Truth Central, said of the study, “… we found that consumers are in favor of sharing shopping data with businesses in exchange for certain benefits but are more cautious about sharing financial and medical data.” She continued, “While the foremost concern must be to protect the data and privacy of customers, a smart strategy also encourages responsible sharing of relevant data, benefiting both the brand and the consumer.”

Yet, the occasional one-sidedness of the dialogue has created unproductive misconceptions such as “marketing services companies collect and sell data to anyone, provide private information to governments, spy on individuals, track their movements, are creepy, evil, terrifying and frightening.” One nationally syndicated blogger used the words, “snooping” “sneaky” “bad” “demon” “shadowy” and “slurping” all in one subtitle.

Without an open dialogue, it is no surprise there is mistrust and suspicion. Like the blind men and the elephant in the ancient parable, we stand around this topic describing it from our own point-of-view in complete disagreement. Only when we listen as much as we talk, and collaborate, will we “see” the full elephant for what it is.
COMMERCE, TECHNOLOGY AND PRIVACY: THROUGH THE AGES

1878 Alexander Graham Bell installs the first telephone exchange in New Haven, Connecticut.

1890 The Harvard Law Review publishes Louis D. Brandeis and Samuel D. Warren's article, "The Right to Privacy" questioning the potential invasion of privacy by the telephone and candid photography.

1936 Social Security numbers are assigned to most adult Americans.

1957 Russia puts Sputnik, the first artificial satellite, into Earth's orbit, leading the way for worldwide satellite-based communications and observation.

1970 The Fair Credit Reporting Act (FCRA) regulates collection, dissemination and use of consumer information.

1971 Direct Marketing Association's (DMA) Mail Preference Service is created to help people filter direct mail marketing.

1980 Organization of Economic Cooperation and Dev. (OECD) issues guidelines on the protection of privacy to "harmonize national privacy legislation and ... prevent interruptions in international flows of data".

1982 Federal Communications Commission (FCC) authorizes commercial cellular service for the U.S.


1996 Health Insurance Portability and Accountability Act (HIPAA) addresses the security and privacy of health data.

2003 U.S. establishes the first national standards for the sending of commercial e-mail and requires the Federal Trade Commission (FTC) to enforce its provisions (CAN SPAM).


2004 Facebook debuts.

2009 The Online Behavioral Advertising (OBA) Privacy Principles, the industry's most comprehensive guidelines on privacy and the collection and use of user data, is jointly released by The Interactive Advertising Bureau (IAB), American Association of Advertising Agencies (4As), Association of National Advertisers (ANA), Direct Marketing Association (DMA), and the Council of Better Business Bureaus (BBB).

2011 In response to FTC urging, online advertisers and websites form the Digital Advertising Alliance and establish guidelines and capabilities to allow users to opt out of having their online activities tracked.

2011 Commercial Privacy Bill of Rights proposal tasks the FTC with developing rules requiring companies to offer consumers "a robust, clear, and conspicuous" choice mechanism.
The Good, the Bad, the What Were They Thinking

Marketing, and the data that informs it, is the engine of commerce, creating economic growth and jobs around the planet. While research presents mixed opinions on the use of data for marketing, individuals actually respond far more favorably to data-fueled advertising that meets their specific needs … some studies show three times more favorably than generic approaches.²

People expect marketers to deliver messaging that is relevant and engaging. In fact, they’re annoyed when it isn’t. The digital world in which we live and shop amplifies this effect; for example, people sign up for the Do-Not-Call list in order to reduce unwanted telemarketing calls. However, opting out from data-fueled online advertising in the same way has a very different effect: advertisers just present a lot more untargeted ads.

In their 2010 study, Goldfarb and Tucker³ found online advertising effectiveness dropped by 65 percent in Europe when restrictions on targeted ads became more rigorous. Advertiser response? More ads, and more ads with “interactive, audio or visual features.” In the researchers’ words, “we suggest that as the use of customer data by marketers online becomes increasingly regulated, ads may become more obtrusive.”

Accomplishing the relevance we are describing, of course, requires data. On the commerce side, particularly regarding digital commerce, the overall positive impact of using data has been profound:

• In a 2011 study commissioned by the Interactive Advertising Bureau (IAB) and produced by Harvard Business School professors John Deighton and Harold M. Brierley, they calculated that the ad-supported internet was responsible for 5.1 Million U.S. jobs and contributed $530 Billion to the U.S. economy.⁴

• In a 2010 study by IAB-Europe, the researchers found that people in the U.S. and Europe derive significant value from ad-funded Web applications — more than had been thought. In fact, advertising effectively finances a consumer surplus of approximately €100 billion for 2010 in the U.S. and Europe, and this number is expected to grow at a double-digit rate.⁵

• In 2011, analysts at McKinsey & Company calculated that data could unlock $300 billion in potential annual value to U.S. health care, and that the U.S. would need 140,000 to 190,000 more analytical talent positions and 1.5 million more data-savvy managers because of it.⁶

But the value of data, even digital data, is not limited to commerce. The World Economic Forum reports on two examples in its report entitled Big Data, Big Impact: New Possibilities for International Development:⁷

• “In the wake of Haiti’s devastating 2010 earthquake, researchers at the Karolinska Institute and Columbia University demonstrated that mobile data patterns could be used to understand the movement of refugees and the consequent health risks posed by these movements. They were able to analyze the destination of over 600,000 people displaced from Port-au-Prince, and made this information available to organizations dealing with the crisis. Later that year, when a cholera
outbreak struck the country, aid organizations used this data to prepare for new outbreaks. The example from Haiti demonstrates how mobile data analysis could revolutionize disaster and emergency responses.

- “The San Francisco-based Global Viral Forecasting Initiative (GVFI) uses advanced data analysis on information mined from the Internet to identify the locations, sources and drivers of local outbreaks before they become global epidemics.”

Many live richer, more rewarding lives because business, public service and not-for-profit organizations responsibly use personal data. Need more examples? In recent years, the use of data has helped people:

- Live longer, fuller lives, through proper coordination of health information
- Find true love — one in six marriages in the U.S. originates from online dating services°
- Promote freedom of speech and the unencumbered expression of ideas
- Be safer by making it easier to root out and identify bad people (criminals, sex offenders, etc.)
- Keep personal finances safer and provide alerts if someone has attempted a theft
- Enjoy free entertainment and content, funded by data-fueled advertising
- Capitalize on greater choice in products and services (generally lowering prices as well)

But just as clearly, there have been inappropriate uses. There are purposeful bad actors and those who have simply ignored the little voice that says, “This doesn’t feel right.” Others have not made data security and privacy a high-enough priority.

- A leading advertising technology company copied mobile subscribers’ entire address books without their knowledge
- Another leading technology/media company overrode browser preferences in favor of its own
- Major hospitals in some of the largest cities in the U.S. made medical records of celebrities available to the media
- A U.S. government department released Social Security numbers of tens of thousands of living Americans in a widely available database of dead persons intended to protect U.S. businesses from fraud.

There are many more of these bad actions — too many to list. The question is how do we find a balance? What should business and not-for-profit organizations, governments, advocates and individuals do to keep the commerce, technology and privacy balance viable? What are the principles?
Another challenge is determining whether or not personalization in online advertising and news creates an artificial and unfair view of the world to different audiences. Researchers and authors have referred to these as “filter bubbles” and “echo chambers.” One of the authors, Farhad Manjoo, has since reversed his view based on a “Facebook study [that] is one of the largest and most rigorous investigations into how people receive and react to news.” In Manjoo’s words, “… I’m gratified by Bakshy’s [Facebook] study.” The echo chamber is one of many ideas about the Web that we’ve come to accept in the absence of any firm evidence. The troves of data that companies like Facebook are now collecting will help add some empirical backing to our understanding of how we behave online. If some long-held beliefs get overturned in the process, then all the better.”

We applaud Manjoo and others like him who support objective investigation over self-serving sensationalism masquerading as advocacy.

**Can We Do This Together?**

The commerce-technology-privacy challenge does not rest on one segment of society. It isn’t an isolated challenge. It has existed through much of our history and has expanded over time.

Governments should make data security legislation a priority — look after the interests of all parties in this debate: technology must progress, businesses and not-for-profits must be able to serve customers and donors effectively, and individuals must have choices about how personal information related to them is used.

Privacy advocates, journalist and bloggers should continue their vigilance about protecting individuals’ ability to choose how personal data is used. In addition, they should continue to advocate for effective data security.

Acxiom will continue to help marketers turn data into actionable insights in a responsible fashion (see our commitment below.) Thus, companies will be able to develop offerings aligned with individual interests; and people can engage with companies, brands and products in a way they prefer. All parties benefit.

And what should each of us as individuals do? We should urge our elected representatives to understand the need for balance between our privacy and our need for convenience and robust commerce. We should understand our rights regarding how information about individuals is used. We should be vigilant about data security at home and work, and we should explore the opportunities to tune the relevance of our individual data footprints within business and not-for-profit organizations.
What does balance look like?

There is a huge opportunity for personal data, when used in a responsible fashion, to drive commerce and to make lives easier, safer and healthier. But there are legitimate public policy issues. What are the business principles that should guide the use of personal information? For businesses using data about individuals for marketing purposes, we believe there are several:

- **Security** — make data security a priority. Implement and maintain robust processes and programs for ensuring appropriate monitoring, detection and resolution of potential issues.

- **Choice** — provide choices for the use of personal data; either opt-out or opt-in options depending on the type of data, intended use and regulations.

- **Don’t be creepy** — here’s a litmus test: are your actions for the individual (not creepy) or to the individual (creepy.) A creepy movie, story or experience is usually about the unknown, the hidden motivation, the ulterior motive. Be as open as you possibly can about your interactions with individuals; use data responsibly to help the individual; provide descriptions of your processes; and describe how you ensure personal data is kept safe.

- **Transparency** — (related to not being creepy) be clear about what data you capture, how it’s used and with whom you share it.

- **Compliance** — comply with regulations and industry guidelines. Avoid marketing to inappropriate segments of the population, and do not market inappropriately to vulnerable segments.

- **Relevance** — serve individuals with highly relevant and engaging content based on individual tastes and needs. Understand and act on explicit individual preferences.

- **Optimize to true long-term customer value** — detailed information about individuals is often the most valuable in marketing scenarios yet presents the most sensitive privacy questions. Don’t be tempted to the quick-buck-dark-side by prioritizing short-term results over long-term value creation. Use data appropriately to build trust-based relationships, not quick scores.

“HERE’S A LITMUS TEST:
ARE YOUR ACTIONS FOR THE INDIVIDUAL (NOT CREEPY) OR TO THE INDIVIDUAL (CREEPY)”
Acxiom’s Commitment

Acxiom is committed to the appropriate use of data. We actively participate in conversations about data, working hard to create policies that both protect individuals and allow for the responsible use of data by business, public service and not-for-profit organizations. And we regularly advise our clients, vendors and partners on the responsible use of personal information.

We also want to be very clear that the focus of our business is marketing. We do NOT permit our clients to use Acxiom-provided personal data to make hiring decisions, make insurance underwriting decisions or to help credit providers grant or deny credit.

Data security remains an essential priority for us — we have a robust program to drive appropriate monitoring, detection and resolution of potential issues. Our security controls include vulnerability and penetration testing programs; firewalls and malware protection; and mandatory annual security awareness training for all employees.

Acxiom’s data consists of publicly available information, permissible public record information, information from surveys and data from other providers. While all of our data collection complies with laws and industry best practices, our marketing data adheres to an even higher standard. One example is that we review our marketing data suppliers’ online privacy policies to determine if individuals are provided notice that information will be shared for marketing purposes and that people have a choice about such sharing. We do not work with data suppliers whose policies do not meet our strict standards.

Acxiom does not collect cross-domain web browsing activity, but we do work with clients and partners who wish to use web browsing activity and our data to present more relevant advertising. When we enable this, we comply with all applicable laws and the higher standards established by industry trade associations like the Direct Marketing Association, the Interactive Advertising Bureau and the Digital Advertising Alliance.

Acxiom provides to our clients three types of data — data that helps companies market more effectively, data that helps reduce fraud and identity theft, and data that helps people find businesses, public services, not-for-profits or other people through our directory services. For the last two categories, we allow individuals to see and correct the data we have.

Because data security is a priority, allowing individuals to access and correct the data for the first category — data that helps companies market more effectively — is complex and sensitive. It’s important to note that marketers and individuals have different needs for data. While people want to see individual data related to them, marketers want to see and act on that information in volume. Marketers combine this information into segments that make their campaigns practical and cost-effective. So, from the marketer’s point of view, there’s no need to extract information on a single individual.

Consequently, we don’t have a system to accommodate this. However, we know people are curious about the marketing data Acxiom has. We think constantly about the future of marketing data and these kinds of new offerings may appear in our future product releases, but only if we can provide the proper security, navigability, understandability and system scalability. We simply cannot allow private information to be exposed to individuals or organized cyber-threats.
In reality, more robust “notice and choice” capabilities would mitigate, to some extent, the need for access. In the future, notice and choice might be facilitated in similar fashion to the email filtering many of us use today; for example the option to “Click here to download pictures” in Outlook.

Our clients and all affected individuals can expect Acxiom to continue to be a thought leader on this important topic. If you have a question, send it to Ask_Acxiom@acxiom.com and we’ll do our best to answer it.

Please download the information here to learn more about the data we have and how it is used. In addition, our U.S. Products Privacy Policy further explains how we collect and use data. Or, you can choose to opt out of our marketing data completely.

We are continuing to help our clients with contact suppression services (such as “do not call,” “do not mail” and “do not track”). This helps them comply with regulations and industry guidelines, enhances their marketing performance, increases ROI and may lower their impact on the environment by helping them recognize individuals who have exercised their choice and opted out. It also recognizes individuals for whom a campaign may be inappropriate, such as under-aged, deceased, in prison, etc.

Finally, we will always strive for greatest transparency possible. In 1991, we became one of the first companies to post a comprehensive privacy policy. We have granted hundreds of media interviews around the world and will continue doing so. We will openly advise government and business leaders about effective ways to protect privacy. Nevertheless, we are sensitive to and respect the need for our clients to remain competitive and take advantage of the information economy we all enjoy.

We are convinced that having data is not inherently good or bad. Certain uses of data can create risk for individuals, and those risks must be minimized, but data clearly provides tremendous good for the economy, for jobs and for individuals.

We commit to seek the appropriate balance — always.

SPECTRUM OF CONSUMER ATTITUDES TOWARD PRIVACY
LOOKING AT THE SPECTRUM OF CONSUMER ATTITUDES TOWARD PRIVACY, MCCANN TRUTH CENTRAL IDENTIFIED FIVE DISTINCT SEGMENTS:

EAGER EXTROVERTS (15%),
SUNNY SHARERS (20%),
SAVVY SHOPPERS (37%),
CAUTIOUS COMMUNICATORS (9%)
AND WALLED WORRIERS (19%).
Additional Reading

Everyone is entitled to his or her opinion. Passionate journalists, privacy and consumer advocates, business and not-for-profit leaders, governments, even technologists are all a vital part of the balanced, open discussion of personal data and how it should be used. Academics, industry analysts, think tanks, consultants and leaders in other industries have participated in the discussion as well. Here are additional reading resources from many points of view:

• A search on “personal data” at the World Economic Forum provides hundreds of reference articles
• “Online privacy: Do we need ‘Do-Not-Track?’” – by Thomas M. Lenard, president and senior fellow, Technology Policy Institute, July 17, 2012
• “What, Me Worry? The Privacy Question” – NPR blog by Alva Noë, Philosopher, University of California, Berkeley, July 10, 2012
• “Stupid Media Watch: The Times Outdoes Itself” – Blog by Ken Magill, former DMNews reporter, June 26, 2012
• “Big Data for the Greater Good” panel discussion facilitated by Roberto Zicari, Editor of www.ODBMS.org and professor of Database and Information Systems at Frankfurt University, June 4, 2012
• “Foursquare on Why Recycling Your Data is Good for You” – CNet review article by Roger Cheng, February 29, 2012
• “Data for the Public Good” – book by Alex Howard, 2012
• “In Defense of Data: Information and the Costs of Privacy” – research paper by Thomas M. Lenard and Paul H. Rubin of the Tech Policy Institute, May 2009

NOTE: For a January 17, 2012 retraction of sorts by author, Farhad Manjoo based on a study of Facebook users; see “The End of the Echo Chamber”
Detailed Recommendations for Balance

Imagine that together we are going to prescribe a code of behavior and expectations for the confluence of commerce, technology and privacy. Might it go something like this?

Business and Not-for-Profit Organizations should:

• Make data security a priority. They should have:
  – Comprehensive programs for ensuring strict monitoring, detection and resolution of potential issues
  – Internet vulnerability and penetration testing programs backed with additional testing by third-party experts
  – Intrusion detection programs to monitor internet footprints for misuse
  – Firewalls and malware protection for all internet systems and appropriate separation of internet risks from data centers
  – Mandatory annual security awareness training for all employees

• Make privacy a priority:
  – Respect the privacy of every individual about whom they maintain information by providing appropriate choices
  – Comply with CAN-SPAM, Do-Not-Call and other channel-specific regulations
  – Honor individual wishes by flagging or removing records from telemarketing, direct mail and email marketing lists of people who have expressed such preferences
  – Regularly advise clients, vendors and partners on the responsible use of personal information
  – Actively review privacy policies of suppliers and partners to ensure the information they provide is from appropriate sources
  – Anonymize (de-identify) data whenever possible
  – Only keep data as long as it has value and is accurate

• Make choice-based, hyper-relevant marketing a priority:
  – Deliver marketing messages that are hyper-relevant and ultra-engaging based on individual tastes and needs
  – Develop offerings and products aligned with individual interests
  – Enable individuals to engage with organizations, brands and products in the ways they prefer
  – Build and manage preference centers where individuals can directly express their desires about communication

• Make transparency a priority:
  – Make it as easy as possible for individuals to stay informed about the collection, use and sharing of personal data
  – Contribute to the use of data that benefits marketers, individuals and society and if there is conflict, support open and honest discussion and debate
– Openly advise and consult with government and business leaders, and with individuals themselves, about effective ways to protect individual privacy
– Avoid marketing to inappropriate segments of the population:
  – Block (suppress) contact to an individual through a specific channel or for a specific campaign when appropriate
  – Comply with regulation and industry guidelines that will enhance marketing performance by recognizing individuals who have opted-out or for whom a campaign may be inappropriate such as under-aged, deceased, in prison, etc.

Governments Should:

• Make data security legislation a priority (see the list above for business and not-for-profit enterprises)

• Look after the interests of all parties in this debate: technology must progress, businesses and not-for-profits must be able to effectively serve customers, and individuals must have appropriate choices about how personal information related to themselves is used

• Encourage the development of industry guidelines as a means of defining appropriate and inappropriate behavior early in the evolution of new technologies, new business models and new data uses

Privacy Advocates, Journalist and Bloggers Should:

• Continue vigilance in protecting individuals’ ability to exercise appropriate choices about how personal data is used

• Advocate for and prioritize effective data security (see the list above for business and not-for-profit enterprises)

• Do as they say. Respect individual privacy by implementing the data collection policies for which they advocate

• Seek balance, not sensationalism. Data is not good or evil, moral or immoral — it is increasingly a product, a facilitator, of our modern way of life; its importance to both individuals and organizations is intensifying

Individuals Should:

• Understand their rights in regard to choosing how personal information related to them is used

• Be vigilant about data security at home and work

• Explore opportunities to tune the relevance of their data footprint within business and not-for-profit organizations; for example, Amazon enables people to manage the recommendations they make in the area entitled, “Improve Your Recommendations.”

• Manage tracking and their online marketing footprint with tools such as Ghostery (http://www.ghostery.com/) or Firefox Collusion (http://www.mozilla.org/en-US/collusion/)
McCann Truth Central Discovers That Privacy Represents The Biggest Opportunity For Marketers Today, October 18, 2011

Privacy Regulation and Online Advertising, Goldfarb and Tucker, 2010

Privacy Regulation and Online Advertising, Goldfarb and Tucker, 2010

Economic Value of the Advertising-Supported Internet Ecosystem, commissioned by the Interactive Advertising Bureau (IAB) and produced by Harvard Business School professors John Deighton and John Quelch, 2012

Consumers driving the digital uptake — The economic value of online advertising-based services for consumers, white paper by IAB Europe/McKinsey, September 2010

(6) Big data: The Next Frontier for Innovation, Competition, and Productivity, report by McKinsey Global Institute, May 2011


(11) The End of the Echo Chamber, A study of 250 million Facebook users reveals the Web isn't as polarized as we thought — article for Slate, By Farhad Manjoo, 2012

© 2012 Acxiom Corporation. All rights reserved. Acxiom is a registered trademark of Acxiom Corporation. All other trademarks and service marks mentioned herein are property of their respective owners.