Media Environments
Edited by Barry Vacker

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media environments

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San Diego, CA
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Recommended Films

to Accompany Media Environments

CHAPTER 1. THE MEME

RECOMMENDED FILMS
Pulp Fiction (Quentin Tarantino 1994)
Whatever Works (Woody Allen 2009)

SECOND CHOICES
Waking Life (Richard Linklater 2001)
Network (Sidney Lumet 1976)
Meet John Doe (Frank Capra 1941)

CHAPTER 2. THE NETWORK

RECOMMENDED FILM
The Social Network (David Fincher 2010)
Star Trek (J.J. Abrams 2009)

CHAPTER 3. THE SPECTACLE

RECOMMENDED FILM
Network (Sidney Lumet 1976)

SECOND CHOICES
Strange Days (Kathryn Bigelow 1995)
Ace in the Hole (Billy Wilder 1951)

CHAPTER 4. THE HYPERREAL

RECOMMENDED FILM
The Matrix (The Wachowski Brothers 1999)

SECOND CHOICE
The Truman Show (Peter Weir 1998)

CHAPTER 5. NEWS

RECOMMENDED FILM
Good Night, and Good Luck (George Clooney 2005)

SECOND CHOICES
The Manchurian Candidate (Jonathan Demme 2004)
The Insider (Michael Mann 1999)
Wag the Dog (Barry Levinson 1997)
Broadcast News (James L. Brooks 1987)
The Year of Living Dangerously (Peter Weir 1983)
The China Syndrome (James Bridges 1979)
CHAPTER 6. DUMBED DOWN

RECOMMENDED FILM
A Face In the Crowd (Elia Kazan 1957)

SECOND CHOICES
Idiocracy (Mike Judge 2006)
Network (Sidney Lumet 1976)

CHAPTER 7. SCIENCE

RECOMMENDED FILM
Contact (Robert Zemeckis 1997)

SECOND CHOICE
Gattaca (Andrew Niccol 1997)

CHAPTER 8. SURVEILLANCE

RECOMMENDED FILM
Minority Report (Steven Spielberg 2002)

SECOND CHOICES
The Lives of Others
(Florian Henckel von Donnersmarck 2006)
V for Vendetta (James McTeigue 2005)
Enemy of the State (Tony Scott 1998)
Nineteen Eighty-Four (Michael Radford 1984)
2001: A Space Odyssey (Stanley Kubrick 1968)
Fahrenheit 451 (François Truffaut 1966)

CHAPTER 9. CELEBRITY

RECOMMENDED FILM
Quiz Show (Robert Redford 1994)

SECOND CHOICES
American Dreamz (Paul Weitz 2006)
S1m0ne (Andrew Niccol 2002)
To Die For (Gus Van Sant 1995)
Natural Born Killers (Oliver Stone 1994)

CHAPTER 10. SOCIAL AND MOBILE

RECOMMENDED FILM
Hackers (Iain Softley 1995)

CHAPTER 11. SPORTS

RECOMMENDED FILMS
Rollerball (Norman Jewison 1975)
Gladiator (Ridley Scott 2000)

SECOND CHOICE
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CHAPTER 12. GAMES AND VIRTUAL REALITY

RECOMMENDED FILMS
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Tron (Steve Lisberger 1982)
CHAPTER 13. THEME PARKS

RECOMMENDED FILM

*The Truman Show* (Peter Weir 1998)

SECOND CHOICE

*Westworld* (Michael Crichton 1973)

CHAPTER 14. CONSUMER CULTURE

RECOMMENDED FILMS

*American Beauty* (Sam Mendes 1999)

*WALL-E* (Andrew Stanton 2008)

CHAPTER 15. GLOBALIZATION

RECOMMENDED FILM

*Slumdog Millionaire* (Danny Boyle 2008)

CHAPTER 16. COUNTERCULTURE

RECOMMENDED FILM

*Fight Club* (David Fincher 1999)

CHAPTER 17. CATASTROPHE

RECOMMENDED FILMS

*2012* (Roland Emmerich 2009)

*The Day After Tomorrow* (Roland Emmerich 2004)

*Independence Day* (Roland Emmerich 1996)

*The Matrix* (The Wachowski Brothers 1999)

CHAPTER 18. ELECTRONIC CONSCIOUSNESS

RECOMMENDED FILM

*Vanilla Sky* (Cameron Crowe 2001)

SECOND CHOICES

*Artificial Intelligence: AI* (Steven Spielberg 2001)

*2001: A Space Odyssey* (Stanley Kubrick 1968)

CHAPTER 19. SPACESHIP EARTH

RECOMMENDED FILM

*WALL-E* (Andrew Stanton 2008)

CHAPTER 20. TRAJECTORIES

RECOMMENDED FILM

*Waking Life* (Richard Linklater 2001)

SECOND CHOICES

*Whatever Works* (Woody Allen 2009)

*Gattaca* (Andrew Niccol 1997)

*Ghost in the Shell* (Mamoru Oshii 1995)

*Blade Runner* (Ridley Scott 1982)
Media Environments is based on a simple concept: combine movies with texts to critique media and society in the 21st century.

If you are a student, you must be thinking: “Cool. This will be a fun class!” But don’t forget, you are reading this in a book, a thick book.

If you are a professor, you might be thinking: “Oh no, more edutainment.” But, like the students, you are reading this in an anthology full of critical theory.

Here’s the general idea behind this book: Entertainment and enlightenment do not have to be in opposition, though they surely are in most of popular culture. “Fun” and “critical thinking” can coexist in a classroom. Art and theory can work together to educate and enlighten, sometimes in an entertaining way. And it is one way to address a daunting educational challenge. Let me explain in greater detail.

THE GOALS

The goal of Media Environments is to inspire students to think creatively and critically based on a broad cultural literacy that includes media and society, theory and technology, and the arts and sciences. Critical thinking and cultural literacy require learning at a deeper level, beyond the latest media trends and techno-gizmo, and being open to exploring the wider range of patterns in technological and cultural evolution. It also requires exploring our own beliefs and our place in the universe as revealed by media technologies.

We live in a 24/7, online, omnipresent, globally networked media universe. This anthology acknowledges that virtually all media technologies, industries, content, and usages have converged and work together to shape consciousness and culture as technological environments. Media-as-environments is the existential reality for college students in the 21st century. Rather than examine the media as separate industries (newspapers, radio, television, etc.), Media Environments explores these media in their totality and provides models for understanding and interrogating many universal themes that span media and global culture.

Media Environments combines popular art with text-based theory to creatively and critically map the “environments” of the media — the mental, material, and cultural environments.

THE CHALLENGE

Designed for media and society courses, this anthology directly confronts a fundamental challenge in the college classroom: how to inspire critical thinking and maintain relevance for students who have grown up with the internet, YouTube, Google, Wikipedia, Facebook, Twitter, and so on.

There exists an endless debate about how to best address this challenge, with little consensus other than colleges and universities inserting the internet into the classroom, making wireless access available to all students with a laptop or mobile phone. Of course, to maintain the students’ attention, professors face two choices: 1) they can make the students turn off all electronic devices, or 2) they must compete with the entirety of the entertainment and information on the internet, plus all those urgent e-mails and text messages from students’ friends. The first choice
seems rather reactionary and draconian, while the other is a formidable challenge for any educator, choosing to stand before any audience with shrinking attention spans and unlimited electronic choices. Of course, the professor can have the students use their laptops for assignments during class, thus minimizing the random web surfing that may be happening.

Though the classroom use of such technologies may have some educational benefits and be relevant for today’s student, it is arrogant or delusional to think the seamless introduction of the internet into the classroom will inherently instill or inspire critical thinking skills. Technological proficiency is not equivalent to reflective thinking. Hollywood, YouTube, TV news, and a zillion blogs illustrate this every day.

The “film-and-text” strategy emerged from my desire for an effective teaching method that combined contemporary relevance with critical analysis. The films provide relevance for today’s students, while the diversity of readings provides analysis that complements the ideas in the films and promotes critical-thinking skills and deeper learning. One key advantage of the film-and-text approach is that the films serve as gateways into the world of critical thinking.

Does the combination of films and texts ensure that all students will be more reflective or better critical thinkers? No. Ultimately, it is up to each student to take responsibility for their own minds, beliefs, and behaviors, while learning what it means to think with greater depth and insight.

Here’s the bottom line: critical thinking requires focusing one’s attention on a topic and analyzing the subject matter with greater depth and from multiple perspectives. This means students should be able to focus their attention and concentration for the length of a film or long enough to read one or more articles. If college students cannot focus their minds for two to three hours in the world of ideas, then, in the famous words of Apollo 13: “Houston, we have a problem.”

If college students cannot focus their minds for two to three hours in the world of ideas, then, in the famous words of Apollo 13: “Houston, we have a problem.”

THE FILM-AND-TEXT METHOD

In the spirit of pioneering media theorist Marshall McLuhan, I believe films can function as “probes” capable of providing deep insight into media and culture. Living in a world filled with media environments, it is often hard for us to get outside and view the larger patterns from different and deeper perspectives. That is why film and theory both play a crucial role in this anthology.

In the 1960s, McLuhan often referenced art to illustrate his innovative and often profound insights into the role of media in society. McLuhan believed that artists — writers, poets, painters, etc. — are capable of intuiting or anticipating patterns of cultural and technological change and that their artworks can serve as “counter-environments” that provide us with “the means of perceiving the environment itself.” As illustrated by the films referenced in this anthology, such artistic counter-environments can illustrate or critique media concepts that might be difficult to perceive or analyze in their totality, precisely because they are environmental in our global culture.

As the millennia of art history have shown, artworks can represent complex ideas in highly stylized and condensed forms, often to very powerful effect. Movies have been doing this for over a century. The art of film can entertain and enlighten students, and thus serves as the starting point for a deeper interrogation of the global media environments. If, as Aristotle believed, art is the fiction that can reveal truth, then surely the fiction of film can help reveal the truths of real-world conditions involving media, culture, and humanity.

As illustrated by the readings, this strategy and anthology provide much more than mere “edutainment.” Rather than merely entertain, the films and readings encourage professors and students to see, read, contemplate, critique, and discuss. In effect, we learn to read a movie and view a text.

UNIVERSAL THEMES

Media Environments explores themes that are universal to media and society in the 21st century. The goal of these themes is to provide critical grand narratives for students living in media environments, with the purpose of uniting
the students in discourse on intellectual topics that span cultures. These topics are highly interdisciplinary, situating media theory and media effects not merely within popular culture but also within the realms of science, philosophy, aesthetics, and cultural studies. Students are exposed to a diversity of cultural ideas and many specific media theories, all united and grounded upon a philosophical foundation toward media education.

This anthology purposely omits topics of class, gender, and ethnicity, as well as the typical textbook collection of factoids, time lines, new technologies, and industry hype. Politics and economics are minimized here, used only as parts of larger themes explored in this anthology. Topics such as class, gender, ethnicity, politics, and economics are amply covered in numerous other courses in the college experience. While teaching at one of the most culturally diverse campuses in America, I have found this approach to be effective in my courses.

With 20 chapters, *Media Environments* provides many options and topics for each week of the semester, while embracing this simple concept: combine movies with texts to critique media and society in the 21st century.

**ADVANTAGES FOR TEACHING**

For the college classroom, *Media Environments* provides pedagogical advantages in five areas:

- The anthology provides a wide range of media theory.
- The anthology presents four basic media models — The Meme, The Network, The Spectacle, The Hyperreal — and invites their application across the remainder of the themes covered in the chapters.
- The film-and-text approach embraces the diversity of learning styles among students.
- The anthology inspires creative and critical thinking necessary for deep learning and cultural literacy.
- The anthology unites the visual arts with text to present students with new models for understanding the global media environments.

The wide range of readings and films permits professors to tailor the theories to fit with their personal interests and expertise in teaching Media and Society or other media-related courses. Professors can select from among 20 chapters and numerous films.

The film-and-text approach uses four forms of communication for the exchange of ideas and enhanced learning in the classroom: oral, print, popular arts, and electronic screens, the last of which are perhaps the media most used by college students of this era. This combination also accommodates the differing and variable learning styles of students. Some students learn best via oral discussion, some via reading, some by seeing the ideas in visual form via film, which is one of the most popular of the arts.

**POTENTIAL FOR “DEEP LEARNING”**

Among college students, there is a spectrum of understanding that ranges between “surface” learning and “deep” learning in any given course. Between surface and depth, there is also the “strategic” learner. Deep learning is what professors and students should desire, precisely because such learning will stay with the student long after the semester ends. To understand how *Media Environments* strives to motivate such deep learning, it is important to first understand the differences between surface, strategic, and deep learning, and the role of “models” and classroom “environments” in effecting deeper learning.

Surface learning involves the student replicating the ideas and information provided by the professor, without really understanding the ideas or grasping their fuller meanings or applications. Such learning among students may be motivated by the fear of being intellectually challenged or the lack of desire for deeper understanding. Students who remain on the surface are likely to forget what they “learned” soon after the completion of the semester. In effect this is the Xerox version of learning and, like most paper copies, it ends up sitting in a file folder or more likely, tossed in the trash can or recycling bin.

Deep learning happens when the student grasps the implications and meanings of the ideas and information. Such learning grasps the core of the idea, its foundations, and/or arguments. Deep learning is motivated in students

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2 Much of the following discussion about student learning draws from insights shared by Ken Bain during a presentation to faculty at Temple University, January 12, 2010. The presentation explained some key ideas in his book, *What the Best College Teachers Do* (Cambridge, MA: Harvard University Press, 2004); student-learning patterns are discussed in Chapter 2, pp. 22–47.
by the desire to know and understand. Strategic learning is most often motivated by the desire for a good grade. As such, it involves surface learning and (sometimes) deep learning as needed to get the desired grade.

One method for inspiring deep learning is to make the course materials relevant to the students in their intellectual and cultural milieu. As with most college students of the past five decades, movies are intrinsic to the milieu of contemporary youth culture. In this anthology, the movies become the gateway to the texts, which can provide the potential for deep learning.

Another method for inspiring deeper understanding is to provide a natural critical “environment” that facilitates learning in the classroom. Since students are immersed in media environments, it makes sense to show movies on screens in classrooms, thus providing the counter-environment for understanding the very media environment that has permeated the classroom.

One of the obstacles to deep learning is overcoming the preexisting mental models about media that students have when they enter the classroom. One of the essential things humans do is integrate perceptual experiences and concepts into mental models (or schemata) that explain “the way the world works.” These models can be simple or complex and have been constructed and modified in people’s minds over the course of their lives. As illustrated most clearly in religion and politics, getting someone to discard one of their mental models is very difficult, often in the face of overwhelming evidence that contradicts or refutes their model. Students are no different and they may simply wrap the new information or model from the course into their preexisting mental models or discard the new ideas or model if it conflicts with what they believe they know.

Regarding deep learning, replacing outmoded or incorrect models in the minds of students is a formidable challenge. Media Environments addresses this challenge in two ways. First, the anthology combines text with powerful visuals to illustrate the models and themes covered in the anthology. Second, the four media models — The Meme, The Network, The Spectacle, The Hyperreal — can be applied to the remaining themes covered in the chapters. In the end, the “film-and-text” method is not a “perfect” method, but it does provide a model that has much potential for effectively teaching Media and Society (and other media-related courses) to the 21st century student.

A NOTE ABOUT THE READINGS AND FILMS

The readings selected for Media Environments were almost exclusively taken from books available in chain and independent bookstores, in the media, sociology, or cultural studies sections. It is assumed that if the readings are from publications in typical public bookstores, college students should be able to comprehend — with effort — the ideas in these readings, as organized in this anthology. That these readings appear in this anthology does not mean that the editor agrees with all the authors. This anthology is not a collection of the editor’s favorite media theories. The readings were selected with one overall goal: to provide a variety of provocative ideas and arguments that mesh with the films to stimulate critical thinking among undergraduate students.

The films recommended in this anthology are not meant to be viewed as the “greatest” films of all time, nor are they the editor’s favorite movies. Rather, these are some of the best popular films that dramatize complex media theory and its relations to culture and society. Professors are encouraged to be open minded about the learning potential of any given film, even though it is not one of their personal favorites. Since these topics and films obviously overlap, with some movies suitable for more than one topic, professors can use the films as they desire for each chapter.

The themes, films, and readings selected for this anthology are meant to provide new ways of looking at media and society. The readings within chapters are not arranged in a facile manner that suggests either/or, pro and con, or “both sides” of the issue. The world of memes and cultures is far more complex. The readings were selected to encourage creative and critical thinking. Though there is an overall structure, I want the films and readings to provide surprising juxtapositions, to flow imperfectly and embrace some turbulence, and to present models and memes in ways that are patterned and chaotic. That is the way the world actually works.
As with any textbook, this anthology would not have been possible without the efforts of many people. My thanks:

To Johanna Marcelino, the acquisitions editor at Cognella who initially approached me about doing an “innovative” anthology. To be honest, I was very skeptical about her interest because virtually all textbook publishers are ultraconservative in their approach and methodologies. That is why the media and society textbooks have hardly changed in style and structure over the past 30 years, despite the proliferation of media in our culture. Much to my surprise, Johanna immediately grasped the essence of my vision for this volume and paved the way for this book to happen. Thanks for getting it, Johanna!

To Al Grisanti, senior acquisitions editor at Cognella, for sharing his many insights into the mass media textbook marketplace. Our conversations helped shape the final selections and chapters included in this text. Thanks for sharing your expertise, Al.

To Monica Hui for making the cover look so great, for letting the image tell the story with minimal interference from text and graphics. Thank you for making it all work together, Monica.

To Jessica Knott for her “cool” design sensibilities. Most media and society textbooks offer a barrage of visual clutter, with pages packed with charts, photos, tables, timelines, and sidebars, all of which distract from concentrated reading and critical thinking. Jessica and I immediately connected in our visualization of the overall look and feel of the interior of the book: cool, clean, modern, minimalist, with just enough design elements to break up the text for easy readability. Your aesthetic talents are much appreciated, Jessica.

To all my colleagues in the School of Communications and Theater and the Department of Broadcasting, Telecommunications, and Mass Media at Temple University: Thanks to all of you who shared your ideas and offered useful suggestions for improving this anthology, especially Jan Fernback, Renee Hobbs, and Sherri Hope Culver. Thanks to Elizabeth Leebron Tutelman for providing me with the opportunity to teach so many of the large lecture courses in media theory at Temple and for supporting my experiments with different teaching styles and methods in these classes. Thanks to Paul Swann, Matthew Lombard, Nancy Morris, and Zizi Papacharissi, all of whom provided helpful feedback for teaching large and small theory-based courses. Thanks to Pamela Barnett and Carol Philips of Temple’s Teaching and Learning Center; I have benefited from their workshops which provide numerous useful strategies for effective teaching. Thanks to everyone!

To Jarice Hanson at the University of Massachusetts Amherst for sharing many ideas and insights during our numerous conversations.

To Carly Haines for her diligent work as research assistant. Your cheerful assistance made working on this book easier.

To Gail Bower for her enthusiastic support of this anthology. Your patience and thoughtful advice was invaluable in helping me navigate the complexities of this project.

Finally, my thanks go to the many filmmakers and writers included in this anthology. Their individual and collective knowledge have furthered our understanding of the evolution and effects of the global media environments. How can anyone look at media, technology, humanity, and culture the same after reading Plato, Neil Postman, Jean Baudrillard, Susan Jacoby, Naomi Wolf, Stephen Hawking, Carl Sagan, and the many others? We all see further because of their visions.
We become what we behold.
— Marshall McLuhan
You live in a 24/7, online, omnipresent, global network of media environments. Screens and more screens, thousands of satellites surround the planet, millions of miles of fiber optics in the metropolises, computers, TVs, Kindles, iPhones, iPods, iPads, each storing and streaming music, videos, films, web sites, blogs, news, sports, opinion, art, and science — all connected via that vast network we call the internet. And there are newspapers and books, too, like the one you are reading now. Media are vast environments, environments of consciousness and culture, an electronic universe of space and time. It’s like living in Times Square.

All this seems rather obvious.

But how can you begin to grasp the profound roles of these environments in shaping culture and human consciousness, including your own? Here’s how:

Unplug. Disconnect. Turn off instant messaging. Tune down your iPod. Silence your cell phone. Yes, it is a challenge, but you can do it and survive, at least for a while. Your media environments are not going away and will be there when you plug in again shortly. The end of the world and 2012 will only happen in the movie theaters. For right now, just reflect on these next few sentences for a moment — a very long moment.

Let’s begin.

Humans always exist astride an existential moment, the moment that is now, the moment between:

➤ Past and future
➤ Yesterday and tomorrow
➤ The world as it is and as it could be
➤ The world as it is and as we perceive it to be
➤ The world as it is and as it is represented to be by art, science, philosophy, and media.

This anthology is about these moments in the realm of media and culture. Since we exist astride these existential moments, we always face another moment, the moment between:

➤ Chance and choice
➤ Ignorance and knowledge
➤ Entertainment and enlightenment
➤ Dream and destiny.

This anthology is also about the moment of choice, the moment each of us faces in trying to shape our lives, to give us a sense of destiny that we control, to give meaning to our existence, to gain understanding of the culture and cosmos we inhabit. And perhaps nowhere are these questions clearer and more open to exploration than in a college classroom. These are the questions implicit in the worlds and worldviews represented in our global network of media environments, the worlds and worldviews explored in the films and readings in this anthology.

Implicit throughout this anthology is the question: “What is the role of media in human existence?” Here’s the sound-bite answer: Media are how you come to know our universe and our planet and your place in that universe and your destiny here on Earth — in your life, in your career, in your network, in your reality. Those are a lot of big ideas implying many questions which are explored in this anthology. The 13 major questions in this introduction will be philosophical and/or rhetorical,
designed to open your mind to thinking differently about your beliefs and the surrounding media environments! These questions also provide you with some context and additional explanations for the chapters, readings, and films.

- **Questions 4 and 5**: These questions help you think differently while exploring the ideas in the book and how you use media in your life.
- **Question 6**: The Spectacle, News, Dumbed Down, and Science.
- **Question 7**: Surveillance, Celebrity, and Social and Mobile.
- **Question 8**: Hyperreality, Sports, Games and Virtual Reality, and Theme Parks.
- **Questions 9–13**: Consumerism, Globalization, Counterculture, Catastrophe, Electronic Consciousness, Spaceship Earth, Trajectories, and additional context for the films.

You can return to these questions and discussions as you work your way through the text over the course of the semester. The four media models — Meme, Network, Spectacle, and Hyperreal — can be applied to the topics and themes in the remaining chapters.

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**QUESTION 1
ARE YOU MASTER OF YOUR DESTINY?**

You enrolled in college. Most likely you have met some new friends and heard some new ideas. You look forward to some of your classes, may dread others, and have dreams of life after graduation: career, fame, family, wealth, and so on. You may have declared a major, perhaps after a few changes and experiments in different classes. It’s good to experiment. Changing your major is easy; changing your mind is a challenge.

What do you believe about the world, the universe, the role of media in human existence? Where did you get those beliefs? Do you know those beliefs to be true or are you just going along with your parents, friends, and society? Think it over.

Did you consciously choose those beliefs? Or did the beliefs choose you? That may sound like a strange question, but it is not. It is based on a very powerful idea. Maybe the ideas and messages in the media replicate like genes and spread like a virus. Can activities, beliefs, and worldviews be thought contagions passed among minds? Douglas Rushkoff and Richard Brodie explain this possibility in the first chapter.

Facebook has friends and fans, Twitter has followers, and YouTube has viral videos. Let’s think about these popular online communities by asking some questions:

- Did you find Facebook or did Facebook find you? Was it through the recommendation of a "friend?" Did you actively choose to become a “fan” of something — let’s say the film *Fight Club* — on Facebook, or did it seem as if the *Fight Club* fan club chose you?
- Did you find Twitter or did Twitter find you? Did you actively choose to become a follower, or did the Twitter followers find you?
- Did you choose to find that viral video in YouTube, or did it seem as if the viral video found you?

Of course, these questions are rhetorical, yet they are meant to be seriously thought provoking at the same time. It is likely that you “found” Facebook, Twitter, and YouTube through a friend, long before your parents and grandparents ever heard of them. Once you found them, they were easy to use because it was easy to imitate what others were doing in these communities. That is why these communities grew so fast. Within but a few years, Facebook has reached over 300 million users, equaling the population of the United States. Some videos in YouTube have been watched tens of millions of times, often within a relatively short time frame. How these sites attain popularity and how you found and use these sites raise questions about the spread of ideas and beliefs via the networks of our media and culture.

Let’s extend our analysis to sports teams and fans.

If you are a fan of a certain American football team, why are you a fan of *that* football team? Is it because they are intrinsically superior to all other football teams? If so, your team would never lose a game or fire their coach. More likely you are a fan because of sheer chance rather than pure choice. Maybe your fan preferences were determined by where you were born and/or raised by your parents; perhaps you grew up in a city that has a professional football team such as Dallas, Philadelphia, or San Francisco. If you grew up in China, it is likely you are not a fan of an American football team and couldn’t care less. Choice comes into the
matter a little more if you chose to attend a college with a prominent football team like the University of Texas, Penn State, or the University of Southern California. But you might be a fan of college teams due to chance, just because you were born or raised nearby. Mostly, but not always, fan preferences are products of chance more than choice.

Of course, some teams find fans outside their regional areas, like the Dallas Cowboys and New York Yankees. They develop mystiques or followings because of their success, meaning they win much more often than they lose. Thus, they are on television more often. The meaning is simple: when teams win, they get more fans. Breathless sportscasters remind us that momentum changes, but winning is contagious! Being a fan looks like fun, except when your team loses.

Teams and fans have identifying slogans and regional nicknames, like “How ‘bout them Cowboys” for the Dallas Cowboys and “Hook ‘em Horns” for the Texas Longhorns. Fans often wear their team’s logos or jerseys. Imitation is flattering and it is easy to do. I live in downtown Philadelphia and when the Phillies won the 2008 World Series, the celebration parade drew more than one-half million fans, all wearing red hats, T-shirts, and jerseys. From the balcony of my loft on the parade route, I watched the joyous fans stream in from every street; it looked like a species migration one might see on the National Geographic Channel. Perhaps sports taps into our tribal roots in hunter-gatherer societies. In Chapter 11, Carl Sagan’s essay “Monday Night Hunters” explores this idea and gives new meaning to Tom Brady in the Super Bowl, Vince Young in the Rose Bowl, and Russell Crowe in Gladiator.

After all, cities and colleges build magnificent stadiums, which are temples and coliseums for their teams and fans. If you cannot attend the game, you can always migrate to the neighborhood sports bar or view the game on your flat screen in your dwelling. This explains how a lot of money is made off fans — many billions of dollars, in fact. To survive as economic and cultural entities, teams need fans and television needs viewers. They function together, always trying to acquire more fans by copying their beliefs into your mind.

And what better way to gain fans than to be celebrated on television in the annual rituals and spectacles of the Super Bowl and the Bowl Championship Series. “Super” games and “championships” are attractive and seductive, as are game-winning plays, heroic quarterbacks, and glamorous cheerleaders. So, did you consciously choose to be a fan because of the unique virtues of your team? Be honest. Or is your preference the product of chance (your parents and where you were born), the team, and the media, all of which combine in trying to choose you to be a fan?

Much like your fan preferences, many of your ideas and beliefs may have been passed down to you from your parents. Political, philosophical, and especially, religious beliefs strongly correlate to your parents’ beliefs and/or which area, nation, or region of the world in which you were born. This means your beliefs and worldview are more likely the product of chance than your conscious choice. Just like teams need fans and TV needs viewers, political parties need voters and philosophies and religions need followers. When you agree with your parents in these realms, it likely makes them very happy. On the other hand, you may have expressed beliefs or behaviors significantly different from those of your parents, perhaps causing them much consternation. At some point, you decided to discard a previous belief or behavior from your parents, in favor of a new idea and activity. You were no longer a fan or a follower of the previous belief, which is no longer being passed on through you. Beliefs die out when they are no longer passed on to the succeeding generations.

All these examples — Facebook, Twitter, YouTube, sports fans, following parents, and chance over choice — raise essential questions about the spread of belief systems and media usage in our culture, especially via the global networks of the internet. Let’s consider another question. Does your mind hold knowledge of the world that you know to be true? Or is your mind merely the host for beliefs that have copied themselves onto your neurons as an evolutionary survival strategy? Are you master of your destiny, or merely a puppet with a mind virus?

QUESTION 2
WHY ARE QUENTIN TARANTINO FILMS SO POPULAR?

Did you know ideas and information evolve in our culture in much the same way as the genes in your body? It makes
sense; our minds are part of our bodies and both are the product of evolution. Understanding how ideas evolve and replicate provides a new way to understand how they spread via the media to reach your mind.

Across eons of evolutionary time, the genes in all life forms survived by successfully replicating themselves in their hosts and getting passed on to future hosts via variation and selection. Evolution is the competition for existence and survival into the future. Genes compete, but not merely by copying. Genes must also be selected from among all the other competitors in the gene pool. When genes copy themselves, occasionally the copy is imperfect, thus generating a random variation or mutation. Those variations or mutations that improve fitness or confer survival advantage — in the highly competitive gene pool — will continue to be copied, unless replaced or improved by further variations and mutations. Over millions of iterations, the surviving copies will gradually take on new qualities that increase their prospects for success in producing progeny or in competition for limited resources. In contrast, the less successful genes will eventually be unable to survive, thus disappearing from nature’s game. In a nutshell, genetic evolution involves replication, variation, selection, and heredity, all for the purpose of existing and surviving into the future. Over a couple of billion years, this simple evolutionary process has produced the complexity and diversity of life on Earth.

In a purely biological sense, your body is the vessel for genes passed down from your parents and all their ancestors. If you choose to have children, your genes will be passed to them and they will become the vessels for the accumulation of genes from all their ancestors. Through the never-ending succession of generations, genes are passed down across great distances of time and have spread around the planet as humans migrated across the face of the Earth. Over the eons, simple and repetitive genetic evolution has produced the complexity that is your human body and brain.

Your brain is home to your mind — the vessel for ideas, beliefs, and worldviews. You most likely inherited many of those beliefs from your parents. You have acquired ideas from your friends, the media, and maybe even some professors. The new beliefs you acquired are the product of mutations of previous beliefs or the competitive success of new and competing ideas, which have succeeded in gaining your allegiance — especially if the new ideas or beliefs seem to better explain the world and your place in it.

To help you think about ideas and information as evolutionary beliefs in a new way, let’s explore the term “meme” (rhymes with cream). “Meme” was coined by biologist Richard Dawkins in the book *The Selfish Gene*, in which he presented his explanation of genetic evolution. Dawkins observed that culture evolves in many ways similar to genes and created “meme” as a term for explaining cultural evolution in new ways. Since then, the concept of memes has spread out into society to become the object of study among many thinkers, as illustrated in the various definitions provided in Richard Brodie’s reading in Chapter 1.

**Biological definition:** The *meme* is the basic unit of cultural transmission, or imitation.

**Psychological definition:** A *meme* is the unit of cultural heredity analogous to the gene. It is the internal representation of knowledge.

**Cognitive definition:** A *meme* is an idea, the kind of complex idea that forms itself into a distinct memorable unit. It is spread by *vehicles* that are physical manifestations of the meme.

**Brodie’s definition:** A *meme* is a unit of information in a mind whose existence influences events such that more copies of itself get created in other minds.

These definitions and the accompanying readings provide a method for thinking about the transmission of ideas from consciousness to consciousness — via the media — in our culture. Across the millennia of cultural evolution, memes have survived and flourished because they managed to replicate, mutate for survival advantage, and continue to be selected within the minds of their hosts.

Some memes are simple, some are highly complex. Memes populate the environments of our minds, in the

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1 Richard Dawkins, *The Selfish Gene* (Oxford, UK: Oxford University Press, 1976): 189–201. Meme is a hybrid term, derived and condensed from the word “mimeme,” which has roots in the Greek word for imitation; Dawkins also thought meme could be related to memory and the French word *mémé*; p. 192.

form of our beliefs and worldviews, which in turn shape our behaviors and destinies. The most complex memes — like sports or religions or worldviews or ecology or consumerism or counterculture — can be thought of as metamemes or memeplexes. A metameme is an overarching meme that contains many lesser memes, while a memeplex refers to a complexity of memes, or clusters of smaller memes that replicate together in a manner that furthers the survival of the memes, collectively and individually.³

It is important to understand that the popularity of a meme, metameme, or memeplex has nothing to do with truth or its true value, but rather its ability to survive by saying something about the world that ensures its replication in the host. In other words, any given meme may be true or may be false. While a meme could be popular because it is actually true, a meme might be unpopular precisely because it is true and challenges a widely held belief system. … Memes can be true or false, including the memes in your mind.

This is no less true in politics. Politicians need voters and political parties need followers. You could think of the 2008 U.S. presidential election as a battle among three memes: “Hope and Change,” “Maverick,” and “Rogue.” Do I even need to mention the names of the candidates associated with these memes? As with all memes, political memes can replicate regardless of whether they are true or false, right or wrong, good or bad. Memes can replicate regardless of whether the politician or political belief has any merit, anything new to offer, or anything coherent to say, as illustrated in Sarah Palin’s famous television interview with Katie Couric. In fact, memes are more likely to be replicated when they are not really new, but only appear new and play well in the spectacle. Politicians, media personalities, and the “experts” may have actual merit, but nothing is guaranteed just because a meme is popular. These conditions are illustrated in the classic media films Network and A Face in the Crowd.


4 In 2007, I wrote and directed an experimental film about media and memes in Times Square. It’s called Space Times Square and it played at various festivals and conferences around the world and received the 2010 John Culkin Award for Outstanding Praxis in the Field of Media Ecology from the Media Ecology Association. The 24-minute film is a mind bender; you can check it out for free in Google Video. Just type in: Space Times Square. For more information, see www.spacetimessquare.net.
Virtually all of the films in this anthology are movie memeplexes, packed with many smaller memes that work together in a complexity to replicate their ideas on the screen and in the minds of moviegoers. Many of these films not only replicate memes, they have mutations that are transformative, resulting in a film with references to the past as well as new meanings and messages for the contemporary era.

Much of Quentin Tarantino’s fame as a filmmaker is because his films are brimming with pop culture memes that are mutant in fresh, surprising, and shocking ways, from _Pulp Fiction_ to _Kill Bill_ to _Inglourious Basterds_. In fact, the name “Pulp Fiction” suggests memes from cheap novels or low-budget films, the very subject matter selected, copied, and transformed by Tarantino. In the famous conversation between two hitmen in _Pulp Fiction_, Tarantino plays with memes we know all too well, the Quarter Pounder and the Big Mac. Quoted on the title page of Chapter 1, this conversation unintentionally illustrates how memes get copied and passed along among humans. Vincent picked up the memes in France and is passing them to Jules, who repeats each meme — “Royale with Cheese” and “Le Big Mac” — after he hears it. Jules’s repeating of the names of the burgers illustrates the copying power of memes. Yet, since Vincent did not go to Burger King, the French version of the Whopper does not get passed along.

Tarantino’s memes also illustrate a key feature of postmodernity, where the proliferation of image and information fuels a culture of copying and “simulation.” As Aaron C. Anderson explains in Chapter 1, Tarantino uses images (memes) from road movies as starting points for _Death Proof_, yet the film discards any reference to the economic or social reality that generated the “original” movies. Tarantino’s _Death Proof_ and Robert Rodriguez’s _Planet Terror_ are the two films in the double feature known as _Grindhouse_; both _Death Proof_ and _Planet Terror_ are not remakes, but are big budget simulations of low budget flicks screened in the “grindhouses” of the 1970s. Tarantino’s films are filled with hybrid memes — copies and simulations of images which once referenced reality — that effect a cinematic “hyperreality” by transforming history into TV and movie images. That Tarantino is hailed as an original filmmaker, a rebel auteur, is a testament to the power of memes and the seductions of simulation and hyperreality.

Genes were the first replicators, fueling the biological evolution of life, including the evolution of the human mind. Emerging from our minds, memes are the second replicators, fueling the cultural evolution of humans around the world. In the words of Susan Blackmore, humans are “gene machines and meme machines.” Blackmore also thinks that a third replicator has emerged among our memes, the replicator of technology, or what she has recently termed as “temes.” Many of these temes have converged in producing the technological evolution of our 24/7 media environments. And these media environments are the perfect ecosystems for the global replication of memes.

**QUESTION 3 WHAT’S THE MEANING OF “THE BRIDGE” IN STAR TREK?**

_Star Trek_ presents an idealized vision of our global network of media environments, circa 2009. The media environments on the Starship _Enterprise_ are ambient, convergent, fluid, interactive and automated, digital and electronic, wired and wireless, social and mobile, operate and update in real time, have access to vast databases, and the information is represented on clear, flat screens throughout the ship. Wherever Captain Kirk and crew members go throughout the _Enterprise_, they are immersed in the ship’s information networks at all times. The media function like a more advanced version of the 24/7, nonstop network that is all around us. That’s why The Network is the second media model discussed in this anthology (Chapter 2).

Let’s go a little deeper. Maybe this will help explain the potential _personal_ power of the media environments. The main control room for piloting the _Enterprise_ is called “the bridge” and it has a circular shape that resembles a panopticon, the circular surveillance system explained in Question 7. As the captain, Kirk is seated in the center of the bridge, with the top-ranked crew members seated before the circular array of screens. There is also a large windshield that allows them to directly perceive the portion of the cosmos in front of the ship. But there are far more screens than windshield, and the crew spends most of the time looking at the screens, not out the windshield.

That’s because direct perception through the windshield is insufficient for traversing the cosmos, thus requiring sensory extension and amplification by technology. This is something humans learned with their first cave painting.

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and spoken word. We looked out from our caves and realized we cannot survive very well without communication and technology.

Extending from the crew to the cosmos, from the bridge to beyond the Enterprise, is a vast network of media technologies, designed to gather, organize, interpret, and display a variety of images and information on the electronic screens. The images on the screens are enhanced representations of the reality beyond the windshield on the bridge. The panoptic networks of the starship illustrate the essential role of media technologies in assisting and extending human consciousness in its never-ending quest to acquire knowledge of reality and the cosmos. In many ways, our personal media technologies are our bridges to much larger universes — the cosmos that surrounds us and the cultural worlds of information, entertainment, and enlightenment. But what happens when entertainment overtakes enlightenment or information overtakes reality to create a substitute reality? These are the questions explored in the next two media models, The Spectacle (Chapter 3) and The Hyperreal (Chapter 4).

In a very real sense, when you are using your computer, you are sitting in your own captain’s chair and navigating a vast electronic universe. What are you doing? Uploading pictures and downloading tunes, watching two-minute videos about celebrities and sports highlights, or perhaps texting and tweeting away about the trivia of life? Doesn’t it seem like it ought to be more than that?

**QUESTION 4**

**HOW CAN I GET MY HEAD AROUND ALL THIS?**

This a challenge for anyone the first time they are exposed to all these new memes. That is why this anthology was created with the combination of films and readings. It provides you with new memes and new models for understanding the role of media in culture and consciousness, including yours. These are not the only memes and models for thinking about the media — but they are among the best. They reveal structure in the chaos, rhythms in the torrents. These memes and models have emerged, replicated, evolved, and survived because of their ability to explain the patterns in the complexity of the media environments.

As discussed in Chapters 1–4, the four key models are: The Meme, The Network, The Spectacle, and The Hyperreal. These models can then be applied to explain and explore the remainder of the sections and topics in the book, which are organized by theme and chapter. In the combination of films and readings, you will be exposed to many new memes and media models, produced by filmmakers and thinkers who all believe they have something important to say about media and culture.

And here is your challenge. These films and anthologies cannot do the thinking inside your own mind. That is your responsibility to yourself. You will have to decide which memes and models match with the evidence from the world around you and that vast electronic realm, the 24/7, online, omnipresent, global network of media environments. Which of these memes and models, if any, will you take with you after this class?

Learning and understanding new ideas is not always easy, especially if the new ideas are unfamiliar or challenge those memes deeply embedded in your neural networks. Ultimately, you will have to decide which memes and models you want to believe, based on the ideas in the memes and the evidence of your life experiences. You have to decide which memes and models provide the best understanding, the most elegant explanation, or the most beautiful sense of destiny.

The choice is yours.

Let me provide some memes for inspiration and reflection:

**MEME 1**

**YOU HAVE A MILKY WAY IN YOUR MIND**

We know genes determine much about what comprises your body, the product of eons of evolution. But what about your mind, that self-awareness centered in your brain, that bioelectrical neural network that is also the product of evolution?

Guess what? You are very lucky, as are most humans on Earth.

The eons of evolution have bestowed your brain with almost as many neurons as there are stars in the Milky Way! And how many is that? Over 100 billion!

Technically, there are more stars in the Milky Way than neurons in your brain, but the exact match is not important. It is the metaphor that is powerful — you have a galaxy of neurons in your brain, a Milky Way in your mind! This meme is illustrated in the opening scene of Contact, where we see the Milky Way and the universe
emerging from the eye of Ellie Arroway (played by a young Jena Malone in the opening and later by Jodie Foster).

So, what are you doing with your own personal Milky Way here on planet Earth? Is your Milky Way enlarging your galaxy of possibilities for living in this world, for understanding this world, for finding meaning in this world, for mastering your destiny? Is your mental universe getting larger or smaller? Are the neural networks glowing brighter or getting dimmer? Since you are in college, your mental universe should be getting larger and glowing brighter. If you open your mind, the films and readings in this anthology can surely expand your mental universe regarding media and culture.

Not only has biological evolution provided you with a Milky Way in your mind, but centuries of technological evolution have provided your cognitive galaxy with access to countless other galaxies of knowledge and wisdom, galaxies from across space and time, in that expanding universe we call cyberspace.

Media technologies shape what we believe and how we think.

You are extending your consciousness into cyberspace with your blog, with your posts on Facebook, with your videos on YouTube. But beyond your ability to put information online, there are many effects to such technological powers. That’s because these media technologies also function to reorder our perceptions of the world, causing us to model the world in new ways. The films and readings in this anthology illustrate this profound point. The alphabet and the printing press changed the course of civilization, just as electronic media is effecting another transformation. Beginning with those cave paintings and the earliest languages, we have developed an ever more complex system of technologies for representing the world we perceive. These technologies permit the spread of memes and models — first locally, then regionally and globally, as with the internet and satellites.

Our thoughts about the world took physical form when we developed symbolic communication and spoken language, from which emerged written languages such as pictographs and alphabets, which allow communication in real time and across time. Stone tablets and papyrus were technologies for preserving the spoken word. Oral myths and storytelling were replaced by written knowledge that was passed down to later generations. That is why we can read Aristotle and Confucius thousands of years later. When you post on your blog, you are communicating across distances in time and space, precisely because either can be viewed at a later date and in another place. Will your post last a thousand years? Does it say anything of lasting value?

Written languages were exponentially amplified with the printing press in the 15th century, the first true mass media technology. In many ways, you are living in the world of the printing press. As explained in the first reading of Chapter 2, the printing press helped usher in the modern world that surrounds you, from mass media to mass production, nationalism to individualism, literacy to enlightenment, democracy to freedom of expression. More than five centuries later, the book you are now reading was born of the printing press. The e-books in Kindle have their origins in papyrus and the printing press.

In the 19th century, our perceptions of the world extended into new forms with photography and the camera, which captured and reproduced what the eye could see and
what the eye could not see, especially with slow motion and time-lapse photography. Humans have been doing theater for many millennia and with the motion-picture camera the stages of theater leapt into the studios of cinema. *Avatar* is pure theater, the theater in James Cameron’s mind and staged with some very powerful digital technologies in the movie studio.

Our thoughts and perceptions extended into electronic forms with the telegraph and telephone, both of which went wireless with radio and digital technologies. iPhones and instant messages are the latest incarnation of communication across distances in space. Radio and motion-picture cameras combined to produce television, from which we get NBC, CNN, YouTube, and Hulu.

From the electronic and digital technologies emerged satellites and ever more powerful computers, within which we see all previous media technologies converging as they encircle the world and extend into the cosmos. Google maps and the Hubble space telescope express these technological powers. But what might be the effect of these latest electronic technologies?

Here is a way to begin considering the question: Since each medium is an extension of consciousness, each new medium becomes a container of the previous medium (or media), with the new medium amplifying the power of the older medium (or media). The printed word contains the written word, which contains the spoken word, which contains human thought. Television contains cinema and radio, with cinema containing the camera and the vision of the eye, while radio contains the telephone and the spoken word. With media convergence via digitalization, many computers now contain all previous media, all migrating into cyberspace and connected via the internet. This is why computers and cyberspace function as containers for the contents of human consciousness. Facebook and blogs are microcosms of what is happening throughout cyberspace and the internet.

But there is something that most everyone overlooks when thinking about the effect of new media technologies. When a new medium is developed, the older media become the content of the new medium. Thus, most everyone concentrates on the old media as content while ignoring or overlooking the amplifying effects of the newer medium.

This is what McLuhan meant in his famed phrase: “The medium is the message.” The social and personal effects of our media technologies are greater than the messages they carry. This does not mean the messages are of no importance. Of course, they are, as illustrated in many readings in this anthology. But each medium carries its own message, its own mode of perception. McLuhan also noted that “the medium is the massage,” meaning that media massage our consciousness, conditioning our minds into ways of thinking and understanding the world.

Thus, our technologies have a great impact on our perceptions and how we organize societies and cultures. If we only think of media technologies as transporters of content, then we are missing the larger effects. Many of these effects are utterly unintended.

Think of the automobile, which takes us from point A to point B. In taking us places, the car generated suburbia and the highway system, which amplified tourism and transformed distribution systems (via trucking); all of this caused massive fossil-fuel consumption and carbon emissions, which have shaped America’s domestic and foreign policies. The medium of the car has a much larger message than traveling from point A to point B.

Now, think of the computer, which transports information from various points. In transporting information, the computer helped generate the internet, both of which are combining to change our public policies, economy, social organization, distribution systems, the spread of knowledge, and the very way we communicate and represent ourselves to the world via art and media. Many of these effects are explored in the films and readings for these chapters:

- The Network
- The Spectacle
- The Hyperreal
- Surveillance
- Celebrity
- Social and Mobile
- Games and Virtual Reality
- Electronic Consciousness
- Spaceship Earth
- Trajectories

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MEDIA TECHNOLOGIES ARE NOT NEUTRAL: AS THEY INCREASE IN POWER, THEY CHANGE OUR VIEW OF THE COSMOS, CULTURE, AND CONSCIOUSNESS.

This meme is an extension or application of McLuhan’s idea of “the medium is the message.” To explore it, let’s consider the universe in Star Trek, the 2009 blockbuster movie. Just what is the universe in Star Trek?

Well, it is a very big universe. Otherwise, there would be no need for “warp drive” and the power to travel faster than the speed of light. Within Star Trek, the universe reflects some of what humans know about the size of the cosmos and phenomena such as the black hole, which was central to the plot of the movie. The universe in Star Trek could only be known and understood via media technologies such as cameras, computers, and various kinds of telescopes. Prior to the invention of telescopes, the universe of Star Trek was unknowable and unthinkable.

Media technologies are not neutral; as they increase in power they change our view of the world. Across the past five centuries, we have extended media technologies ever further out into space and time, and in so doing we have transformed our view of the cosmos, culture, and consciousness. Though media technologies have the power to accurately represent the world to us, it does not mean they are “neutral” in how we see and understand the world. We know human bias and personal subjectivity exists in how each of us views the world, yet here we are referring to something much different. Media technologies shape what we believe and how we think. Grasping this meme is crucial for understanding the most profound effects of the global media environments.

The films and readings in the following chapters illustrate the effect of media technology in three areas:

➤ Our cosmological worldview: Science and Spaceship Earth
➤ How we create and organize culture and societies: The Network, The Spectacle, and The Hyperreal, Surveillance, Celebrity, Social and Mobile, Theme Parks, Globalization
➤ How we view consciousness and form identities: Dumbed Down, Games and Virtual Reality, Electronic Consciousness, Trajectories.

WE ARE NOT THE CENTER OF THE UNIVERSE

What is the most profound philosophical and social effect of media technologies? Perhaps it is the discovery that we are not at the center of the universe. This profound insight is on display across four decades of the Star Trek memeplex, which includes the perpetual discovery of “new life forms and new civilizations.”

Across the millennia, ancient peoples gathered around campfires and gazed up at the starry skies in search of patterns, meaning, and cosmic destiny. They told stories, created myths to provide meaning, and identified constellations in the random patterns of stars, glowing like diamonds on black velvet. Now most people live in electrified metropolises and rarely see the stars at night, and if they do, the few visible stars are faint and unimpressive. So, the urban dwellers turn on their substitute universe, their televisions and computers, which glow much brighter. Or maybe they go to an IMAX movie and look up at the domed screen that resembles the curvature of the night sky.

When watching the stars and moon rise and set on a clear night in a remote desert or over the vast ocean, it is easy to see how the ancients could have imagined only that the Earth was at the center of the universe. In addition, the repetition of movement across months and years seemed to coincide with seasonal changes and weather patterns. Thus, many peoples believed that the stars foretold their destinies because weather patterns were a matter of life and death for hunter-gatherers or agrarian cultures, all reliant on the accurate prediction of seasonal changes to find or grow food. Entire cultures were built around these seasonal patterns, which were seemingly predicted by the stars as they passed across the night skies of the Earth, which apparently was at the center of the universe. The idea that the Earth is at the center of the cosmos is called the geocentric model of the universe and this worldview and metameme prevailed across many millennia, forming the cosmological basis for most of the world’s theologies and astrologies.

Over the past five centuries, the geocentric metameme has been shattered by the telescope, perhaps the most important media technology in human history. In 1609, Galileo used one of the earliest telescopes to verify the calculations of Copernicus and Kepler, both of whom suggested that a sun-centered universe might better explain and predict the patterns in the night skies. When Galileo was able to demonstrate that the Earth and planets orbited the sun, our view of the cosmos and Earth changed forever.
Four centuries later, only two of Galileo’s telescopes remain in existence and one was featured in an exhibit that visited America in 2009. Entitled “Galileo, the Medici and the Age of Astronomy,” the exhibit only came to Philadelphia’s Franklin Institute, the prestigious science museum where I had the good fortune to see the telescope. Very slender and a mere three feet long, with two glass lenses for refracting the light, Galileo’s telescope shows that a media technology does not have to be large to have a huge effect. Not unlike microprocessors.

Since Galileo’s discovery, our understanding of the cosmos has grown exponentially, as has the size of the universe. A new metameme has emerged that explains our place in the cosmos and is supported by an ever-growing “galaxy” of evidence provided by our most advanced media technologies. This cosmological metameme is known as the “big bang” universe.

Using the most powerful telescopes on Earth and the Hubble space telescope, we now know that the our planet orbits a typical star situated in an arm of the Milky Way, a spiral galaxy with at least 100–400 billion stars and a width of 100,000 light years (100,000 x 6 trillion!). Even more amazing is that the Milky Way is just one of at least 100 billion galaxies in the known universe, each with many billions of stars. There exists the possibility of millions or billions of suns in the universe with planetary systems, perhaps even planets with life. E.T. may take many forms, phone many homes.

Our telescopes and computers have revealed that the universe emerged from a cosmological eruption almost 14 billion years ago, an explosion known as the “big bang.” Since the big bang, the universe has been expanding in all directions, with vast voids of dark energy shoving the galaxies apart from one another at ever greater velocities. It is strange to imagine, but our planet, the sun, and the Milky Way are all hurtling through space at approximately 500,000 miles per hour. Yes, right now, as you read this book, you and everything on Earth are moving through space at 500,000 miles per hour!

And even more strangely, scientists estimate that the edges of the universe are expanding at 1 billion miles per hour. This model of a big bang universe is a mind-boggling metameme and offers further proof that as media technologies increase in power, they change our view of the cosmos and our place in it.

The evolution of our cosmological understanding of the universe — from flat earth and geocentric to the big bang and the expanding universe — perfectly illustrates the evolution of science and the role played in this evolution by media technologies. Like memes and metamemes, science (and our cosmology) evolve by replicating. But, and this is most important, science varies and selects based on one of two factors: 1) the correlation of a new model (or theory) with new evidence, or 2) the better correlation of a new model (or theory) with existing evidence. Much of this new evidence is gathered with the assistance of media technologies such as telescopes, microscopes, cameras, and computers. When new evidence warrants a new model or when a new model better explains existing evidence, a new meme or metameme is born.

When the new model is verified by additional evidence or additional tests, the model has survived and will be replicated. The meme or metameme is believed to be true, precisely because it has not been falsified by other tests, models, or theories. Science builds on the models that prove to be true over time by their correlation with evidence and/or other proven theories. Meanwhile, those metamemes that are proven false will fail to replicate and eventually die out, such as the geocentric and flat earth models. Sometimes a new model is so profound it creates a new metameme, a new model of life or the universe, such as Darwin’s evolution, Einstein’s relativity, and Hubble’s big bang.

To model the big bang and the expanding universe, scientists use powerful supercomputers. Though you may not have access to those computers, for now, you can see a visual representation of some of the vastness of the universe in the opening sequences of the film Contact. You can also see a tiny approximation of the big bang in the movement of the icons on an iPhone, and that representation is laden with meaning about the nature and power of media technologies, including your media power.
A mere glance at our 24/7 media environments reveals that flat screens are proliferating in multiple sizes and forms, from iPods to iPads, laptops to desktops, television to Times Square. Day or night, it doesn’t matter, the pixels are glowing ever more brightly and powerful. But what exists behind or beyond those screens? Let’s think of it in cosmic terms.

During the day, sunlight shines through the sky, illuminating the objects of the world. At night, stars shine through, too, but in a manner more like electronic screens, for the twinkling stars pixelate the dark sky, beckoning us to a world far beyond the sun. The stars signify mystery and destiny, situated in the vastness and emptiness of space beyond our solar system. Shining through the electronic screens of computers is yet another “world beyond,” the cosmos of cyberspace, and it beckons to us across its vast and expanding universe, a universe experiencing an electronic big bang. As Paul Levinson observed: “The screen becomes a portal to a virtual infinity (in both senses of the word ‘virtual’) of possibilities beyond.”

You’re probably wondering how the big bang is approximated on the iPhone and what this “virtual infinity” could mean for your media power. The representation of the big bang is not a clever app or video clip, but rather in the very way the icons function on the iPhone. If you own an iPhone, you probably are looking at it right now, maybe even thinking this meme is absurd. But keep an open mind because the visual metaphor is powerful. It might cause you to rethink the time you spend on Facebook or playing video games.

Even if you do not own an iPhone, you probably know what its screen looks like, with rows of icons that include Safari, Mail, Stocks, Weather, Maps, Notes, Text, Camera, Photos, iTunes, iPod, YouTube, and so on. If you have an iPhone, touch one of the icons with your finger. Here’s what happens: when the icon is touched, the remaining icons quickly disappear, moving off the edge of the screen, not unlike galaxies moving toward the horizons of the expanding universe. Further, as the unselected icons slide off the screen, the realm signified by the selected icon — say Safari, the Apple Web browser — instantly emerges from the center of the screen, directly from the vanishing point to encompass the entire screen, as if emerging from a singular point to become the universe on the screen.

Through this elegant imagery, Apple has unintentionally expressed the idea of an electronic big bang, the expanding media universe existing alongside the material universe, the two worlds we humans inhabit on Earth. It’s a powerful metaphor once you get your mind wrapped around it. Think of it this way: It’s not just that you live in a world of media environments, but within those environments is an expanding electronic universe. And your flat screens — TVs, computers, cell phones — are portals to that universe. You should make sure this universe does not become a mere television universe, with laptops and iPads serving as portable TV screens for passive or trivial consumption.

You might be saying: “Okay, so what, we have more media now than yesterday. No big deal. I use my iPhone to text my friends and play video games, not to think about ‘electronic universes’ and the big bang.” I can’t stop you from thinking that, but you are missing out on powerful memes that might change how you interact with and think about media.

Grasping the importance of the electronic universe meme requires understanding digitalization and the meme of “Moore’s Law.”

Digitalization means all words, images, and music in our media technologies are stored, manipulated, and
transmitted as tiny bits of digital and electronic information. Inside the microprocessors that power our media technologies, the electronic information is coded in a binary sequence of numeric ones (1) and zeros (0). These 1s and 0s are “bits” of information, the genes of digital DNA, the smallest elements in the electronic universe. They have no color, no size, and no weight and can travel at the speed of light. Inside the microprocessors, the bits are in the form of electrical current carried via electrons through the circuitry — when the current passes through the circuit, it is “on,” and when the current does not pass through, it is “off.” When these on-off states are sequenced as 1s and 0s, the strings of binary code become the content of the media, with the circuitry of computers functioning as the container for the expanding electronic universe.

That this universe is expanding, like the big bang, is the product of continual innovations in the microprocessors, innovations that follow a pattern known as “Moore’s Law.” In 1965, Gordon Moore, the cofounder of Intel, observed that the number of transistors that could fit on a computer chip had doubled every year since 1959, and predicted that the pattern would continue for at least 10 more years. By 1975, the pattern revealed the doubling of transistors every 18 months to two years, not the exact time frame Moore predicted, but still a radically fast expansion of processing power. Since then, this pattern has generally held true, with power doubling about every two years, while also declining in price relative to power. This remarkable pattern has come to be known as Moore’s Law and is expected to hold true for the foreseeable future. Moore’s seemingly modest insight has, in effect, described and predicted a “big bang” of computer and media power, an expanding universe of media environments, doubling every 18–24 months.

This may sound like jargon for techno-geeks. But it is a key idea for understanding media technologies and their power. Moore’s Law is an example of “period-doubling,” the process by which a small system can grow enormously large by repeatedly doubling over a given period. For example, suppose you had a job offer upon graduation and the employer offered to pay you one penny on the first day, but pledged to double your pay every day for the first month. Should you take the job? Yes, then retire after day 30. Let’s look at what you would earn if you began with a penny and doubled your pay every day for a month: Day 1 = 1 cent, Day 2 = 2 cents, Day 7 = 64 cents, Day 8 = $1.28, Day 15 = $164, Day 22 = $21,000, Day 29 = $2.7 million, Day 30 = $5.4 million. Your one-month total = $10.8 million. This is not a trick. Do the calculations for yourself.

The growth, power, content, and social value of our media environments are following this exponential pattern. And this does not even include the people linking to the network, which is exponentially increasing and now exceeds 1.6 billion.

**QUESTION 5**

**IS THE INTERNET WORKING FOR YOU?**

If you have been in college two years, the size and power of the global media environments have effectively doubled. So, what have you done to double your power in the past two years? This is not a trick question. Of course, you might reply that you are going to college to have the career and lifestyle you desire. That’s a very good strategy. But is it enough?

If you graduate at age 22, Moore’s Law indicates computer power will have doubled 11 times during your lifetime. So think about that question again. In the past two years, what have you done to double your power in the world of media? What will you do in the next two years to double your power?

You may have spent a lot of time on Facebook or MySpace or perhaps playing video games and watching movies online. It may be entertaining and everyone likes a little fun. But during all that time, have you increased your power? Are you more in control of your destiny because you spent a lot of time on Facebook or Myspace?

When you spend a lot of time on Facebook, it surely makes Mark Zuckerberg very happy. According to the film *The Social Network*, Facebook had a market value of approximately $25 billion in October 2010, with a population exceeding 500 million users. Simple math shows that each user had contributed an average of $50 to the market value of Facebook. Just think: all the time you have spent on Facebook, however fun, has yielded only $50 in market value.
value for Facebook. Now imagine all the hours you spent on Facebook and ask if you would do it again for $50. This raises another question: Is Facebook working for you or are you working for Facebook? Let’s extend the question further: Is the internet working for you or are you working for the internet?

As dramatized in David Fincher’s film about the founding of Facebook, The Social Network, Zuckerberg made the internet work for himself by building the world’s most popular social networking site. Today he is the world’s youngest billionaire. The Social Network reveals how Zuckerberg tapped into the power of the network and its ability to replicate memes, specifically the memes of the everyday lives of the 500 million users. In this sense, Facebook uses the network to surveil and access the memes of crowds, much like the metaphorical hives and swarms discussed by Kevin Kelly in Chapter 2.

The Social Network overlooks the importance of Facebook’s underlying technological platform — the internet. Facebook is largely an application for the ever more powerful open network that is the internet, a global platform that makes possible unceasing innovation.9 Anyone, anywhere in the world with an idea has the opportunity to make the internet work for their own personal goals.

To make the internet work for you, you need to rethink and modify your online behavior. Posting and texting may be fun, as are downloading music and films. Better than downloading someone else’s memes or copying what everyone else is saying or doing, try creating your own unique memes — via blogs, books, music, films, podcasts, and so on — and get them copied by other people. Create a mind virus. The ideas in these readings can provide you with many, many memes, waiting to mutate and transform through your efforts in your creative projects. The more your new memes are being copied and replicated via the network, the more likely you are increasing your social and economic power.

QUESTION 6
ARE WE BECOMING SMART MOBS?

Though Moore's Law cannot hold true forever, Stephen Hawking thinks it could hold true until computers attain the complexity of the human brain (Chapter 1). He may be right. Innovations continue to happen throughout the computer industry. Here are just a few. Scientists report that DNA computers could deploy genetic technologies, where one gram of DNA could hold 1 trillion CDs.10 Chemical computers could be powered by molecular-sized “transis-


a network of “smart mobs” or a herd of tribes replicating memes (Chapter 10)?

There is much debate about the effects of electronic and digital media on the dissemination of information, knowledge, and understanding in society. On one hand, we are living amid an information explosion, yet face information overload, as much of the enlightening information is overwhelmed by the entertaining information. And there is the proliferation of advertising and propaganda, spam and junk information. Intelligence and understanding confront proliferating inanity and non-understanding. The power of media technologies is trivialized and the content of media is too often dumbed down or narrowed down to please the various forces in the market, such as ignorance, intolerance, corporations, governments, theologies, naive relativism, and the unlimited supply of special-interest groups.

As Hawking explains, scientific knowledge is exploding, revealing stunningly beautiful new insights into the evolution of life on this planet and the life of the cosmos. Yet, as Chris Mooney and Sheril Kirshenbaum explain in Chapter 7, scientific illiteracy is reaching epidemic proportions in America, fueled, in part, by Hollywood and the media industries. This decline correlates with the precipitous deterioration in intellectual standards in America, as detailed by Susan Jacoby and Mark Bauerlein in Chapter 6. These declines are the product of a complex culture-wide process, but Jacoby and Bauerlein explain the likely roles of electronic and digital media in these deteriorations.

Has the desire to be comforted overtaken the desire to be challenged, the desire to be entertained overtaken the desire to be enlightened?

Maybe there are deeper reasons why movies and TV shows routinely feature an endless supply of ghosts, monsters, evil extraterrestrials, mad scientists, paranormal claims, pseudosciences, and so on.

Do these declines and trends correlate with shrinking worldviews? The majority of Americans reject the science of evolution but apparently not the sciences of physics, gravity, electricity, electronics, medicine, or many others. After all, Americans fly on jetliners, flip on light switches, turn on TVs and computers, and call on their dentists and doctors. So, why be picky about which science to reject and which evidence to ignore? Surely, there are many reasons for such trends, but perhaps there is a reason often overlooked.

Is the internet amplifying and entangling the cacophony of memes, making it harder to get a coherent view of the world? Scientific knowledge is expanding exponentially in quantity, yet fragmenting into hyper-specialized realms that make it difficult for science to serve as the foundation for coherent worldviews and metamemes. The same is true in arts and the humanities. The world has more artists and scientists than at any time in human history. Specialization is the norm, not the exception. And the news provides us with a barrage of “stories” and talking heads, all providing a collision of factoids, emotional appeals, and some analyses that is virtually impossible to integrate into a meaningful understanding of the world. This leaves the playing field of metamemes wide open for The Celestine Prophecy and The Da Vinci Code to pretend to make sense of the world.

Have the chaotic complexities of the memes driven many people to look for simplicity in their metamemes and models of the world, even if they are based in magic and myth? Has the desire to be comforted overtaken the desire to be challenged, the desire to be entertained overtaken the desire to be enlightened? For many people, it seems that the chief function of media technologies is to produce fun, not insight — create instant gratification, not long-term happiness; effect cheap thrills, not deep learning; empower rants, not exercise critical thinking; provide a mirror for their ignorance, not an expansive worldview. Are entanglement and entertainment overtaking enlightenment? The spectacle is seductive, powerful, and profitable, especially when it plays to the dominant forces in the market. What’s true is what sells. These issues are discussed in Chapters 3, 5, 6, 7, and 10, and in Network, A Face in the Crowd, Idiocracy, Quiz Show, Rollerball, The Truman Show, and Good Night, and Good Luck.

If these questions seem cynical, then perhaps we should turn off the Google news reader, because these questions are implicit in the events of the world. Sure, there are lots of great things happening in the worlds of media, science, art, architecture, medicine, and other areas. Some people are getting smarter and more knowledgeable. There are lots of talented, visionary people out there and we benefit from their genius. I am grateful that some geniuses have made possible my laptop, upon which I am writing this essay while enjoying an espresso at my favorite Philadelphia
coffeehouse, all while I am wirelessly connected to a vast repository of human knowledge. Yet there remains abundant human ignorance in the world. It permeates the news, it fuels fear, it creates economic meltdowns, it causes war.

QUESTION 7
IS EVERYONE WATCHING EVERYONE?

Celebrities are famous people—that much is obvious. They make lots of money and seem to live glamorous lives among “the beautiful people.” Celebrities are the royalty of media culture, the aristocrats of popular culture. They star in our movies, TV shows, and sporting events. Many people like to watch celebrities talk to other celebrities on TV talk shows. Many people just like to watch celebrities, whatever they are doing, for a variety of reasons (Chapter 9).

“Celebrity” is part of the surveillance mania that has swept through our media environments, especially with digital cameras, computers, and the internet. This was happening long before 9/11, though it has since been ramped up by the U.S. government with the Patriot Act, which basically ignores the Bill of Rights. As Naomi Wolf and Jan Fernback explain in Chapter 8, many essential rights, freedoms, and privacies are in jeopardy. Will any privacy be preserved in the internet age?

The internet is a global “panopticon.” Originally, panopticon referred to a prison system designed to maximize the efficiency of surveillance of the prisoners. A few guards could watch many prisoners. Here is how it worked: The guards were positioned in a tower at the center of the prison; the cells containing the prisoners formed a circle around the tower; the rows of cells were stacked several floors high, with all cells facing the tower. Just think of a circular apartment building, six floors high, with each apartment having one room and a clear front door, with all doors opening to the inside facing a tower with a guard or a surveillance camera. That’s a panopticon. If you are having difficulty visualizing this, just use Google images and type “panopticon.” Panoptic prisons have been built.

In the classic novel 1984, George Orwell explained how television could be used as an electronic panopticon, making it possible for the few to control the memes of millions of people.13 The government could perform surveillance on the populace inside their homes via “telescreens,” which were televisions that could never be turned off. Just as you watch television, television could watch you. In 1984, Orwell showed how television was a powerful force for propaganda and the ideological control of society. The novel was a warning for our democratic societies during the Cold War. Orwell described many of the implications of a 24/7 surveillance society, which included paranoia, distrust, and the conversion of everyone into potential suspects guilty of “thoughtcrimes” (thoughts deemed illegal by the government). Think of standing in line at the airport security check in, where everyone is a potential terrorist in the eyes of the TSA agents. Extend that to the entirety of society. Everyone is a potential suspect and the government has the power of fear and paranoia.

The internet is the most powerful panopticon ever built, with surveillance technologies operating on a global scale and giving governments and corporations enormous power. In Minority Report, Tom Cruise works for the “Pre-Crime” agency and is situated at the center of a circular array of screens, much like Captain Kirk in Star Trek. The array of screens illustrates the panoptic power of the surveillance network, which is seeking to prevent crimes before they happen. Throughout the film, it is obvious that Steven Spielberg is trying to update some of Orwell’s memes by situating them in the internet age.

With the internet, there remains one essential difference from the traditional panopticon. Each computer is a node in the network and thus a center point in the network. Everyone using a computer is, in effect, at the center of the internet. Everyone can watch everyone.

You have enormous power to access and distribute information, exponentially more than at any time in human history. Some thinkers believe this will preserve democracy and freedoms. Will it? What are you doing with your personal panopticon? Gazing at celebrities, rock stars, and your friends’ party pics?

If so, that’s not surprising, because the celebrity system is the flip side of the surveillance system. Celebrities exist at the center of their own personal panopticon, which radiates from them throughout the network. The paparazzi surround them, stalking their every move, hoping to get the money shot that will appear on the covers of all the celebrity magazines (People), gossip tabloids (National Enquirer), and the up-to-the-minute scandal sites (TMZ.com). Celebrities are memes, with their images replicating throughout the network. The celebrity system relies on the same panoptic system, but rather than the few watching the

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many, the many are watching the few. This is illustrated in the film *Quiz Show*.

And then Facebook appeared: the celebrity system for non-celebrities. Or maybe Facebook is a micro-celebrity system, with you functioning as your own personal paparazzi? No photographers stalking you? No problem. Whip out your iPhone, snap a few pics of yourself, upload to Facebook, and you can be seen all over the world by your “friends,” the stand-ins for your fans. Facebook allows you to place yourself under surveillance and create a celebrity system with you at the center — a media world about you, starring you, created by you. Facebook is the most solipsistic and narcissistic technology ever invented, after the mirror, of course.

**QUESTION 8**

**WHAT’S HAPPENING IN THE DALLAS COWBOYS’ STADIUM?**

Completed in 2009, the new Cowboys Stadium is a steel and glass cavern of monumental scale. It is the largest domed stadium in the world. In addition to football, there are rock concerts and other spectacles; music performances have included U2, George Strait, and Paul McCartney, whose concert was the first event in the stadium. Like all stadiums, Cowboys Stadium is panoptic and serves the celebrity system. The many (the fans) watch the few (the players, cheerleaders, and musicians). Plus, the wealthy and *nouveau riche* get to view the game and concerts from the exclusive luxury suites, just like the royalty in *Gladiator* and the corporate elite in *Rollerball*, long before luxury boxes existed in every stadium in America.

If you are attending a game in Cowboys Stadium, you can also watch it on high-definition television. Mounted above the playing field is a massive flat-screen TV, 60 yards long and shining very brightly with 30 million LEDs. Having taken a tour of the stadium prior to its opening for the 2009 NFL season, I can attest to the radiant brightness, even in the daytime. There are giant openings on both ends of the stadium, so natural light was pouring in, yet the screen easily outshone the rays from the sun. It’s the largest and brightest screen at any athletic venue, though it is likely some team will top it in the future. Running throughout the stadium are 220 miles of cable connecting 3,000 flat screens of varying sizes, which are mounted everywhere you look. It’s like attending a football game in Times Square. The architecture of the stadium is very sleek and somewhat futuristic, looking like a spacecraft (especially when aglow at night) sitting next to the original Six Flags theme park, which was built in 1961, just six years after Disneyland.

So, the new stadium features football in Times Square inside a spacecraft, all sitting next to a theme park! Welcome to hyperreality.

With a screen that is 60 percent the size of the playing field, it ought to be obvious that the map is overtaking the territory. Yet even the football field itself is a map, with lines marking the territories of each team, highlighted by the colors in the end zone, which signals not only touchdown, but the end of the “reality” that is the field. With football and many other sports, the map has far exceeded the territory.

So what’s happening in Cowboys Stadium? Just take the Meme, the Spectacle, and the Hyperreal, combine them with Moore’s Law and Sagan’s “Monday Night Hunters,” add 100,000 fans wearing team jerseys watching the game on TV while attending the game, and you’ve got it! That’s NFL and college football. The meme of territorial conquest is simulated in a hyperreal environment, experienced as a spectacle by the tribes of fans. The map is the territory.

Still not convinced? Let’s take the Super Bowl. Like all football games, the Super Bowl supposedly lasts 60 minutes, divided into two halves, each with two 15-minute “quarters.” Yet, the average game exceeds three hours, which just happens to coincide with the needs of television advertising and viewers in sports bars and in their dwellings. And the telecasts last even longer. Then there are all the pregame shows, with masculine, virile men dispensing their supposedly brilliant insights into the strategies for both teams. It is likely no one bothers to check on the accuracy of their analyses or predictions, precisely because it doesn’t matter; what matters is chatter. On a regular NFL Sunday, the telecasts last almost all day, with ESPN highlights running all day and night. For the Super Bowl, the hype runs nonstop for a week or two leading up to the spectacle of “Super Bowl Sunday.” If that is not enough,
the NFL Network runs 24/7 on cable, all year long. And, every major city has pundits and personalities chattering all day long on sports-talk radio. The “territory” of NFL football games lasts an hour, but the maps are running 24/7, nonstop, all year long.

Of course, sports can unite societies to help overcome bigotry and prejudice. Branch Rickey and Jackie Robinson changed America when Rickey signed Robinson to play baseball for the Brooklyn Dodgers. In 1947, Robinson was the first African-American to play in the major leagues. As dramatized in the film Invictus, Nelson Mandela changed the course of history in South Africa with his enthusiastic embrace of South Africa’s nearly all-white Springboks national rugby team. Spurred on by Mandela, most of the Afrikaners united to support the Springboks as they won the 1995 Rugby World Cup, which was being hosted in South Africa. Most recently, the New Orleans Saints won their first Super Bowl in 2010, thus helping inspire the city that was devastated by Hurricane Katrina. Yet none of these positive memes is immune to the spectacle and hyperreality.

QUESTION 9
HOW CAN MAPS OVERTAKE TERRITORIES?

Times Square, Disneyland, and Cowboys Stadium are all microcosms of the hyperreality first theorized by Jean Baudrillard. In fact, Baudrillard is sort of hyperreal himself, kind of like Plato and Marshall McLuhan on steroids, with some occasional Jean-Paul Sartre as his energy drink to wash it down. That helps explain why Baudrillard is a controversial and complex thinker, whose explanations of the hyperreal are often vague or obscure. For many people, the concept of the hyperreal might be the most difficult media model to understand.

One of Baudrillard’s essential memes is that much of hyperreality is a hollow world of surfaces, facades, and replicas, a world of reproductions, of cloned realities, of mediated existence. If we think of media as maps, then the media maps have overtaken the territories of reality. Better yet, the maps are generating the territories as a substitute reality. In his more radical texts, Baudrillard suggests that the real or authentic reality is no longer accessible, no longer existing outside our mediated perceptions. The remaining “real” realities, if they exist, reside in “the desert of the real,” those natural deserts that exist far outside the metropolises, or maybe in the cultural deserts that exist in the fissures within the metropolises.

This meme was imperfectly illustrated when Morpheus says to Neo, “Welcome to the desert of the real,” and both are situated next to a rocky landscape, next to a smoldering metropolis, all inside in a TV reality. The Matrix is a metaphor for living in our 24/7 media environments, the hyperreality of everyday life. We do not have to be literally plugged in to a computer network and living in a gooey pod to be in “the Matrix.” Spending 10 or more hours a day gazing into our electronic screens seems close enough to The Matrix, especially if we have little understanding of the world outside the media.

As William Irwin explains in Chapter 4, The Matrix is a retelling of Plato’s Cave, where the prisoners were limited to viewing the shadows and images on the wall, unable to exit and discover the real reality in the sunlight outside the cave. Variations on the Cave abound in films about media and culture: The Truman Show, American Beauty, Wag the Dog, Idiocracy, Quiz Show, eXistenZ, Fight Club, Vanilla Sky, V for Vendetta, Waking Life, and the classics like Ace in the Hole, A Face in the Crowd, Fahrenheit 451, Westworld, and Network. In many ways, the Hyperreal model is a postmodern spin on Plato.

Since we humans first peered out of our caves, we have sought to represent the world to ourselves via art, language, symbols, architecture, metamemes, media technologies, models of the universe, and so on. Every era or age creates new methods and models to represent the world. For Baudrillard, the way we represent the world to ourselves has evolved over time, changing with the technologies of the eras and increasing exponentially in complexity, such that representations of reality have become the reality. Across many essays and books, Baudrillard identifies and critiques three broad eras of human culture, or what he termed three “orders” of simulation. These “orders” roughly coincide with three eras of human civilizations: premodern, modern, and postmodern (or hypermodern).

In the premodern world, there was a simple and direct relation between representation and reality. The symbols and stories referred to the world of things that were perceived. For example, a cave painting of the deer represented the deer outside the cave. The drawing of the warrior represented the warrior. The stained-glass window

in the monastery told creation myths. The symbol and the story were unquestioned “truths.”

The modern world significantly altered how we represented reality. Not only did Galileo and Newton have a huge effect with the clockwork solar system, so did mass media technology. At the center of the emergence of modernity was the printing press, which mass produced identical copies of texts, such as the book you are now reading. The mass production of goods and images transformed civilization to produce the modern world you inhabit. Inspired by the printing press, industrial mass production begins with a prototype and generates a series of identical copies, abandoning the idea of authenticity for the goal of quantity and efficiency. Think McDonald’s. Big Macs. Or Le Big Mac, as they say in Paris and Pulp Fiction.

The correlation between reality and its representation was replaced by a different model of “reality.” The modern world expresses the drive to have everything approximate the industrial prototype or embody the mass-production model, which created a new social and cultural ideal. Think capitalism and communism, though they disagreed about ownership of production, which was key to the construction of industrial “reality.” Industrial reality became the series of things mass produced as objects of needs and then desires, from our food to our clothes to our music to our furniture to our homes to our cities, from McDonald’s to Levis to EMI to IKEA to McMansions to New York City. Our urban and suburban metropolises are machines, energized and electrified, and driven by the desire for material abundance and symbolic expression. You live in a machine of mass production. It is no wonder Fight Club resonated with so many youthful moviegoers. The well-crafted film was, in part, a quest for authenticity in the mass-produced metropolis. Some of these issues are addressed in Chapters 14 and 16. The industrial model is still very much our world; we live in the machine.

Yet from within the machine, a new kind of world is emerging — what some thinkers call the postmodern world. Other thinkers refer to the era as hypermodern, or an intensification and amplification of some features of modernity. This is the world of information and electronic screens, the networked technologies of television, cinema, computers, cyberspace, the internet, and the theme park — all of which are producing Baudrillard’s hyperreality. The laws of the machine have been replaced by the codes of the media; the power of labor in the production of goods is superseded by the production of meanings in the proliferation of symbols and images. That’s what the Super Bowl is about; that’s why tattoos are proliferating, that’s why there are more photos on Facebook than there are people on the planet — far more!

So, is authenticity still possible? Every “alternative” band on MySpace seems to think so. Tyler Durden thinks so. Or is that counterfeit authenticity and simulated individuality?

Mediation and simulation are the dominant energies of postmodern culture. They can be very powerful technologies, as illustrated by the discovery, modeling, and verification of the big bang universe, the breakthroughs in gene therapy, and the radical new designs in architecture, made possible by computers. In many areas of postmodern culture, it seems that media and simulation are less about producing something that is real or truly new, and more about making reproductions of the world that only seem real or new. This obscures the distinctions between the fictional and the authentic, virtual and actual, cultural and natural. The real has become that which can be re-presented or reproduced or repackaged, a world of events hyper-intensified, the realm of the “hyperreal.”

This is why it is naive to view Disneyland and Las Vegas as escapist fantasy lands surrounded by “the real world,” when these sites are microcosms of media and simulation in everyday life. If we think of media as maps, then Disneyland, Times Square, and Las Vegas are examples...
of the map overtaking the territory, or generating the territory, or anticipating the territory. That surely seems strange, but this is even stranger. The New York-New York hotel in Las Vegas anticipated the future territories of New York City by not including the Twin Towers in its skyline, which was completed in 1997. In effect, New York-New York mapped New York City, post-9/11. The Empire State Building was the tallest building in the New York-New York skyline in 1997, which became reality for New York City in 2001.

**QUESTION 10**

**IS THERE AN OPTIMISTIC FUTURE AHEAD?**

“The future begins” — so says the tagline for *Star Trek*, the 2009 blockbuster that rebooted the famed science-fiction franchise. Though most science-fiction films are set in “the future,” they are usually commenting on the future of the world as understood in the era when the film was produced. This is no less true with *Star Trek*. In a review of the new movie on Salon.com, Stephanie Zacharek described the *Star Trek* memeplex as providing an “optimistic” vision of the future:

> For kids of the ’60s and ’70s, “Star Trek” offered a vision of the future that suggested we had something to look forward to, not just in terms of groovy space travel, but in the sense that citizens of the coming centuries would share the same civic values.17

A product of space-age optimism, the original and new *Star Treks* express a confident vision of the human world of tomorrow, both culturally and technologically. This is in distinct contrast to the never-ending parade of films that depict an apocalyptic future for humanity, caused by our wars against one another, our misuse of technology, or our disregard for nature. And there is the cosmos smashing us with comets and asteroids and angry extraterrestrial civilizations blasting us, apparently just for the fun of it.

By rebooting the “original” *Star Trek*, as represented in the TV series from the 1960s, the new *Star Trek* repackages an optimistic metameme born of American popular culture and Enlightenment cultural philosophy. This metameme is cleverly summarized by the following passages from reviews of the film by Zacharek and Manohla Dargis of the *New York Times*:

> Initially appearing in 1966, the original “Star Trek” is a utopian fantasy of the first order, a vision of the enlightened future in which whites, blacks, Asians and one poker-faced Vulcan are united by their exploratory mission (“to boldly go”), a prime directive (no intervention) and the occasional dust-up. An origin story directed with a sure touch and perfect tone by J.J. Abrams, the fully loaded film (…) turns back the narrative clock to the moment before the main characters first assembled on the deck of the *U.S.S. Enterprise*, a sleek spacecraft that invariably sails into intergalactic storms. Even utopia needs a little bang.18

A bright, shiny blast from a newly imagined past, “Star Trek,” the latest spinoff from the influential television show, isn’t just a pleasurable rethink of your geek uncle’s favorite science-fiction series. It’s also a testament to television’s power as mythmaker, as a source for some of the fundamental stories we tell about ourselves, who we are and where we came from. The famous captain (William Shatner, bless his loony lights) and creator (Gene Roddenberry, rest in peace) may no longer be on board, but the spirit of adventure and embrace of rationality that define the show are in full swing, as are the chicks in minis and kicky boots.19

Though there is surely more to the *Star Trek* metameme, as legions of Trekkies will proclaim, these two passages get to the essence of the issue for our purposes. The original *Star Trek* presented a largely “utopian” vision of the “space-age” future, where the culturally diverse crew of the *Enterprise* meant that humans had put aside centuries of prejudice and tribal, religious, and nationalist warfare to unite as a secular and democratic civilization on planet Earth.

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18 Ibid.

When the optimistic worldview of Star Trek is described as “utopian,” it does not mean that the film represents a world of impossible perfection tainted by a flawed humanity. Star Trek does not present a meme of perfected humans, but rather a meme that expresses hope for human progress. The film portrays these technological and cultural environments as we wish they were, populated by people we wish we were, or at least people we would like to hang out with, all in a world we wish we could visit — the future. The metameme embraces the traditional Enlightenment view of progress and technology, meaning that the evolution of philosophy, science, and technology can serve to enlighten and improve the lives of humanity now and into the future. In Star Trek, this is suggested by the technology, design, and architecture throughout the film, including by the Starship Enterprise, the futuristic Vulcan city, and the vast and futuristic skyscraper metropolis of San Francisco, home to Starfleet Command and the Council of the United Federation of Planets.

The original and new Star Treks are pop-culture derivatives of the Enlightenment metameme that accompanied the rise of the modern world. Star Trek assumes that not only would science and technology evolve, but so would human consciousness and philosophy via the development of a more enlightened view of humanity, other life forms, and the cosmos. Such evolution is represented by the Prime Directive (which forbids interference in the affairs of other planets), the diversity of the crew, and the stated goal of exploring the universe in the search for knowledge and understanding. This overall optimism and confidence was expressed in the famed voice-over of the original Star Trek, which has been slightly modified in serving as the coda for the new Star Trek:

Space: The Final Frontier. These are the voyages of the Starship Enterprise. Her ongoing mission: to explore strange new worlds; to seek out new life forms and new civilizations; to boldly go where no one has gone before.

No doubt the coda may sound cheesy or ridiculous to many people, maybe even you. However, the coda is an expression of a confident, committed, yet open-minded consciousness that has proven best for gaining new knowledge, for improving life, for building a better world, for understanding ourselves and the universe around us. Is this metameme very optimistic? Sure. But if this worldview does not make a better world, then whose fault is that?

QUESTION 11
OR IS IT THE END OF THE WORLD?

Roland Emmerich is perhaps the most famous director of apocalyptic and catastrophic films, most famously with the extraterrestrial assault of Independence Day, the climate apocalypse of The Day After Tomorrow, and the cosmic annihilation of 2012. These films have become box office blockbusters. In an interview in the New York Times, Emmerich claimed the films were mirroring the cynicism of the culture:

If I cannot destroy a big high-rise anymore, because terrorists blew up two of the most famous ones, the twin towers, what does this say about our world? … I think we have become more and more pessimistic about the future. … I see it in myself. In Independence Day the world was something worth defending. In Day After Tomorrow, the message was, “We’ll go down if we don’t stop what we’re doing,” and in 2012, “We’re going down no matter what.”21

A world worth defending, then a tomorrow not worth inhabiting, and now the future not happening, period. This is a rather astonishing claim about the future of civilization, an apocalyptic view that went unchallenged and largely unexplored in the story. So, what’s happened to optimism and enlightenment, especially in our media environments, with the endless memes of doom and de-

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20 Since I have barely viewed any of the many other Star Trek spinoff films and TV shows, I do not know if any are derivatives of the Enlightenment worldview.

struction replicated by the news, governments, theologies, and popular films.

The Enlightenment worldview was utopian and optimistic in its attitudes toward human potential in the modern world. The essential Enlightenment belief was that art, science, technology, and philosophy could transport humanity into a better world, a better future — from ignorance to enlightenment, scarcity to abundance, inequality to equality, servitude to freedom, endless war to perpetual peace. A quick browsing of the news and television programming makes this seem unbelievably idealistic. Yet it was generally believed that mass media would provide the means for enlightenment and education, machines and mass production would provide the material abundance, and representative governments would provide the equality and secure the freedom. The practical idea was that people would live better and more peaceful lives in more harmonious societies with a better understanding of themselves, one another, and the world.

This, of course, is a highly condensed summary of a complex global process that has been evolving for several centuries. Some thinkers have argued that all science and human knowledge are mere social constructs and have no external validity in the real world. This amounts to saying that what we know is all just “opinion.” In my view, such intellectual relativism is mistaken and too often misguided, thus permitting superstitions and inanities to be substituted for reason, science, critical thinking, and the never-ending evolution (replication, variation, and selection) of human knowledge. If all knowledge is relative and every opinion has merit, then the profound is no more important than the profane and the Science Channel has no more insight than The Jerry Springer Show. As Steven Best and Douglas Kellner explain in Chapter 20, we can embrace art, science, technology, and some postmodern theory without a blanket commitment to excessive relativism or sheer irrationalism.

Of course, the imperfections of the Enlightenment process have rightfully faced criticisms and complaints about its association with imperialism and nationalistic hypocrisy, its inconsistent application in all societies, the uneven distribution of benefits to many citizens, or the unintended consequences of the machines and media. A decade into the new millennium, the most notable of these consequences include the rampant consumer society, issues of identity and authenticity, the sense of the loss of nature, pollution and environmental degradation, and the effects of fossil-fuel consumption. Plus, it seems humans just can’t stop declaring wars and committing genocides. And there are those endless reality TV shows. No wonder the extraterrestrial civilizations want to wipe us out. They are tired of receiving the TV signals of our inane programs.

Perhaps all this helps explain why it seems Hollywood has set up a film factory to imagine and produce every possible end-of-the-world scenario in every kind of apocalyptic movie (Chapter 17). Since the 1950s, there have been a zillion apocalypses, catastrophes, and disasters. Here are some of the more popular end-game scenarios:

**Technological apocalypses:** nuclear annihilation in Dr. Strangelove and Planet of the Apes; chatty computers killing humans in 2001: A Space Odyssey; biowarfare wiping out humans in The Omega Man; global food and energy shortages in Soylent Green; global fuel shortages and punk bikers in Mad Max; Skynet nuking humans in The Terminator; rising sea levels in Waterworld; computer networks ruling the planet in The Matrix; and global ecological destruction in WALL·E.

**Biological apocalypses:** deadly virus from outer space in The Andromeda Strain; genetically created dinosaurs run wild in Jurassic Park; monkey virus wipes out humans in 28 Days Later; infertile humanity dying off in Children of Men; and flawed cancer cure kills most everyone in I Am Legend.

**Natural apocalypses:** angry birds attacking small towns in The Birds; earthquakes leveling cities in Earthquake; tornados on steroids in Twister; asteroids blasting Earth in Armageddon; and all-out climate apocalypse in The Day After Tomorrow.

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Extraterrestrial civilization apocalypses: giant spaceships arrive and blast us from above in *Independence Day* while giant extraterrestrials rise from underground and blast us in *War of the Worlds*.

Unexplained apocalypse: for reasons never made clear, most everyone is dead and civilization is wiped out in *The Road*.

Cosmic apocalypse: The Milky Way, the sun’s neutrinos, and gravity will combine to wipe us out in 2012.

Somehow, we survived the wars and apocalypses well enough to keep making movies about us getting wiped out. So the cosmos has finally had enough and is going to wipe us out in 2012. Despite the bogus (though clever) apocalyptic cosmology at the beginning of 2012, director Roland Emmerich poses a most profound question. If we had to save civilization, what elements would we preserve? Those humans responsible for this task try to preserve the best of our art, our literature, our science, and even some of our utopian philosophies. The presence of all these things in our contemporary world is why it is not the end of the world.

Why can’t Hollywood and the media imagine a more optimistic future? As explained in Chapter 17, there are complex reasons for the recurring cinematic catastrophes. There is also fear of accelerating change, the fear that things are escalating “out of control,” be it in nature, technology, or culture. Perhaps the most important reason is the inherent challenge in imagining a cultural and media world that provides personal and shared meaning, while being grounded in our true place in the cosmos as passengers on Spaceship Earth.

**CHAPTER 1. THE MEME**

*Pulp Fiction* and *Whatever Works*

- *Pulp Fiction* is mostly dystopian, while *Whatever Works* is more utopian.
- In *Pulp Fiction*, many cinematic memes are replicated and transformed, yet each meme seems to involve personal identity and finding meaning in the world, even if there is little meaning beyond that in a movie theater.
- In *Whatever Works*, finding your identity and a meaningful worldview hold the keys to personal happiness and social harmony, along with cultural tolerance. Of course, those metamemes may find you, too.

**QUESTION 12**

**WHAT KINDS OF WORLDS ARE WE CREATING?**

What kind of worlds are we creating with our media environments on Earth? The world of *Star Trek* and its science-savvy crew on the Starship *Enterprise* or *WALL·E* and its mindless consumers on the spacecraft *Axiom*? The world of ideas for the inquisitive Wiley Wiggins in *Waking Life* or the anti-intellectual world programmed by Diane in *Network* and Lonesome in *A Face in the Crowd*? The enlightened world of the rebel Ellie Arroway in *Contact* or the destructive world of terrorist Tyler Durden in *Fight Club*?

All of the films recommended in this book do what films are supposed to do: create a world to represent a worldview, use themes to convey ideas, let fiction present truths. Much like the models presented in the readings, these movie worlds provide memes and models of media and society that are meant to serve as prototypes for a better society or warnings about a flawed society.

A film is “utopian” to the extent that it provides a prototype or model for an improved, better, or more harmonious cultural and/or natural world. That’s why Stephanie Zacharek referred to *Star Trek* as “utopian.” In effect, utopian models are metamemes for improving society, be it models that are technological, ecological, or political. Like *Star Trek*, The Network is largely a utopian model for media. A film is “dystopian” when it presents a model that is negative, highly non-ideal, and meant to serve as a critique and warning for humans. The Spectacle is largely a dystopian model. George Orwell’s 1984 is dystopian, as is *The Matrix*.

The worlds and worldviews in this anthology are a mix of utopian and dystopian models.
CHAPTER 2. THE NETWORK
STAR TREK

➤ Mostly utopian.
➤ The ethnic diversity of the Federation crews suggests we overcame our prejudices on Earth, with the embrace of science, technology, and secular society being key to cultural progress, human understanding, personal identity, and cool starships.

CHAPTER 3. THE SPECTACLE
NETWORK

➤ Mostly dystopian.
➤ Media corporations, newscasters, programming executives, and audiences are active participants in the dumbing down of culture via the media spectacle.

CHAPTER 4. THE HYPERREAL
THE MATRIX

➤ Mostly dystopian.
➤ Computers are dominating humans, who do not know they are plugged in to a virtual reality network; the matrix is a metaphor for the view that most people’s understanding of “reality” is filtered through a media spectacle or “reality” is a hyper-reality structured via media content and media technologies.

CHAPTER 5. NEWS
GOOD NIGHT, AND GOOD LUCK

➤ Mix of utopian and dystopian.
➤ An authoritarian political dystopia will prevail over popular democracy unless corruption is exposed and political power is checked by an inquisitive and vigorous media.

CHAPTER 6. DUMBED DOWN
A FACE IN THE CROWD

➤ Mostly dystopian.
➤ The media firms have the power to dumb down popular culture and political discourse in service to economic and political power in the spectacle; the film anticipates the rise of the rock star as messiah and adviser to politicians. Print media try to counter the power of electronic media.

CHAPTER 7. SCIENCE
CONTACT

➤ Mix of utopian and dystopian.
➤ Our most powerful media technologies have the potential for profound enlightenment about our place in the cosmos, with the support of the popular culture and political systems. Yet the media business and audiences can dumb down or trivialize the discovery to fit within their own narrow worldviews and mythologies.

CHAPTER 8. SURVEILLANCE
MINORITY REPORT

➤ Mix of utopian and dystopian.
➤ The film begins by presenting Washington, D.C., as a crime-free surveillance utopia, yet offers a dystopian warning when the flaws in the system are revealed.

CHAPTER 9. CELEBRITY
QUIZ SHOW

➤ Mostly dystopian.
➤ Insight and knowledge are simulated for the entertainment of the masses; a college professor sells his soul for fame and prestige; despite the highly publicized hearings, television and entertainment prevail in the triumph of the spectacle.
CHAPTER 10. SOCIAL AND MOBILE

**HACKERS**

- Mix of utopian and dystopian.
- The global network can be used for nefarious ends in effecting an ecological dystopia, but the enlightenment potential of media prevails as the computer-savvy high schoolers use the network to save the environment.

CHAPTER 11. SPORTS

**ROLLERBALL AND GLADIATOR**

- Mostly dystopian.
- Sports and spectacle are the weapons of mass distraction in service to royalty, both corporate and Roman. Remember, this refers to the original version of *Rollerball*, directed by Norman Jewison in 1975. Though the film is 35 years old, it remains relevant for today's sports culture.

CHAPTER 12. GAMES AND VIRTUAL REALITY

**eXistenZ AND TRON**

- Mix of utopian and dystopian.
- Is *eXistenZ* presenting a virtual world you'd like to visit or inhabit?
- In *TRON*, two models of cyberspace do battle in a video game; an open and democratic cyberspace versus the big brother of the “master-control program,” with implications for privacy, autonomy, government, capitalism, and intellectual property.

CHAPTER 13. THEME PARKS

**THE TRUMAN SHOW**

- Mix of utopian and dystopian.
- Truman Burbank (the true man of television) lives in a theme park broadcast as a popular global TV show; the fans cheer his bid to escape as they remain glued to their TV screens. *Note:* This was filmed in Seaside, Florida, a “real” town founded in 1979 and a prototype for many urban design trends, while also being an unacknowledged derivative of Main Street in Disneyland.

CHAPTER 14. CONSUMER CULTURE

**AMERICAN BEAUTY AND WALL·E**

- *American Beauty* and *WALL·E* are mostly dystopian, except for the naive eco-utopian ending in *WALL·E*.
- In *American Beauty*, the veneer of suburban order and consumer abundance conceals the quest for personal identity and meaning.
- In *WALL·E*, consumers live on a spaceship in the supersized world of Buy N Large, with logos and electronic screens everywhere; meanwhile, a robot cleans up the garbage and ecological mess left behind on Earth.
- As the consumer-entertainment “utopia” is embraced by the consumers, the mediated screens and the *Axiom* mask the eco-dystopia caused by rampant mindless consumption.

CHAPTER 15. GLOBALIZATION

**SLUMDOG MILLIONAIRE**

- Mix of utopian and dystopian.
- The complex journey of the young lovers occurs against the backdrop of the spread of the modern metropolis and the positive and negative effects of globalization; the media spectacle and celebrity culture are shown in a utopian and dystopian manner.

CHAPTER 16. COUNTERCULTURE

**FIGHT CLUB**

- Dystopian.
- Consumer culture and the modern world must be returned to “zero” to make room for Tyler Durden’s premodern utopia, a hunter-gatherer society where supposedly more authentic identities will flourish among the “space monkeys.”
CHAPTER 17. CATASTROPHE

2012, INDEPENDENCE DAY
THE DAY AFTER TOMORROW, THE MATRIX

- 2012 is a mix of utopian and dystopian.
- Sure, 2012 is a bit cheesy, but it is a lot of fun, with a serious message, like the other films mentioned below. On the serious side, humans save the ideas of civilization by preserving art, literature, science, culture, and even some of our utopian philosophies. On the fun side, there is the scene of a jetliner flying through the expanding gorge of an earthquake in Las Vegas and avoiding the hotels falling into the gorge above the jet. Surely, there’s a message in there about maps overtaking the territories, or territories reclaiming the maps. And the film is filled with witty images and commentary on popular culture.
- The Day After Tomorrow, Independence Day, and The Matrix are dystopian.
- The Day After Tomorrow and Independence Day feature spectacular catastrophes in New York City, each drawing upon a lengthy cinematic legacy. The Day After Tomorrow is a warning about global warming, while Independence Day depicts an apocalypse effected by extraterrestrials as a metaphor for humans destroying our planet’s resources. Notably, the extraterrestrials are defeated by humans using the internet and laptops, a clever expression of the digital utopianism of the 1990s.
- The Matrix draws from a long line of technological dystopias in which computers or robots control humans; in the end, the film offers some hope for personal autonomy among the enlightened few. As discussed in Chapter 4, the film also explores postmodern hyperreality.

CHAPTER 18. ELECTRONIC CONSCIOUSNESS

VANILLA SKY

- Mix of utopian and dystopian.
- The future of human consciousness is uploaded as a dream in cyberspace; or is Lucid Dream a metaphor for our current media culture?

CHAPTER 19. SPACESHIP EARTH

WALL·E

- Mostly dystopian, except for the utopian ending.
- There is an environmental dystopia on Earth, while humans are dumb and supersized in the mediated mall and theme park on the Axiom floating in the cosmos. The electronic screens on the hoverchairs illustrate maps becoming territories.

CHAPTER 20. TRAJECTORIES

WAKING LIFE

- Mix of utopian and dystopian.
- The search for meaning and identity via a tour of philosophy in pop culture; the story is told through scenes featuring a mélange of memes and metamemes.

In many ways, we are living in these worlds. Yet we exist on one planet.

QUESTION 13 WHAT ARE WE DOING ON SPACESHIP EARTH?

In 1968, the Apollo 8 astronauts became the first humans to escape the gravity of Earth in their journey to the moon. Once there, astronaut Bill Anders turned on his 35mm camera to capture the image of Earth rising above the horizon of the moon, floating amid the dark cosmic void. The famed photo is called “Earthrise” and is likely the most important and most reproduced photo in human history. In Google images, just type: “Earthrise.” Not only did “Earthrise” confirm Galileo’s discovery, but it also jump-started the contemporary environmental movement and inspired the annual celebration of Earth Day. “Earthrise” was featured prominently in the cosmic images that eloquently framed Al Gore’s ecological concerns in the book and film An Inconvenient Truth; and it is the signature image in “The Power of Information” (Chapter 19), from Our Choice: A Plan to Solve the Climate Crisis. In this reading, Gore shows how the proliferating satellite and information technologies have revolutionized our understanding of Earth’s weather and ecosystems, along with the human impact on these systems.
Visible in “Earthrise” are no borders, no nations, no signs of humanity, just its blue waters, white clouds, and brown and green continents, all on a planet floating amid the dark void, beyond which are billions of galaxies with billions of stars. The image is beautiful, the idea is sublime.

Perhaps most importantly, “Earthrise” inspired the understanding of our planet as a spaceship floating in the cosmos. We are all passengers on Spaceship Earth, with all its natural resources and magnificent beauty. Yet as Buckminster Fuller explained in Chapter 19, there is just one problem: there is no pilot and no instruction manual for guiding us through the cosmos or for living on this planet. Without a pilot, we are passengers who serve as crew, with nature and our minds and our technologies as our only guides.

In addition to the “Earthrise” photo, an estimated 1 billion people watched the Apollo 8 telecast, held while the spacecraft orbited the moon and viewers and astronauts gazed in awe. It was as if television was poetically permitting us to contemplate our most profound existential conditions. This was surely one of the most important moments in media history and human history.

It has been more than four decades since the astronauts and their media technologies first left Earth to explore the moon, only to transform how we see our planet and our place in the cosmos. Many people believed then that “Earthrise” would inspire humans to learn to live together in building a peaceful, cooperative, and enlightened global civilization. Since Apollo 8 and “Earthrise,” we have strung a vast network of communication technologies around that planet floating in the void, a media environment growing ever more complex as it becomes home to our electronic consciousnesses. So what are we doing on that planet with that network?

Do these networked consciousnesses threaten to mass produce the memes of monoculture and infotainment, operating under the imperatives of corporations, nations, governments, and theologies? Or are we seeing the emergence of a hybrid culture, fueled by the “universal solvents” of electronic media, pop music, ecological awareness, and the growing acceptance of the scientific account of the universe?

Does the globalization of technology and capitalism signal electronic imperialism and cultural domination? Or does it signal the next phase of cultural evolution, as global consciousness evolves beyond hegemonic empire toward a cultural pluralism that mixes the cooperative with the competitive, both of which are inherent in biological and cultural evolution (Chapter 15)?

Is this network of electronic consciousness evolving more toward the always-entertained mind of Vanilla Sky, or more toward the evolving planetary mind of The Global Brain (Chapter 18)? Or are the maps overtaking the territories so much that hyperreality is the now-dominant “reality” and few care to know the difference?

There are no easy answers. The readings in Chapter 20 speculate on some possibilities for the trajectories of media and culture in the new millennium. You will have to make up your own mind about these memes as you traverse the global networks and electronic consciousnesses. The media technologies are there for you and can enlighten you. These technologies can help build a more humane civilization, one that recognizes our need for global thinking and global culture, yet which also cherishes our local cultures as they mix, mingle, and evolve with other once-local cultures. In a future of increasingly complex global networks, will any culture or belief be merely local on Spaceship Earth? Isn’t that one of the deepest meanings of Pulp Fiction, Contact, Fight Club, and Slumdog Millionaire?

Most people know little of science, yet have picked up enough in pop culture to realize we are living in a vast, awe-inspiring universe. Our media technologies have changed everything we know about human existence in the cosmos and life on our planet. From Galileo’s telescopes to the Hubble space telescope, the past five centuries of media technologies have made us almost disappear within the grand scale of the cosmos, going from living at the center of the universe to living on the “Pale Blue Dot.” That’s the famed 1990 photo of Earth taken by the Voyager space probe from a distance of about 3.7 billion miles away. In Google images, just type: “Pale Blue Dot.”

In the “Pale Blue Dot” photo, Earth is a tiny speck in the

“Earthrise” and “Pale Blue Dot” are the two most important images in human history.
solar system, a “pale blue dot” of light floating amid the cosmic void. The significance of that photo is discussed by Carl Sagan in the final reading of this anthology. I invite you to read it. How can anyone look at the “Pale Blue Dot” and read the last five paragraphs of “You Are Here” and not view the world and life on Earth in a radically different manner?

“Earthrise” and “Pale Blue Dot” are the two most important images in human history. If you reflect upon those images for a while, then perhaps you can better understand the odyssey of Wiley Wiggins in Waking Life, realizing you face the ultimate responsibility for your beliefs and worldview, your memes and metamemes. You must make sure you are awake and not in a dream, not living someone else’s memes and metamemes.

Launched in 1977, Voyager has now left the solar system on its voyage into the Milky Way and beyond. From our minds, we have extended a complex information and communications network around the planet, beyond the solar system, and inside our bodies. With our media technologies, we can map the movement of the most distant galaxies and the innermost regions of our neural networks. We know exponentially more about our planet than ever before, from geology to ecology to cosmology. We know more about ourselves than ever before, from philosophy to psychology to biology to neurology. To paraphrase Carl Sagan, everything on Earth and in our bodies is made of stardust left over from an exploding star, which means we are the stardust that has become aware of the universe!

Should these metamemes make you feel small and insignificant? No. Humble? Yes. Here’s why: Everything on Earth, including each of us, is the end product of almost 14 billion years of cosmic evolution, which has provided us with a profoundly powerful consciousness for grasping the surrounding universe. The human mind is a very large space in a very small place. That is why you and I should feel proud that we possess the potential to grasp our cosmic conditions and that we are just beginning to understand our true place in the cosmos as passengers on Spaceship Earth.

As mentioned earlier, we can embrace science and some postmodern theory without a commitment to naïve relativism or blind irrationalism. By our very nature, we are not omniscient beings. That’s okay! Certainty and uncertainty are both part of our lives. Our methods of knowing have natural limits, but those limits are set only by our cognitive evolution and the physical universe. And evolution has given us a Milky Way of neurons for knowing the universe and mastering our destiny.

Our knowledge is always evolving and open ended. Some theories are proven to be true over time, such as evolution and the big bang, while others are proven false, such as the geocentric and flat-earth models. That science and theory evolve is their virtue and need not imply naïve relativism.

If our knowledge and “certainty” mean the complete grasp of all facts or all possible theories, then we are left with the false alternative of being either omniscient gods or ignorant fools. That choice is a no-win scenario. From the fact that we cannot know everything, it does not follow that we do not understand anything — that we are not gods does not mean we are fools.23

All our knowledge and understanding should be thought of as contextual and evolutionary, not timeless or static. What we know may be subject to revision when presented with new facts, new conditions, or new theories. That is what this anthology is trying to do with media theory: present you with new theory to better explain the conditions created by our media environments. That is why I combined art (movies) with theory and science, precisely because we need a mix of the arts, sciences, and humanities to better understand the world.

In my view, humans will never fully learn to cooperate and peacefully evolve until we understand and embrace our true place in the cosmos — not the cosmos as we wish it was, but the cosmos as it is, as revealed by our media technologies. Yet like the cosmos and planet from which we emerged, evolution is our fate. The choice we have is how we evolve.

And that brings us back to the beginning, to that moment we all face, that moment between chance and choice, ignorance and knowledge, dream and destiny, past and future. That moment is now.

23 My thoughts on these complex issues in relation to science, media, and culture are detailed my books, Zero Conditions, pp. 70–91, and Crashing Into the Vanishing Points, pp. 85–99.
Look, all I am asking is for you to have just the tiniest bit of vision, you know, to step back for one minute and look at the big picture.

— Ellie Arroway, Contact (1997)
CHAPTER 1

The Meme

Vincent: You know what they call a “Quarter Pounder with Cheese” in Paris?
Jules: They don’t call it a “Quarter Pounder with Cheese”?
Vincent: Nah, they got the metric system. They wouldn’t know what the fuck a quarter pounder is.
Jules: Then what do they call it?
Vincent: They call it “Royale with Cheese.”
Jules: Royale with Cheese.
Vincent: That’s right.
Jules: What do they call a “Big Mac?”
Vincent: Big Mac’s a Big Mac, but they call it “Le Big Mac.”
Jules: Le Big Mac (chuckling). What do they call a “Whopper?”
Vincent: I don’t know. I didn’t go in a Burger King.

— Vincent Vega and Jules Winnfield, Pulp Fiction (1994)
Chapter 1. The Meme

Recommended Films

*Pulp Fiction* (Quentin Tarantino 1994)
*Whatever Works* (Woody Allen 2009)

Chapter Summary

Douglas Rushkoff explores media environments and media activism in terms of the “virus.”

Richard Brodie explains the concept of “memes” and how they are spread via the media.

Randall E. Auxier argues that Quentin Tarantino’s art does not imitate life, it imitates other art.

Aaron C. Anderson shows why Quentin Tarantino’s great contribution to cinema is the “performance of the simulacrum.”
The average American home has more media-gathering technology than a state-of-the-art newsroom did ten years ago. Satellite dishes spot the plains of Nebraska, personal computers equipped with modems are standard equipment in a teenager’s bedroom, cable boxes linking families to seventy or more choices of programming are a suburban necessity, and camcorders, Xerox machines, and faxes have become as accessible and easy to operate as public pay phones. Household television-top interactive multimedia centers are already available, promising easy access to the coming “data superhighway.” Like it or not, we have become an information-based society.

We live in an age when the value of data, images, and ideologies has surpassed that of material acquisitions and physical territory. Gone are the days when a person’s social stature could be measured by the distance he had to walk to see smoke from his neighbor’s campfire. We’ve finally reached the limits of our continental landmasses; we’ve viewed the earth from space over national broadcast television. The illusion of boundless territorial frontiers has been destroyed forever. There’s simply no more room, nothing left to colonize. While this may keep real-estate prices high, it also demands that real growth — and the associated accumulation of wealth and power — occur on some other level.

The only place left for our civilization to expand — our only real frontier — is the ether itself: the media. As a result, power today has little to do with how much property a person owns or commands; it is instead determined by how many minutes of prime-time television or pages of news-media attention she can access or occupy. The ever-expanding media has become a true region — a place as real and seemingly open as the globe was five hundred years ago. This new space is called the datasphere.

The datasphere, or “media-space,” is the new territory for human interaction, economic expansion, and especially social and political machination. It has become our electronic social hall: Issues that were formerly reserved for hushed conversations on walks home from church choir practice are now debated openly on afternoon talk shows, in front of live audiences composed of people “just like us.” Good old-fashioned local gossip has been replaced by nationwide coverage of particularly resonant sex scandals. The mediaspace has also developed into our electronic town meeting (to use Ross Perot’s expression). Traditional political debate and decisions have been absorbed by the ever-expanding forums of call-in radio and late-night variety shows. Today’s most media-savvy politicians announce their candidacies on Larry King and explain their positions on Rush Limbaugh or, better yet, prime-time “infomercials.”

It has become fashionable to bemoan the fact that “Saturday Night Live’s” Dana Carvey’s latest impersonation of a political celebrity means as much to the American voter as the candidate’s official platform or that kids today can get passionate about the styles and attitudes depicted in the latest MTV video but may never have watched an evening news broadcast. We worry that our media industry has developed a generation of couch potatoes who are

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incapable of making an intelligent decision and too passive to act on one if they did.

That’s not what is going on. True, the construction of the American media machine may have been fostered by those hoping to market products and develop a consumer mindset in our population. As media analysts from Marshall McLuhan to Noam Chomsky have shown, television and printed news cater to the corporate and political entities who created them and keep them in business. You don’t need a conspiracy theory to figure out the basic operating principles of Madison or Pennsylvania Avenues. But even if the original intentions of the media were to manipulate the American psyche by deadening our senses and winning over our hearts and minds to prepackaged ideologies, this strategy has finally backfired.

Nielsen “peoplemeters” may indicate which channels we’re watching, but they tell little about our relationship to the media as a whole. Just because a family is “tuned in” doesn’t mean it hasn’t turned on and dropped out, too. No, the media web has neither captured nor paralyzed the American individual. It has provided her with the ability to chart and control the course of her culture. She’s been empowered.

The first step toward empowerment is to realize that no one takes the mainstream media any more seriously than you do. Having been raised on a diet of media manipulation, we are all becoming aware of the ingredients that go into these machinations. Children raised hearing and speaking a language always understand it better than adults who attempt to learn its rules. This is why, educators believe, our kids understand computers and their programming languages better than the people who designed them. Likewise, people weaned on media understand its set of symbols better than its creators and see through the carefully camouflaged attempts at mind control. And now Americans feel free to talk back to their TV sets with their mouths, their remote controls, their joysticks, their telephones, and even their dollars. Television has become an interactive experience.

The advent of do-it-yourself (DIY) technology makes direct feedback even more far-reaching. Today, homemade camcorder cassettes are as likely to find their way onto CNN as professionally produced segments. Tapes ranging from “America’s Funniest Home Videos” to the world-famous Rodney King beating are more widely distributed through the datasphere than syndicated reruns of “I Love Lucy.” Alternative media channels like the computer networks or even telephone and fax “trees” (distribution lists) permit the dissemination of information unacceptable to or censored by mainstream channels and have been heralded as the new tools of revolution in countries as “un-American” as Romania and Communist China. Pirate media, like illegal radio broadcasts and cable or satellite jamming, are even more blatant assertions of the power of individuals to hack the data network.

To appreciate the media as facilitator rather than hypnotizer, we must learn to decode the information coming into our homes through mainstream, commercial channels. We, the television audience, have already been trained as media theorists. We must acknowledge this education if we ever hope to gain command over the language being used to influence us. The first chapters of this book will examine some of our most popular cultural icons in the context of the mediaspace in which they live and the agendas they hope to promote.

In doing so, we’ll come to know a new generation of media activists, whose techniques demonstrate a keen awareness of psychology, conditioning, sociology, and marketing. These children of the fifties, sixties, and seventies were willing participants in a great social experiment in which the world behind the television screen was presented as a depiction of reality — or at least a reality to which they should aspire. This was a dangerous perception to instill. Spending most of their energy trying to conform to media representations, these kids eventually determined that the easiest way to change the world is to change the television image. Now that these kids have grown up, we find our most imaginatively influential programming developed, written, and produced by people who were themselves products of the media age. They are in command of the most sophisticated techniques of thought control, pattern recognitions and neuro-linguistic programming and use them to create
television that changes the way we view reality and thus reality itself.

This mainstream media subversion is accomplished through careful and clever packaging. Commercial television activism means hiding subversive agendas in palatable candy shells. Most of us do not suspect that children’s programs like “Pee-Wee’s Playhouse” or “The Ren & Stimpy Show” comment on gay lifestyles or that “The Simpsons” and “Liquid Television” express a psychedelic world-view. Children’s television and MTV, in fact, are the easiest places to launch countercultural missiles. The more harmless or inane the forum, the more unsuspecting the audience.

The messages in our media come to us packaged as Trojan horses. They enter our homes in one form, but behave in a very different way than we expect once they are inside. This is not so much a conspiracy against the viewing public as it is a method for getting the mainstream media to unwittingly promote countercultural agendas that can actually empower the individuals who are exposed to them. The people who run network television or popular magazines, for example, are understandably unwilling to run stories or images that directly criticize the operating principles of the society that its sponsors are seeking to maintain. Clever young media strategists with new, usually threatening ideas need to invent new nonthreatening forms that are capable of safely housing these dangerous concepts until they have been successfully delivered to the American public as part of our daily diet of mainstream media.

This requires tremendous insight into the way media works. Today’s activists understand the media as an extension of a living organism. Just as ecologists now understand the life on this planet to be part of a single biological organism, media activists see the datasphere as the circulatory system for today’s information, ideas, and images. The datasphere was created over the past two or three decades as the households and businesses of America were hard-wired together through devices like cable television, telephone systems, and personal computer modems. As individuals we are each exposed to the datasphere whenever we come into contact with communications technology such as television, computer networks, magazines, video games, fax machines, radio shows, CDs, or videocassettes.

People who lack traditional political power but still seek to influence the direction of our culture do so by infusing new ideas into this ever-expanding datasphere. These information “bombs” spread throughout the entire information net in a matter of seconds. For instance, a black man is beaten by white cops in Los Angeles. The event is captured on a home camcorder and within hours the beating is replayed on the televisions of millions. Within days it’s the topic of an afternoon talk show; within weeks it’s a court case on the fictional “L.A. Law”; within months it’s a TV movie; before the end of the year it’s the basis of a new video game, a comic book, and set of trading cards. Finally, what began as a thirty-second video clip emerges as the battle cry for full-scale urban rioting. This riot, in turn, is amplified on more talk shows, radio call-ins, and new episodes of “L.A. Law”! A provocative image or idea — like Rodney King getting beaten or even Pee-Wee Herman masturbating in a porno theater — spreads like wildfire. The event attracts our attention and generates media for several seconds, minutes, or even months … but its influence on us doesn’t stop there.

Within every media sensation are ideas, issues, and agendas — often purposefully placed — that influence us less directly. A home video of police beating a black man, for example, initiates a series of responses in the viewer. Questions of racism, police brutality, the First Amendment, Los Angeles politics, drug abuse, even the power of consumer-grade electronics — to name a few — are all released by the single media image in its media context. Similarly, a media icon like Pee-Wee Herman attracts attention because he is bizarre and funny, but hidden in the image and forcing us to respond are questions about homosexuality, consumerism run amok, the supposed innocence of childhood, and the farce of “adulthood.”

If we are to understand the datasphere as an extension of a planetary ecosystem, or even just the breeding ground for new ideas in our culture, then we must come to terms with the fact that the media events provoking real social change are more than simple Trojan horses. They are media viruses.

This term is not being used as a metaphor. These media events are not like viruses. They are viruses. Most of us are familiar with biological viruses like the ones that cause the flu, the common cold, and perhaps even AIDS. As they are currently understood by the medical community, viruses are unlike bacteria or germs because they are not living things; they are simply protein shells containing genetic material. The attacking virus uses its protective and sticky protein casing to latch onto a healthy cell and then inject its own genetic code, essentially genes, inside. The virus code mixes and competes for control with the cell’s own
genes, and, if victorious, it permanently alters the way the cell functions and reproduces. A particularly virulent strain will transform the host cell into a factory that replicates the virus.

It's really a battle for command of the cell, fought between the cell's own genetic programming (DNA) and the virus's invading code. Wherever the cell's existing codes are weak or confused, the virus will have a better chance of taking over. Further, if the host organism has a weak immune system, its susceptibility to invasion is dramatically increased, it can't recognize that it is being attacked and can't mobilize its defenses. The protein shell of a virus is the Trojan horse. The genetic codes are the soldiers hidden inside, battling our own genes in an attempt to change the way our cells operate. The only "intention" of the virus, if it can be said to have one, is to spread its own code as far and wide as possible — from cell to cell and from organism to organism.

Media viruses spread through the datasphere the same way biological ones spread through the body or a community. But instead of traveling along an organic circulatory system, a media virus travels through the networks of the mediaspace. The "protein shell" of a media virus might be an event, invention, technology, system of thought, musical riff, visual image, scientific theory, sex scandal, clothing style or even a pop hero — as long as it can catch our attention. Any one of these media virus shells will search out the receptive nooks and crannies in popular culture and stick on anywhere it is noticed. Once attached, the virus injects its more hidden agendas into the datastream in the form of ideological code — not genes, but a conceptual equivalent we now call "memes." Like real genetic material, these memes infiltrate the way we do business, educate ourselves, interact with one another — even the way we perceive reality.

Like real genetic material, these memes infiltrate the way we do business, educate ourselves, interact with one another — even the way we perceive reality.

Media viruses spread rapidly if they provoke our interest, and their success is dependent on the particular strengths and weaknesses of the host organism, popular culture. The more provocative an image or icon — like the videotaped police beating or a new rap lyric, for that matter — the farther and faster it will travel through the datasphere. We do not recognize the image, so we cannot respond automatically to it. Our interest and fascination is a sign that we are not culturally "immune" to the new virus. The success of the memes within the virus, on the other hand, depends on our legal, moral, and social resiliency. If our own attitudes about racism, the power of police, drug abuse, and free speech are ambiguous — meaning our societal "code" is faulty — then the invading memes within the media virus will have little trouble infiltrating our own confused command structure.

There appear to be three main kinds of media viruses. The most obvious variety, like publicity stunts or activist pranks, are constructed and launched intentionally, as a way of spreading a product or ideology. There are also what we can call co-opted or "bandwagon" viruses — the Woody Allen/Mia Farrow debacle or the AIDS epidemic — that no one necessarily launches intentionally, but which are quickly seized upon and spread by groups who hope to promote their own agendas. (Republicans used the Woody affair to criticize New York's family values; ultraright conservatives used the AIDS epidemic to equate homosexuality with evil). Finally, there are completely self-generated viruses — like the Rodney King beating, the Tonya Harding/Nancy Kerrigan affair, or even new technologies like virtual reality and scientific discoveries — that elicit interest and spread of their own accord because they hit upon a societal weakness or ideological vacuum.

Today's media activists understand the properties of media viruses. The designers of intentional viruses take into account both the aspects of the status quo they wish to critique, as well as the kinds of packaging that will permit the distribution of their critique. Most, but certainly not all, intentional media viruses are cultivated from scratch. The "smart drugs" virus is an excellent example of such designer memes. By the late 1980s a small group of AIDS activists, pharmaceutical industry critics, and psychadelics advocates felt the need to call our current drug paradigm into questions. The AIDS activists were upset by laws limiting the domestic use of unapproved or experimental

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drugs from overseas. The pharmaceutical industry critics were frustrated by the way that the profit motives of drug companies could limit rather than expand the number of helpful medications and nutrients available to the public. The psychedelics advocates were disturbed by the “just say no” drug abuse publicity campaign, which denies the possibility of any value to experimentation with mind-altering substances.

The virus began with the carefully conceived phrase “smart drugs.” Like many of the media viruses we’ll be exploring — virtual reality, techno-shamanism, ecological terrorism — smart drugs is an oxymoron. By juxtaposing two words or ideas that do not normally go together, the phrase demands thought: “Drugs are smart?” Utilizing a hypnosis technique first developed by Milton Erickson, the contradictory phrase creates its own unique conceptual slot in the minds of people who hear it. The longer the phrase demands conscious attention, the more opportunity the virus has to inject its memes. If it makes us think, then we cannot be immune to it. Like a deer in a car’s headlights, we freeze in our tracks.

The term “smart drugs” is meant to refer to a group of nutrients and prescription drugs that have long been shown to enhance memory functioning in senile people. A few doctors and nutritionists began to experiment with these substances on normally functioning people to see if they could induce superior mental functioning and found some positive results in their tests. These doctors ran up against many obstacles when they tried to publicize their findings and get research dollars for further study. AIDS, pharmaceutical industry, and psychedelics activists adopted this cause as their own and came up with “smart drugs” as part of an overall media strategy.

The next task was to develop what we can call the “syringe” for the virus. The way a virus is administered is as important as the construction of the virus itself. Often the way in which a virus spreads communicates as much as the memes within the virus. The smart drugs activists decided to create “The Smart Bar,” a dispensary for over-the-counter cognitive-enhancing substances, right on the dance floor of a popular nightclub.

Within minutes after The Smart Bar opened, computer bulletin boards carried news of the smart drugs. Within weeks, Rolling Stone, GQ, “Larry King Live,” “Nightline,” and a host of other media outlets were covering the event. Other clubs began to sell smart drugs, health stores stocked up on cognitive-enhancing nutrients, and a lot of people and agencies became alarmed — not only because smart drugs were sweeping the nation, but because controversial memes within the smart drugs virus were spreading themselves throughout the datasphere.

While these drugs may or may not make a person smarter, their infusion into the datasphere as an idea has called our FDA laws, pharmaceutical industry, drug use policies, and medical mind-set into question. The smart drugs themselves are the Trojan horse — the sticky shell of the virus getting all the attention. As the smart drugs virus spread, one of its creators, John Morgenthaler, was asked to appear on “Larry King Live.” Once safely nested on the studio set, he used the forum to explain how information about many smart substances has been ignored or even suppressed by the American pharmaceutical industry for years. The young, unassuming, and well-dressed man explained (to an audience whose appetite had already been whetted by the term “smart drugs” and video footage of the smart bars) how current FDA regulations require that millions of dollars of tests be done before these substances can be prescribed for cognitive purposes. Because the patents for many of these chemicals expired before the pharmaceutical companies realized their value, no firm today is willing to spend research dollars on a chemical it can’t own.

This particular meme — we can call it the “patent law meme” within the smart drugs virus — burrows deeply into the existing medical business paradigm. As smart drugs promoters go on the air to discuss the problems caused by patent-motivated medical decisions, they convince viewers that the pharmaceutical industry is dangerous to the population it claims to serve. Along with smart drugs, says an AIDS activist friend of Morgenthaler’s who appeared on “Nightline” a few weeks later, several potentially effective AIDS medications have been suppressed because they, too, cannot be patented. Whether or not smart drugs prove effective at all, the memes within the smart drugs media virus have infiltrated the existing conceptual framework for drug legalization.

The inconsistencies of our AIDS drug policies were exposed by the smart drugs virus — first on computer bulletin boards, then in magazines, then on cable television, and finally on national network news. The attraction to the idea and sound of smart drugs and smart bars opened the necessary media channels for the virus to spread. The immune response of our culture to the virus was weak because of our ambivalent attitudes toward drug use. The memes...
themselves were able to infiltrate because of our ambiguous
laws and policies — our faulty societal code.

But not all media viruses are constructed purpose-
fully. The Woody Allen/Mia Farrow scandal was — most
probably, anyway — not created as a publicity stunt. The
particularly New York story broke, however, during the
Democratic Convention for Bill Clinton. The Republicans,
who had already been denouncing New York as a hotbed
of morally decadent and “cultural elitist” attitudes, were
quick to capitalize on the Allen/Farrow media virus.
Introductions for Bush’s campaign speeches made refer-
ence to Woody Allen, hoping to reinterpret the memes
that had already spread — child molestation, movie stars
not being as they appear, New York confusion — as con-
demning evidence of Democratic family values.

Finally there exist what countercultural activists would
consider “self-generated” viruses. These are concepts or
events that arise in the media quite spontaneously, but
spread widely because they strike a very resonant chord or
elicit a dramatic response from those who are exposed to
them. If all of civilization is to be seen as a single organ-
ism, then these self-generated viruses can be understood as
self-corrective measures. They are ways for the organism to
correct or modify its own code. This is what is known in
evolutionary circles as “mutation.”

One such self-generated virus, the theories of chaos
math, come to us from deep in the computer departments
of major universities, but their implications have reignited
enthusiasm for ancient pagan and antiauthoritarian values.
This new, highly heralded form of mathematics works
without the straight lines and linear equations we have used
to interpret reality for the past dozen or so centuries and
instead paints a picture of our universe as a quite random,
discontinuous field of natural phenomena. Chaos math is
now used to analyze systems as complex as the stock market
or the weather with astonishingly accurate results.

The famous phrase “a butterfly flapping its wings in
China can create a hurricane in New York” means that a
tiny event in one remote area can lead to huge repercus-
sions in another. It is no wonder that those attempting to
demonstrate the fall of hierarchical systems and to debunk
the notion of top-down control cherish the memes of the
chaos math virus, which contradict these orderly notions of
natural behavior. Activists love evidence that supports their
minute-man tactics.

It is the media activists, most of all, who depend on
a world-view that accepts that a tiny virus, launched
creatively and distributed widely, can topple systems of
thought as established as organized religion and institutions
as well rooted as, say, the Republican Party or even the
two-party system altogether. This is why it is so important
that we understand that, at least as far as media activists are
concerned, viruses are not a “bad thing.” True, biological
viruses, when successful, can destroy the host organism. If
they invade and take control of enough cells, they redirect
vital functions that the host needs in order to survive. Media
viruses do target a host organism, but that beast is
not culture as whole; they target the systems and faulty
code that have taken control of culture and inhibited the
natural, chaotic flow of energy and information.

A media virus may be designed to fight a political party,
a religion, an institution, an economy, a business, or even
a system of thought. Just as scientists use viruses to combat
certain diseases within the human body or to tag danger-
ous cells for destruction by the person’s own antibodies,
media activists use viruses to combat what they see as the
enemies of our culture. Media viruses, whether intentional,
co-opted, or spontaneous, lead to societal mutation and
some sort of evolution. The purpose of this book is not to
cast judgment on any of the issues these activists raise, but
rather to examine the methods they use to promote what
they see as positive, evolutionary change.

Interestingly enough, however, to come to grips with
the efficacy of media viruses in our present datasphere,
we must also accept, or at least acknowledge, the basic
principles of the datasphere as these activists view them.
To understand media viruses, we must allow ourselves to
become infected.
MEMES AND MEMETICS

The meme is the secret code of human behavior, a Rosetta stone finally giving us the key to understanding religion, politics, psychology, and cultural evolution. That key, though, also unlocks Pandora’s box, opening up such sophisticated new techniques for mass manipulation that we may soon look on today’s manipulative TV commercials, political speeches, and televangelists as fond remembrances of the good old days.

The word meme was coined by Oxford biologist Richard Dawkins in his 1976 book The Selfish Gene. Since then it has been tossed about by Dawkins and other evolutionary biologists, psychologists such as Henry Plotkin, and cognitive scientists such as Douglas Hofstadter and Daniel Dennett in an effort to flesh out the biological, psychological, and philosophical implications of this new model of consciousness and thought.

The meme has a central place in the paradigm shift that’s currently taking place in the science of life and culture. In the new paradigm, we look at cultural evolution from the point of view of the meme, rather than the point of view of an individual or society.

Why bother to look at life in this new, upsetting, inside-out way? Well, for the same reason explorers started to look at the earth as round instead of flat, and the same reason astronomers stopped looking at the universe as if it revolved around the earth: it makes a lot more sense, and you can get more exciting things accomplished when you find a better model for explaining the way the world works. Such a model is the theory of the meme, or memetics.

Memetics is the study of the workings of memes: how they interact, replicate, and evolve.

The science of memetics is the mind universe’s analogue to genetics, which studies the same things about genes in the biological universe.

DEFINING THE MEME

It’s not so easy to answer even the obvious question, “What is a meme?” If you ask a biologist, the answer is likely to be along the lines of Dawkins’s original definition:

The meme is the basic unit of cultural transmission, or imitation.

According to this definition, everything we call “culture” is composed of atomlike memes, which compete with one another. These memes spread by being passed from mind to mind in the same way genes spread by being passed down through sperm and egg. The memes that win this competition — those that are successful at penetrating the most minds — are the ones responsible for the activities and creations that constitute present-day culture.

The most interesting memes to a biologist have to do with behavior. Dawkins’s original examples of memes were:

...tunes, ideas, catch-phrases, clothes fashions, ways of making pots or of building arches.

According to the biological definition, women wear long skirts one year, then, a new short-skirt meme catches on for whatever reason, and now women wear short skirts. Popular songs compete for the Top 40, each a meme or perhaps a bundle of memes. Then people start humming the catchy tunes, spreading those memes even further. Engineers build bridges on the cantilever principle; then the suspension bridge is invented and its meme spreads quickly to become the new state of the art in bridge building.

This biological definition is kind of satisfying, because it gives us a way to reduce all of culture to manageable pieces and start to label them and see how they interact and evolve. Frustratingly, though, it doesn’t lend much insight into the question of why certain memes spread and others don’t. So let’s put that definition on hold for a moment and look at some other points of view.

A PSYCHOLOGICAL DEFINITION

If a psychologist were asked what a meme is, he would give a slightly different answer, one that illuminates more the workings of the mind than the components of behavior. Here is psychologist Henry Plotkin’s definition of meme:

*Psychological Definition of Meme (from Plotkin)*

A *meme* is the unit of cultural heredity analogous to the gene. It is the internal representation of knowledge.

This definition stresses the analogy to genes, which are tiny chemical patterns living on strands of DNA. As those tiny DNA patterns cause all kinds of external effects — eye and hair color, blood type, even whether you grow up to be a human or a golden retriever — the memes in your head cause behavioral effects. Likening your mind to a computer, memes are the software part of your programming; the brain and central nervous system, produced by your genes, are the hardware part.

The memes in this definition don’t live in the external trappings of culture, but in the mind. After all, it is in each individual’s mind where the competition for memes takes place. According to this definition, a woman might have in mind a meme like *It’s good to be aware of the current fashion*; another meme, *Women who dress fashionably get ahead*; and a third meme, *I want to get ahead*. Wearing short skirts when they become fashionable is a behavior that results from having all these memes working together in her mind. If there are enough women who have these supporting memes in their minds, all it would take would be one more meme — *Short skirts are fashionable* — to cause a proliferation of raised hemlines.

Bridge-building methods evolve because of memes. An engineer might be programmed with memes such as *Suspension bridges are the most efficient for this kind of job*; *Engineers who do a good job get their bosses’ approval*; and *Getting the approval of my boss is important*. Without any of these three, the engineer might not build a suspension bridge. All three memes acting together cause something to get built out in the world. Of course, the engineer works with other engineers, construction workers, teamsters, and so on, all behaving as directed by their memes.

Under this definition, memes are to a human’s behavior what our genes are to our bodies: internal representations of knowledge that result in outward effects on the world. Genes are hidden, internal pieces of information stored in an embryo that *result*, with the influence of its environment, in the flesh and blood of the developed organism. Memes are hidden, internal representations of knowledge that *result*, again along with environmental influence, in external behavior and the production of cultural artifacts such as skirts and bridges. If I look around and see short skirts, that might cause the production of a meme in my mind such as *Short skirts are in fashion*. But the meme is in my mind, not on Meg Ryan’s body.

If someone is having difficulties in life, a memetic psychologist might explore what memes the patient has that are producing the undesirable results. Once discovered, those memes could be changed.¹

¹ This is in fact close to what goes on in the practice of cognitive therapy, pioneered by psychologist Albert Ellis and psychiatrist Aaron Beck in the 1950s. Cognitive therapists theorize that unwanted mental states such as depression are the result of incorrect thinking (“cognition”) about life and the world. Since the patient is living with an inaccurate model of reality, naturally he or she has difficulty succeeding in life. The cognitive therapist interviews the patient and methodically uncovers and “corrects” illogical or inaccurate beliefs, eventually leaving the patient with a better working model of how to get along in life and therefore a feeling of well-being.
This way of looking at memes is useful for understanding how people work. However, it still has some problems as a complete theory of the evolution of knowledge. It centers around the human mind, and not all knowledge in the world is stored in people’s minds. As people interact with other forms of knowledge — geography, the genetic knowledge contained in each organism’s DNA, the astronomical knowledge of the universe — how does that affect culture and behavior?

A COGNITIVE DEFINITION

We can eliminate ourselves from the picture entirely, then, and look at an even more abstract definition of meme. This one is from cognitive scientist and philosopher Daniel Dennett:

Cognitive Definition of Meme (from Dennett)
A meme is an idea, the kind of complex idea that forms itself into a distinct memorable unit. It is spread by vehicles that are physical manifestations of the meme.

As Dennett says:

A wagon with spoked wheels carries not only grain or freight from place to place; it carries the brilliant idea of a wagon with spoked wheels from mind to mind.

Now this definition really gives you a meme’s-eye view of the universe. Notice the phrase “forms itself.” Well, we know ideas don’t form themselves any more than spoons get up and dance on the table. This definition is a scientific model — and as we have seen, there are many such models possible just surrounding the term meme. Using the phrase “forms itself” is a trick to get us to look at things from a meme’s point of view. You notice interesting things when you look at a specific meme and see what happens around it: how it spreads, mutates, or dies.

Someone whose mind carried the spoked wheel meme might build a wagon with spoked wheels. Someone else would see the wagon, “catch” the spoked wheel meme, and build another wagon. The process would then repeat itself indefinitely. Unlike the biological definition, this view of memes places them in the realm of the unseen — software of the mind, ready to produce results in the physical world that then carry their own seeds to other human beings.

The cognitive definition gives us license to take out a magnifying glass and follow around a specific meme like a private investigator — watching to see how infection with it affects people’s behavior; noticing how people spread it; comparing it with competing memes, like the suspension bridge with the cantilever — to see what properties it has that make it occupy more or fewer minds than its rivals.

One potential pitfall with this definition is the use of the term vehicles. The distinction of a meme-carrying vehicle is not as clear-cut as in biology, where organisms are vehicles for the spread of DNA. Not all meme transmission is as simple as imitating a catchy tune or noticing a spoked wheel.

If memes are our internal programming, we can draw on decades of research in psychology to look at how we get programmed — how memes get transmitted into our minds. Once programmed, we behave in complex ways that spread memes indirectly.

So while it may sometimes be illuminating to use the term vehicle to describe behavior or an artifact that tends to infect people with a meme, more often the existence of a meme will trigger a Rube Goldberg-like sequence of actions that only indirectly causes spreading of the meme. The wagon wheel and the commercial advertising on TV programs are the exceptions as meme-spreading vehicles; the rule is more complex.

A WORKING DEFINITION

We want a definition of meme that gives us access to understanding cultural evolution, as in the biological definition. But we want to be clear that memes are internal representations, as in the psychological definition. And we want to look at memes as ideas — as our software, our own internal programming — that produce an effect on the outside world, as in the cognitive definition. The result is the definition I use in this book, a definition similar to the one Dawkins adopted in his 1982 book The Extended Phenotype:

Definition of Meme
A meme is a unit of information in a mind whose existence influences events such that more copies of itself get created in other minds.