THE FUTURE OF VIDEO

becoming people of the screen

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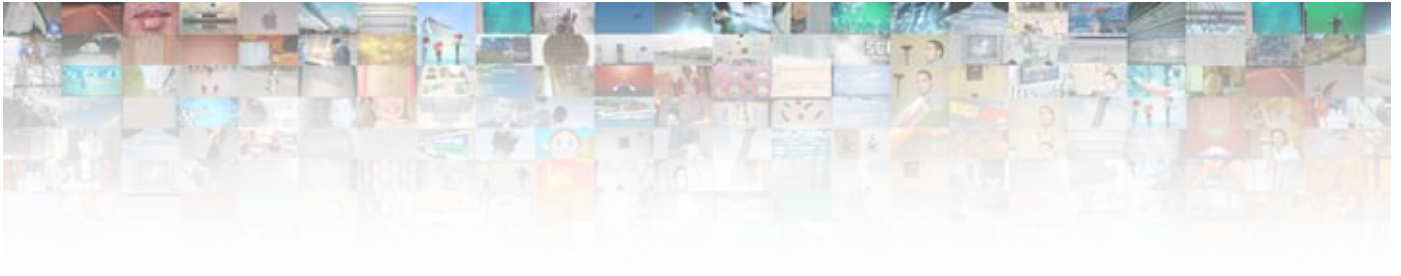
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Introduction

The Future Of Video:
Becoming People of the Screen

The direction of video has moved.

It is **animated** …
moving from static page to flickering screen.

It has become **pervasive** …
moving from stationary furniture into mobile devices and onto every kind of wall and
surface that surrounds us.

It has become **democratized** …
moving from the grips of the powerful and into the hands of citizen journalists and
everyday people.

It has become **distributed** …
moving from the dream factories of New York, Hollywood, and Mumbai into every village
around the globe, and every bedroom in suburbia.

It has become massively **collaborative** …
moving large numbers of people to participate.

It has become **transformative** …
moving our culture in new directions.

Ultimately, it has moved us, as groups and individuals, to think, see, and feel differently ...

… to experience new landscapes and ways of seeing,
… to take action and mobilize ourselves around the challenges we face,
… to connect, share, learn, and care about each other.

We are seeing a fundamental shift in how we are making and remaking culture, how we
are using the language of video to create meaning and share our lives. This is the story of
that shift.

> " Petit à petit, l'oiseau fait son nid. "
>
> —*French Proverb*
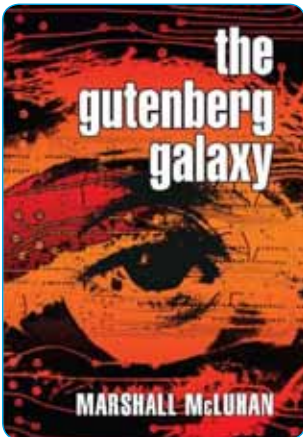
Little by little, the bird builds its nest. The story of video has been one of great expectations fed by incremental advances in technology and media orgware. But video, outside the mainstream TV and film industries (that is, in its new popularized, democratized, radicalized form), has not yet delivered on its predicted revolutionary potential—a revolution forecast for at least a half a century.[1]

In 1998, media scholar Mitchell Stephens observed that even though video-based media have penetrated almost every aspect of our lives, "we have not yet recognized the power of moving images."[2] Now, more than a decade later, with the meteoric rise of YouTube and user-generated video on the Web as well as the availability of mobile devices, the recognition of this power is clear and unavoidable. Leveraging digital networks, each technological advance in camera technology and accessibility, each new platform for distribution and editing, each new social community built around video, and each new change in the way we experience the world through video brings us one step closer to that big shift we've long been expecting.

Forty years ago, anthropologist Jean Rouch's film *Petit à Petit* (whose title was inspired by the proverb) foreshadowed the values and culture of much of today's participatory video world. In the film, an early attempt at what Rouch called "shared anthropology," a group of young Songhay men improvised an adventure tale of life in modern Africa. This rare (for the time) form of collaboration challenged the familiar distinctions between "us" and "them" and the traditional relationship between those in front of and behind the camera. Today the sharing of power and blurring of boundaries between producer and viewer, between the professional and the amateur, between the adept and the novice is a fundamental characteristic of video culture, bolstered by Web 2.0 technologies and driven by the do-it-yourself maker mentality.

Ubiquitous and accessible digital capture and distribution technologies are empowering more user-creators to participate in the global conversation, and vibrant new cultures and conventions are emerging around video-based communication. We are all becoming media-makers, producers, critics, and re-mixers of the world around us. As Kevin Kelly of *Wired* magazine wrote, we are becoming "people of the screen."[3]

FROM PAGE TO SCREEN

How are "people of the screen" different from Marshall McLuhan's print-based "typographic man"? Let's look back before we look forward at each of the relevant aspects of print vs. video. Each medium comes with its own possibilities and limitations. Becoming people of the screen is not about video replacing text or other media, but rather is about the increasing power of video to remix culture, organizations, and ourselves.

	THEN (Print)	NOW (Video)
Knowledge Dissemination	The invention and rapid diffusion of the printing press ushered in a series of cultural, cognitive, and political revolutions. Manuscript culture had been built around a feudal model of social and information control, with reading and writing the domain of the privileged few. By allowing works to be more accessible, print upended the feudal hierarchy's control and centralization of knowledge.	Knowledge, social provocation, political critique, and technical skills are being disseminated through video—and unlike text, video images don't require translation to have meaning. Any place can become the center of the world by capturing the attention and imagination of the global video community. Essayist Sven Bickerts observed, somewhat lamentably, "all is … becoming foreground."
Community	A new public sphere was cultivated around books, journals, pamphlets, and newspapers. This new public was predominantly male, educated, politically active, and open to individual and social experimentation.	Video communities are diverse, spontaneous, and often fragile, with levels of participation ranging from occasional viewing to deep collaboration. And more stable communities are forming around platforms like YouTube, topical aggregators like ScienceHack, trusted media brands like BoingBoing Video, and personalities like Web impresario Ze Frank.
Education and literacy	Print allowed information to be reproduced reliably and (relatively) cheaply, and distributed to large numbers of people very quickly. Literacy for the masses was necessary and desired, creating the need for public education and textual literacy.	We have not seen mainstream education move boldly toward video and media literacy, but it is coming. Howard Rheingold's Social Media Classroom is a prime example.[6] Understanding the new genres and conventions emerging from video culture will be an essential competency of the future.
Logic and Linearity	Objectivity, linear logic, and textual literacy attained their social and organizational currency out of the ability to fix and reproduce ideas in print. Print privileges the abstract, timeless, authoritative voice.	Participatory video culture is about multiple perspectives, collaboration, and mashing-up and recombining the images, sounds, and practices of life. Because sequencing and association create meaning, video has a relational and fluid logic. Openness, irreverence, and authenticity are common sensibilities in video.
Cognitive Engagement	The mind that was set by print culture revolved around silencing the other senses in the service of vision. In the Middle Ages, reading was as much oral/aural as it was visual—people typically read manuscripts aloud, even when alone—but over time, quiet visual consumption of text became the norm.	With video, we see a different form of cognitive engagement: one that reintegrates sight, sound, and sometimes touch. It is creating, in the words of McLuhan, a new "ratio" of the senses—a new way of dividing and focusing our attention and of redistributing the visible and invisible.

ABOUT THIS REPORT

The sections of this report explore the impact video technology is having on the way we create, communicate, and make sense of the world:

- We begin with a look at the new media-makers—who they are, how they use video, and the values that drive video culture.

- Video has become a major catalyst for political and social mobilization. We then explore the ways user-generated video is being used as a tool for political resistance and social justice.

- Next, we look at the emerging language of user-generated video, especially the new genres and conventions that are "native" to Web and mobile video.

- We know that media and culture shape our minds; however, research on the impact of video on the way we think and sense the world remains preliminary. We offer some speculations about the brain on video, and the new sense ratios that video enables.

- We conclude by offering several specific forecasts regarding the future of video.

IFTF's research leading up to this report included interviews and workshops with amateur and professional content producers, technology experts, video entrepreneurs, lawyers, and media scholars. The research team gathered signals of the latest advances in video technology (presented along with IFTF's technological forecasts in the *Future of Video Map of Opportunities*[7]) and created peopleofthescreen.org, an online experiment in open, embedded collaborative editing. We also created and posted our own video content, and logged many hours watching user-generated videos on YouTube and other video sites.

LESSONS FOR ORGANIZATIONS

Will YouTube be the 21st Century version of Gutenberg's printing press? There are many technological and economic obstacles to be overcome, but there is little doubt that video will shape the way we live our lives and organize our communities. The text-Web is quickly becoming the video-Web. Virtual networks are being integrated more and more seamlessly into our environment and lives,[8] and these networks now channel video.

The millions of users generating and viewing video content from their laptops and mobile devices are exerting enormous influence on culture. To understand and benefit from these changes, organizations must get to know who those users are, how they communicate, and what they're up to next. Leaders must effectively incorporate video into their communications repertoire and develop advanced media skills.
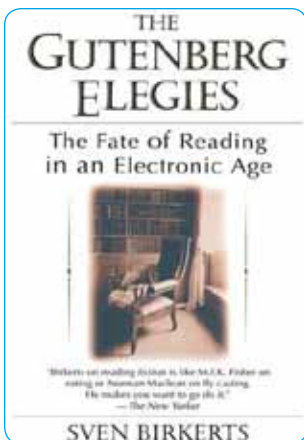
Video is huge and only getting bigger and better. It has become the driver for a cultural and cognitive shift, pointing to a new era of communication and creativity. Organizations that want to capitalize on the wave of opportunities that video and the video-Web can offer must clear away calcifying assumptions about the nature of video, how it is made, where it is shown, and where it can be used productively.

New media creates new relationships. An integrated video communications strategy that builds video skills internally and speaks with an authentic voice externally is essential. Such a strategy requires fluency in the vernaculars of video and a deep understanding that video communication is a social medium that is dependent on the contexts of creation, delivery, and audience. People of the screen will require adept and fluent "organizations of the screen," and those organizations will wield enormous influence and power in the future.

Section 1
Everyone is a Media-Maker

Last year, the do-it-yourself (DIY) culture of makers, artisans, and tinkerers—everyday people who are using their skills, passions, and ingenuity to transform how the material world is made and remade—was examined in the IFTF Technology Horizons report *The Future of Making: The Way Things Are Made Is Being Remade* (SR-1154). As the research showed, when passive consumers become active makers and producers, the entire dynamic of markets, innovation, and creativity is reordered.

This trend is even more pronounced and accelerating faster in the world of user-generated video. Barriers of entry to becoming a media producer are extremely low, and will soon to be so low as to become virtually nonexistent. To anyone who has watched user-generated video, it is clear that little skill is needed to be a video-maker. Embedded webcams, inexpensive and user-friendly digital video recorders like the Flip camera, and video-enabled mobile devices are making us all video producers.

The most powerful technology, however, in the democratization of media production will be Web- and video-enabled mobile devices. Cameras were introduced in phones in 2001 and quickly became a standard feature. And with global penetration well over 50%, mobile devices with video capture and upload capabilities will be in the hands of billions within a few years.

With so many recording eyes in our environment, and with video capable of being uploaded or streamed live and seen by billions, social expectations and public behaviors take on new meanings and scale. This mass *witnessing* capability (which we explore further in the next section) makes us more conscious of our social performances. The expression "off the record" might be meaningless to future generations.

The popularity of video sites like YouTube, along with live streaming and mobile blogging (moblogging) sites like Ustream and Qik, is continuing its exponential growth. As a clear and present indicator of this trend, YouTube mobile uploads increased 400% following the release of iPhone 3GS alone, and 1,700% in the last six months overall.[9]

These trends mean a world of new voices, new perspectives, and new practices will be competing for attention in the cacophony of media on the Web. Every minute, 20 hours of content is uploaded to YouTube, and almost 90% of it is original content. This leads one to wonder, what are people producing?

It is not the originality or creativity of these uses that is revolutionary, but rather the sheer volume of media, the numbers and kinds of people who are participating, and the repository of existence that we have available to us.

MASS MEDIA?

Users are certainly making and posting home videos (the most common genre on You-Tube). As anthropologist Michael Wesch notes, although millions of hours of video are being uploaded and billions are watching, this is decidedly *not* mass media. In general, we are documenting our lives and sharing videos with a small group of friends and random viewers (generally less than 100).[10]

But we are also documenting events around us, being the eyes and ears of the world and creating a more massive record of human existence than known before in history. We are streaming our world and our commentary on life and events live to anyone who wants to watch. We are using machinima (real-time 3D graphically rendered animation using ready-made virtual reality engines like *Second Life* or first-person shooter games) to turn ideas directly and easily into creative expression.

It is not the originality or creativity of these uses that is revolutionary, but rather the sheer volume of media, the numbers and kinds of people who are participating, and the repository of existence that we have available to us. When functional video search, recognition, and hyperlinking technologies become available, this mountain of video data will drive our imaginations and open up avenues for remixing reality using what Kevin Kelly calls "the great hive mind of image creation."[11] What new visions, what new representations of the familiar, unseen, or ignored might this massive repository of images unleash?

Here we will look at some of the new genres of video, but one thing is certain: amateur producers and viewers will have a multitude of platform options for distributing their content. Our media (and built) environment will be beaming content from the multitudes. And this content skews much more in the direction of the everyday, rather than instances of hidden genius. Mimi Ito, who has studied youth culture and their use of video media, asserts that "the vast majority of digital video that is being produced today is motivated by social communication, and not really for the creative or commercial impulse that has motivated professional media creation."[12]

The commercial impulse has, as if to confirm Ito's findings, moved from content to plat-form. As Will Richmond at VideoNuze observes, "Over the last 3 quarters—arguably the heart of the current recession—at least 26 [broadband and mobile video-oriented] compa-nies have raised a total of $219M." And, he continues, one thing worth noting is that "of the 26 companies, not a single one is a video producer itself, or even an aggregator of video. There has been a significant shift in investor sentiment away from content and towards the platforms and tools required to power video."[13] Enabling communication and community building is the prime strategy. Content scarcity, once a driver for distribution markets, is no longer an issue; millions of avid user-producers have taken care of that.

NEW GENRES

While there is no dearth of the unoriginal and inane in the user-generated video sphere, there are many examples of genres that have the spark of something new, something that utilizes the inherent characteristics of new video. Below is a sample of some of the more interesting and influential modes of expression in the participatory video community.

Video Blogs (Vlogs)

One of the most common and popular forms of user-generated content is the video blog (vlog). This form of sit-down philosophy is as simple and straightforward a use of the medium as possible. Anyone with a webcam can do it—which is part of its prevalence and appeal. There is very little social or technological distance between people who use a webcam to record their commentaries on life or events and the viewers on the other side. Address is often in the second person singular, emphasizing the intimacy this form creates. This sense of closeness and authenticity makes for a powerfully seductive and addictive medium.

Ze Frank, one of the most influential performers on the net, with his daily video dispatches from March 2006 through March 2007 called *The Show*, created many of the idioms we see today among the growing number of vloggers. Ze knew how to use his personality, charm, and the affordances of the interactive Internet space to create a deep bond with his audience. He allowed his community of "speed racers" not only to participate through feedback and "missions," but also to create and drive primary content on *The Show.* Fans of *The Show* were more than fans in the old media sense, where feedback and interaction were always at a safe distance from the producers. Ze created a lexicon of in-jokes and in-group rituals to strengthen his connection with the audience. As IFTF Research Director David Pescovitz opined, Ze seemed less like a TV comedian and more "like a funny friend who you invite over and they sit there in your living room making you laugh."[14]

Ze Frank could get people to do absurd things—like make an "Earth Sandwich" by placing two pieces of bread at opposite ends of the Earth. It was fun, original, and completely devoid of cynicism. Leveraging his talent and Web video, he was able to create a thoroughly engaged community.[15] Advertisers and sponsors began to approach Ze; companies were seduced by the power he was wielding, and wanted to get a contact buzz from the positive response he was generating among his community.

Viral Mimicry

Imitation is the sincerest form of flattery, and there is no scarcity of imitation in the Web video galaxy. People seem to have a deep desire to connect with something beyond themselves—to connect at some level with the larger cultural stream they are floating in. From viral home movies like "Charlie bit my finger" to spontaneous performances like those of Gary "Numa Numa" Brolsma to documented events—"Don't Taze me, Bro"—there are innumerable examples of people remaking and recreating videos that have touched a public

There is very little social or technological distance between people who use a webcam to record their commentaries on life or events and the viewers on the other side

nerve. Michael Wesch, in his lecture on the anthropology of YouTube, quotes commentator Douglas Wolk on the phenomena of mass remakes:

> They start to look less like an infectious joke than like a new cultural order. These kids aren't mocking … they're venerating … and they're beautiful to see, because they're replicating and spreading … happiness. They're following a ritual that's meaningful if not yet venerable: learning the dance, lip-synching the song, documenting their performance just so, making it available for the world to see. [It] is now part of the fabric of the Internet. It's bypassed the monolithic American entertainment industry to become a standard.[16]

"Autotune the News" is a news parody that overlays autotune and rap onto daily newscasts.

Infants learn to speak by repeating simple words and imitating sounds. The preponderance of viral mimicry might be a sign of a medium's early stages of development, moving along the path to maturity. Large numbers of people are exploring and experimenting with video, practicing this language with the freedom and wonderment of children.

Mash-ups

Remix and mash-ups are allowing us to recombine media to create new meanings, to stitch together original conversations from disparate pieces of found footage, to re-assemble our media for subversion, critique, or entertainment in the form of news parodies,[17] movie trailer mash-ups,[18] and musical re-assemblages.[19]

The power and effectiveness of the remix genre was clearly demonstrated in the 2008 U.S. Presidential campaign. 236.com's brilliant piece called "Synchronized Presidential Debating"[20] was a remarkable example. Using footage from the three televised debates, the creators pulled repeated verbatim phrases spoken by the candidates and synchronized them in split screen. The arresting and hilarious montage mocks the artifice of overly rehearsed political talking points and sound bites. This kind of remix video commentary is more effective than any reasoned deconstruction of political speech.

For the synchronized debates and most remix videos, producers put clips together relatively slowly and painstakingly, watching and matching the sound bites. A substantial investment of time is required. But as easy-to-use editing platforms, like Kaltura, and video and keyword search engines, like Blinkx and Delve Networks,[21] come online, this subversive and powerful form of commentary will become a mainstream tool.

But remix and mash-ups are only the beginning. Other trends of note in user-generated video include lifecasting and live streaming video,[22] first-person "head cam" videos (usually of skydiving, mountain biking, or other adventure sports), mobile filmmaking,[23] next generation instructional videos (which we explore in the next section), and non-camera capture productions using machinima and animation engines.[24]

Crowdsourcing Production

Media-makers are inventing and incorporating new avenues of participation and new forms of collaboration. These forms are contributing to the decentralization and global distribution of production and authorship.

Participating in an online video community is as easy as capturing and uploading content to one of the myriad video hosting platforms on the Web, or streaming live to sites such as JustinTV, Ustream, or Qik. Participatory media is also being integrated into mainstream television channels. Current TV and LinkTV have been at the forefront of supporting and broadcasting user-generated content. Current TV's VP of Strategy, Robin Sloan, claims their goal is to give viewer-producers more agency, to empower them to create something more original and honest than is typically seen on mainstream TV. Essentially, he tells Current TV viewers, "Here's the key to the vehicle. Drive it! We want to blow up TV, blow up video."[25]

Video on the Web makes new forms of creative collaboration possible. An experiment in open-source filmmaking, "A Swarm of Angels," has reached more than 1,000 participants. It bills itself as "a new kind of film process and movement pioneering extreme collaboration and digitally-native cinema."[26] There is a lesson here in success and appropriate scale, however, as production has gone on hiatus to try to create a platform that can accommodate the large numbers of contributors.

Seven years in the making, *StarWreck: In the Prikinning* is an amateur, collaborative Finnish remake of *Star Trek*. This low-budget, "basement" film incorporates remarkable special effects and techniques that make it look like a professionally produced film. The tools now available to amateur creators and the new power to create complex productions at low costs is emphasized by the producers of *StarWreck*:

> Making a movie is not about the money any more, but the will to do so and the wits to make [the] best of the available resources. A computer, a camera and couple of programs (Adobe's *Premiere* and *After Effects* and Newtek's *Lightwave 3D*) were the bare necessities for StarWreck. Desktop video is here to stay.[27]

Can these amateur, collaborative films compete with the quality of professional studio productions? The group Mass Animation enlisted the Internet community to create a five-minute animated short called "Live Music." Sony bought the film and is distributing it as a theatrical opener to its animated feature "Planet 51." As stated by Michael Lynton, chairman and chief executuve of Sony's entertainment domain, in the *New York Times*:

Search Inside allows viewers to search where keywords come up within a video

"Live Music" is a five-minute short movie created by an online community

Social networks can operate like automated talent scouts, helping the cream rise more quickly to the top, and that's what happened with 'Live Music,' while creativity has been pretty evenly distributed in society, it hasn't always been easy to tap into.[28]

Tapping into creativity and collective intelligence has been the fuel for the rise of Wikipedia and other wiki-like platforms. The rocket accelerant of collaborative video creation is coming in the form of collaborative video editing on Wikipedia. Wikimedia is currently integrating video content into their free and open encyclopedia. Using open-source editing tools from Kaltura and public domain video archives like Metavid and the Internet Archive, Wiki contributors will be able to "take a video, to crop it, to edit it, to take different assets and mix them into a single video—not just video ... a text slide or ... a slide show," said Wikimedia deputy director Erik Moller, "you can mix videos, tag them with audio, obviously. So we want to build a completely open standards-based environment that people can use to remix video."[29]

WHAT'S IMPORTANT?

In a few short years, personal publishing, citizen journalism, and the rise of the blogosphere rocked the foundations of the print news industry. Smart media brands are now scrambling to grab and monetize the tsunami of citizen video on the Web, but the target is slippery and on the move. This new media reality requires quick adjustment and speed of action. Although video is flooding the Web, many platforms, including Joost and Microsoft's Soapbox, have not been able to sustain users and create value.

People are finding new ways to express themselves, to form communities, to share moments together through video. Emerging types of user-generated content, while having some similarities to old media, are taking advantage of Web 2.0 to create new and deeper levels of engagement with the public. In modern times, popular culture has largely been the product of corporate design, with its own priorities, values, and styles; the cultural trendsetters were chosen and groomed for some imagined mass appeal—but no more. Now anyone can be a media-maker, and everyone is a culture-maker. To be successful in this environment, organizations must understand how people use video, what they use it for, and where their product or service can be integrated into the stream of engagement.

Section 2
The Revolution of Mass Witnessing

If the pen is mightier than the sword, could the camera be mightier than the tank? Network TV stations showed us 20 years ago that one man in Tiananmen Square could, with the protection of a video camera, indeed hold back a column of tanks from advancing—at least temporarily. In 2005, South Korea's infamous "Dog Poop Girl" was publicly shamed and ostracized from her university when photographic evidence captured on cell phones appeared online demonstrating her rudely failing to clean up after her small dog defecated on a subway train. Cell-phone-captured video of a police officer fatally shooting a young black man at an Oakland, CA train station in 2008 led to massive public outcry when it surfaced on YouTube.

Burma VJ is a clear signal of the future of video making for global social justice. A feature film shot on pocket-sized cameras by dissident Burmese journalists, smuggled out of the country and assembled in Denmark by documentarian Anders Østergaard, the project demonstrates that, armed with a few cameras, citizens of one of the world's most brutal and closed regimes can manage to capture and distribute footage of the most terrible abuses.

And most recently, mobile-captured and uploaded images from Tehran showed massive street protests and the violent repression of those protests (including the now-infamous brutal shooting death of Neda Agha-Soltan) by the Iranian regime following the contested election of June 12, 2009.

BEARING WITNESS: DOCUMENTING THE MOMENT

Such instances are clear cases of the power of a camera to literally alter the course of history; had these moments not been recorded, the chain of consequent events could have been dramatically different. Projects like WITNESS's Hub for collecting user-generated video documentation of human rights abuses demonstrate a clear trend toward more systematic and independent efforts to document and expose injustices the world over.

WITNESS, a globally recognized human rights organization founded by Peter Gabriel, launched the Hub as an interactive community for sharing user-generated video documenting human rights abuses. Going to great lengths to protect the identities of users when necessary, the organization endeavors to walk the fine line between featuring amateur or unedited content and producing their own professional content built on the submissions of users. With more resources at their disposal than the average human rights group, and a savvy board and software developer/video production team, the success of their work will be a bellwether of future developments in this field.

CAMERAS TO THE PEOPLE: NEW GLOBAL VOICES

As video creation and distribution technologies become more widely distributed, deliberate efforts at effecting social change through video will play a much broader role in the development of democracies around the world. Attempts at empowering underprivileged individuals through access to video technologies are still in their incipient stages, but these technologies may become powerful tools for the oppressed. Video Voice Collective and Video Volunteers are two early signals of this potential.

Public Health scholar Caricia Catalani decided that the standard tools of her discipline left her underequipped to deal with the health problems presented in communities like New Orleans, where she conducted a portion of her graduate fieldwork. She and a group of collaborators created the Video Voice Collective to give the most underprivileged communities—and not coincidentally, the most at-risk in public health terms—in New Orleans access to video equipment and training sessions to communicate the challenges and needs of their community to a broader public. This exercise in community empowerment has led to concrete public health gains as New Orleans city infrastructures and housing are rebuilt with deeper public participation.

"What if the poorest one billion people in the world had their own media industry?"

Video Volunteers asks "What if the poorest one billion people in the world had their own media industry?" This organization works primarily in India to train hundreds of villagers and residents of the country's slums to use video cameras, editing software, projectors, and social media technology to communicate about their own local communities' most pressing issues. About every six weeks, each Community Video Unit (CVU) holds showings of their work that gather hundreds of audience members. Confronting issues of women's rights, caste, class, violence, sexuality, terrorism, development, public health, and more, these locally tailored news magazine programs have been a major success across India. Participants gain valuable commercial skills and regularly go on to earn an income using these skills.

Similar programs have been implemented across the developing world and will grow significantly in the coming decade, offering the tandem benefits of both occupational training and community empowerment. In particular, as these types of groups are able to increase the levels of video production literacy that they offer to their constituencies, much more compelling storytelling methods and distribution strategies will lead to a broader diffusion of video from the bottom up across human societies.

WHAT'S IMPORTANT?

The power of the medium of video to tell stories and generate emotive experiences for viewers has made it a dominant medium. Strategically deployed video will be the communications medium of choice for those seeking to bring about social change in the coming decade. The most successful campaigns will be those that deftly deploy not only effective storytelling techniques, but also shrewd distribution strategies that cut through the noise to reach their intended audiences.

The ubiquity of video documentation in public and private spaces signals a shift in our expectations of privacy and free expression. We must now assume, for better or worse, that everything in the casual commons can and might be recorded. Politicians have known this for some time, and temper their words even in private conversations, but everyone, especially in business and organizational contexts, must expect their interactions to be documented and possibly publically distributed. The daily experience of everyone—employees, guests, visitors—is increasingly being captured. We are all submerged in a world of witnessing.

Section 3
Threshold Literacies:
Understanding the Language of Video

Can you converse in video? Most of us know how to "watch" TV, "read" a novel, and "listen" to music. Media literacy has been defined in terms of our ability to use conventional genres, structures, and tropes to make sense of content. Each technology comes with its own set of evolving conventions. New media technologies often start out as mere imitations or translations of old media: early photography functioned as portraiture and documentation; most early film was simply moving documentary photography; and early TV consisted mostly of filmed theater and popular radio shows. Over time, technologies develop an internal momentum toward the new, so that while occasionally still resembling previous forms, new uses and conventions are invented that are "native" to the particular platform of communication.

Going "native" in media requires experimentation, creativity, and usually a generation of mutation and adaptation. In his rumination on media technology, *Software for the Self*, Anthony Smith notes that this transition occurs "in circumstances that depend on the movement of markets, the recognition of social uses, and the establishment of perceptual attractiveness."[30] Considering the vast amounts of time and money being invested in video, the massive wave of user-generated content being produced and consumed, and the way video is changing our habits of attention and the way we communicate, video is fast becoming a transformative medium.

During the transition from a technology into a medium, what might be called "threshold literacies" develop. Threshold literacies are genres, grammars, and conventions that smooth the transition from old media to new, often making the displacement appear more comfortable, palatable, and natural. Looking at the signals from the video environment, especially Web video, it appears as if video is currently moving across this threshold. Much of what we see in the video universe still largely reflects the conventions and sensibilities of home movies, advertising, and mainstream media, but it is manifesting the early signs of spontaneous and indigenous forms that will come to define how video is made and consumed in the future.

STYLE: WEBCAM AESTHETIC

Necessity is the mother of invention, and the limitations of webcam video have created a battery of styles, conventions, and techniques to turn these limitations into features. Certain idioms, if popular enough, become conventions. Most of the conventions we see in user-generated video were created in response to the technological constraints of webcams.

Although there are no reigning styles in the heterogeneous world of user-generated video, the webcam aesthetic is one of the most common features. You've seen it: a person or persons in extreme close-up are facing directly into the camera above their monitor or laptop screen. The sound is bad, the lighting is terrible, and faces are cut off or at strange angles. There are few (if any) camera moves—no zooms, pans, or fades. The person is staring straight at you, pouring her soul out about something in her life, making fun of someone else, or ranting about the burning political issue of the day. Simplicity is its appeal and power; there is no smoke and mirrors or stagecraft. It is the person, the camera, and you watching from your computer—and you get to interact, to communicate directly or indirectly with each other.

Interactivity is one of the distinguishing features of Internet video, bringing a network of globally distributed users together in a shared, virtual creative space. In user-generated video, producer and audience usually share the same basic idiomatic expressions, the same language, and the same consumer-based technologies, all being producer-consumers themselves, lending a sense of authenticity and emotional connection to the conversation.

Because there are few ways to create movement or dynamism using a webcam, editing becomes a key feature. When Ze Frank started *The Show*, he was faced with the problem of how to keep it interesting by just talking directly into the camera. He also had the dilemma that 3- to 5-minute monologues are hard to memorize. So, he came up with a solution: he would film one sentence or thought at a time, and edit the pieces together using "off-the-shelf" consumer editing tools. And out of this adaptation to certain design dilemmas, one of the most common aesthetic features of avid vloggers was born: the contraction—jump cuts that stitch spoken phrases together and reduce pauses, breaths, and even the long tails of words ending in "S." But, he discovered, jump cuts from phrase to phrase when the person on screen is at the same distance look awkward. So, he moved in and out, closer or farther from the camera for each sentence, enabling him to change emphasis, create pacing and rhythm, and use distance to create a different "voice" for segments of his commentaries. He turned monologues into dialogues using creative editing to make it appear that he was conversing with himself, and turned a simple, single point-of-view camera into a style that has become the standard.

Simplicity is its appeal and power; there is no smoke and mirrors or stagecraft. It is the person, the camera, and you watching from your computer—and you get to interact, to communicate directly or indirectly with each other.

## DURATION: SHORT ATTENTION SPAN THEATER?

In late 2008, Stanford University researchers launched "Microdocs: Short Attention Span Science Theater." The goal is public outreach to increase science literacy and knowledge using Web video segments of 2-4 minutes that "deliver science, one idea at a time."[31] The Stanford researchers understand two very important aspects of Web and mobile video. First, while the text Web has long been a repository and destination for knowledge-seekers, Web video is becoming a key resource for information and a dominant collective knowledge reference platform, especially with young people. In fact, YouTube, the most popular video site on the Web, has now become a major player in search, surpassing Yahoo to become the second most popular search engine behind Google, according to comScore.[32] Anyone with specialized knowledge or skills (or who believes they have specialized knowledge or skills) can now easily and widely share their "gift" with the world—and the world is watching and learning.

The second insight that drove the creation of Microdocs reflects the nature of the Web and mobile video viewing experience. Video on the Web or a mobile device has many more ways for competing for our attention than TV or film does. Social networking pings, email dings, and 20 open browser tabs all call out in pleading and piercing wails. Web video is what UW-Milwaukee Communications Professor Michael Z. Newman calls "interstitial media": media one consumes while doing something else, creating a distinct cognitive constraint on the viewing experience. Says Newman, "web video is short in part because it does not function as an evening's entertainment, like cinema or television, but as a momentary diversion in the context of another activity—a digital-age improvement on playing basketball with crumpled up office paper and a trash can."[33]

Video in this context has to be short and concise and capture your attention quickly. There is no time for long introductory setup. Using techniques like contraction and clipping, all the pauses, stops, and even breaths are cut from each shot. These techniques create a fast-paced, staccato rhythm and cut precious seconds off the running time of the video—great for interstitial Web viewing.

Three to five minutes has become the gold standard for video length. But is short, user-generated content the eternal sweet-spot for video? Maybe not. There are signs pointing to increasing use of laptops and mobile devices for long-form video viewing. The success of the Hulu online video service is one example. As a recent *New York Times* article points out:

> TV networks get much of the credit for the longer-length viewing behavior. In the past two TV seasons, nearly every broadcast show has been streamed free on the Internet, making users accustomed to watching TV online for 20-plus minutes at a time. By some estimates, one in four Internet customers now uses Hulu every month.[34]
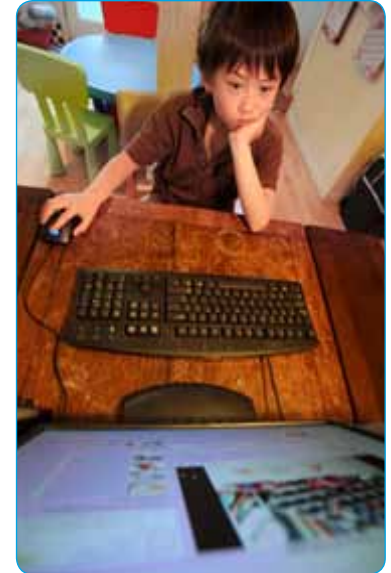
YouTube has become the second most popular search engine on the Web.

A recent report also shows that long-form Web viewing is much more common in Asia than in North America or Europe. In fact, "long-form professional content" is the most popular viewing content among Asian Internet viewers. And Asia, with 60% of the world's population, is by far the biggest growth market for video. As the report notes, with "over 180 million regular viewers of online video content—China has already surpassed the United States as the largest Internet audience in the world."[36] We might be seeing the birth of long-attention span theater as well, at least for professionally produced content.

Two separate but complementary trends are emerging. On the one hand we have short, free, amateur video (free for producers and consumers: Google's operating loss on YouTube has been estimated at $470 million dollars a year), and on the other hand we have longer, professional, pay-per-view or advertising-based content. These trends may be competing for attention and still struggling to solidify a business model, but they both appear to be here to stay.

CONVENTION: GENRE-BENDING

While mainstream media conventions still proliferate in the video world, there is a growing incredulity and playfulness toward traditional genre conventions. Mash-ups are not just about content, they are also about form.

> "You suck at Photoshop … you do … you're awful, and that's why you're here."

So began one of the most popular video series on the Web last year: You Suck at Photoshop. We don't know what motivated world-weary Photoshop expert Donnie Hoyle to post his bi-weekly dispatches to YouTube, but, despite his deteriorating personal and professional life, he manages to keep up his reluctant motivation to teach the unwashed masses the magic of Photoshop CS3. Through each of the 20 tutorials (on warping effects, 3D layers, Photomerge, etc), we are privy to Donnie's personal trials and tribulations, including the dissolution of his marriage and his run-ins with the law, and to his acerbic and sarcastic personality, which he unleashes on his presumptive audience.

The series was a smash hit on YouTube and MyDamnChannel (a comedy website), and launched its actual producers, Troy Hitch and Matt Bledsoe (ad agency veterans based in Covington, KY), into Internet stardom. The genres of how-to video, reality soap opera, and satirical comedy came together to great effect, creating an original and addictive viewing experience—all communicated by voice-over narration of Photoshop screencasts. Some view the show as a comedy masquerading as a how-to video, others as a how-to video using comedy as a pedagogical tool. In fact, it won Webby Awards in both the How-to and Comedy categories. Either way, it shows how the latent talent of a couple of Kentucky designers, through the free play of style and genre, can capture the imagination of a huge audience.

Simplicity is its appeal and power; there are no smoke and mirrors or stagecraft. It is the person, the camera, and you watching from your computer—and you get to interact, to communicate directly or indirectly with each other.

WHAT'S IMPORTANT?

Learning to make and effectively use video in the future will require fluency in the emerging vernacular of video.[37] For businesses, this new language will be necessary to communicate with staff in the workplace, funders and shareholders, and customers.

Just as important will be understanding how these vernaculars are conditioned by particular technological and social contexts. By looking at signals of threshold literacies, we can begin to understand the new grammars of video and how to use them most effectively.

Howard Rheingold's Social Media Classroom teaches viewers the vernacular of video.

Section 4
Video Sense and Sensibilities

"When media change, human relationships change," notes anthropologist Michael Wesch.[38] This has become a truism in our hyper-mediated, hyper-connected world. Different media intercede and facilitate different kinds of relations—between humans and other humans, and between humans and their technologies.

When media change, our minds change as well. New media alter our sensory encounters with the world, influence how we see ourselves and create our identities, and change our habits of perception and attention. Media tune our neurons and change what we can and cannot experience at a given moment.[39]

While reading text, the eyes are activated as we try to quiet all our other senses. The modern mind has been defined by the ability to think in text and communicate with the written and printed word. The formal systems that emerged after the invention of printing remade our minds, which remade our society, which again remade our minds. This evolution continues, but driven now by new media.

Our subjective experience of the world, the distribution and relation of our sensory perception, has material effects. We order our societies around the way we perceive reality, and a change in the form of experience changes the way we build our institutions, organizations, and culture. For example, the Tzotzil and other indigenous cultures of Latin America order and classify the world around them based on heat, using thermal symbolisms and metaphors to understand health, power, and human relations.

Indeed, we can view human culture and history through the dynamics of the relationship of media technology to our worldviews, our minds, and our senses. We have travelled through various sensory cycles in human history—from the primacy of the chemical senses of taste and smell, to touch and oral/aural cultures, to modern vision cultures.

Video technologies are having a significant impact on the sensory hierarchy that has dominated modern, print-oriented culture. Although it is still too early to make definitive claims about the effect of video on our minds, senses, and sensory culture, we can postulate directions and impacts from the early indicators we've uncovered.
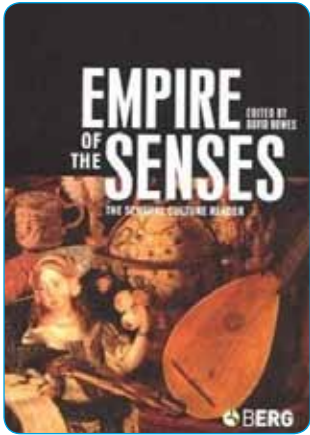
ATTENTION AND SPACE

Attention and perception go hand in hand. Video capture technologies, as stand-alone gadgets (like the Flip video) or integrated into our mobile devices, combined with the ability to easily share content with our social networks and the Web public, change our relationship to our surroundings and visual environment. The mobile and online video space, and the culture that enlivens it, creates new modes of circulation and patterns of attention. We are observing the world differently, seeing new things and ignoring other parts of our visual environment—making spontaneous associations and collaborations.

The camera eye sees the world differently than the human eye, and as we mediate our experience of the world with always-on video, we are beginning to internalize the point of view of the camera, both in observation and episodic recall. There is often an aesthetic cost to this new mediated experience. Performances take on a different feeling as we view them through our camera lens, adding another layer of distance between audience and performer. Instead of enjoying the immediate experience of being an audience member at a school play or sporting event, Mom or Dad becomes a videographer—focusing on properly capturing the moment on video rather than experiencing it herself. Well-trained as moviegoers and ESPN-watchers, we document because we have come to associate recording with the production of meaning. For many burgeoning media-makers, the documentation of the central events of our lives slowly begins to take precedence over experiencing them in person.

As it is being deployed, the camera eye is more akin to a personal paparazzo or tabloid journalist than an inspired video artist. Within the context of our social networks, we are looking to capture "share-worthy" and "news-worthy" footage. As Mimi Ito argues, the majority of user-created videos are about "social belonging, about identity, about participation in community, about pleasure, about having fun together. Creativity is a side effect of social participation, not the other way around."[40]

VIDEO AND IDENTITY

As our lives are lived on the screen and shared through our social networks, the creation and maintenance of our identities become more complex. The images and footage we choose to upload to Facebook and YouTube help us create a persona, and tell the world what is important to us. But this self-crafting power, as we discussed earlier, exists in a world where others can also capture us. We become part of someone else's story, which may or may not reflect favorably upon us.

And how is our personal development influenced by ubiquitous documentation? If so many of our actions are captured and made available, we are going to be anchored more closely to our past. Personal experimentation will take place within the context of our previous lives and identities. When one moves from high school to college, for example, new ideas and behaviors are tried, new identities formed, and new friends made. Will the college self be tempered or thwarted by viewing the high school self—or will life lived on the screen allow for transparent and blatant experimentation without stigma?

REMIXED SENSES

Painting with a broad brush, Marshall McLuhan observed that modern Western cultures "tend to live in the cool visual mode in which people and things have a good deal of separate existence"—in other words, an object world, with discrete boundaries and stable elements. We are now seeing the beginnings of a new sensory order, what McLuhan calls a "reeducation of sense life." If print encouraged calm, quiet interactions with information, video encourages multiple sensory engagement through the integration of sight, sound, and touch.

The surfaces and screens that are the new skins of our material world are creating sensory options and cognitive requirements for engagement with images and information. We have new controls and choices over the appearance, scale, and style of the media we interact with.

THINKING WITH VIDEO

Although auteur directors and visual artists address abstract truths through moving images, video tends to make situation and context unavoidable. What is captured or created on video is there in front of us, and embodies something tangible—what semioticians call the indexicality of video. Video creates meaning through the relationship of shot to shot, scene to scene. It can make great associative leaps and connections through visual puns and metaphors. Unlike static printed text, which is read linearly (for English, left to right and top to bottom), video is a rhythmic, pulsing web of sounds and images, a mosaic of analogics and activity.

Especially with the rise of read-write-execute culture, video is a tool that is dislodging the assumption of consistency, reliability, and stability associated with print and print culture. In this remix video world, much as in oral cultures, nothing is ever finished. The current performance is *the thing*, and content evolves through interaction and iteration. Even old films are no longer immune to change, much to the chagrin of movie fans, as producers recut and remake classics. Videos on the Web are hard to keep canonized as well; they are ripped, satirized, and overlaid with ongoing commentary. Citation, reference, and genealogy are important, but not authoritative, with video. Users are producers, with the agency and power to change their world—a world that can be edited and reedited by groups or individuals at their whim.

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WHAT'S IMPORTANT?

Our sensibility toward reality and truth is radically altered by video technology. We must approach content with more skepticism and the realization that what you see today may be different tomorrow. Not only are we going to have multiple interpretations of video-captured events (like the Rodney King beating), but with ubiquitous capture and surveillance, events will be seen from multiple angles and perspectives, each possibly telling a different story of that single event.

This new focus on temporality and multiple perspectives reinforces a relationship to reality that acknowledges the inherent limitations of our natural and artificial senses, and challenges the philosophical basis and trust we have in institutions built on text, including law and education.

Organizations will need to understand how attention, identity, and cognition are shaped by new video technologies and cultures in order to make their stories stand out in the media cacophony.

These forecasts sum up what the various changes in the direction of video will mean in the experience of making, sharing, and consuming video.

FORECAST: From Text-Web to Video-Web
Video will dwarf all other media on the Internet.

A website without prominent video will appear ancient within just a few years. In terms of bandwidth, video information will surpass all others by far, encompassing 90% of consumer Internet traffic by 2012. Video capabilities in mobile devices and remote uploading will accelerate this trend. Other media (text, image, etc.) are not going away, but video is becoming the engine of communication.

STRATEGY: Have One! | Video no longer means a "nice to have," occasional production by an obscure wing of your organization; rather, it must be integrated into an overall internal and external media and marketing strategy. Video is being produced and embedded in websites and reports to enhance and augment text, to engage a wider range of emotional and intellectual connections. Text remains relevant, useful, and essential, but now video is just as essential.

FORECAST: From Hierarchy to Anarchy
New players will quickly become market forces.

Lowered barriers to entry have made video a key part of the overall democratization of media, challenging the hierarchies of traditional market structures. The creativity of everyday people and the amateur has been unleashed. DeAndre Ramone Way, aka Soulja Boy, self-produced and published a song (and dance) on YouTube that eventually became a sensation and the #1 hit on the Billboard charts. Viral videos are unpredictable yet powerful tools for capturing mass attention. Finding talent and riding the wave of (or manufacturing) virality will be a seductive goal for those wishing to capitalize on video.

STRATEGY: Embrace the Chaos | Overnight sensations and talent can be found from any corner of the Earth. While creation of content is important, so is constant swimming in the media stream—drawing unexpected inspiration and latent creativity into your sphere of activity. The zeitgeist is more ephemeral and more rapidly changing than ever—organizations must branch out, and tap in.

FORECAST: From Façade to Facility

Video technologies will transform the inert physical surfaces around us into dynamic, interactive media portals.

Pico projectors, spatial learning projection, OLED displays, and other flexible video media will allow us to re-skin the world with our images and interactive applications. All surfaces will have the potential to become productively useful. We will be able to choose appearances and form factors that enable more personalized and varied engagements with information. A wall is no longer a barrier, but a canvas for our creations.

STRATEGY: Become Fluid | Use open-source software, interoperable platforms, and non-proprietary tools to allow content to flow freely across devices, screens, and channels. People do not want to learn new languages when they buy new devices, and they don't want to have to translate rules from one media to the next. Keep user interaction languages, gestures, and inputs simple, progressively revealing them as users become more adept.

FORECAST: From Hard to Soft

Wiki-style collaborative video editing, streaming video, and interactive media will turn video into a constantly evolving, unique, and personalized media experience.

Print may run from sun to sun, but digital work is never done. Hard copies, fixed media, and canonical sequences will become less common, replaced by ephemeral livestreaming, frequently edited iterations, and mass mash-ups. Interactive video, collaborative editing, and live commentary will make each viewing experience a unique event.

STRATEGY: Become Touchably Soft | Make much of your video content open, available, and touchable. Integrate and encourage the use of editing tools and video hyperlinks. Content is no longer broadcast to a passive audience; the audience is now a public, and as Howard Rheingold observes, "a public can respond to you, they can link to you, they can make a parody of you …there's a tremendous shift in that membrane between the producer and the consumer. Those consumers are going to produce right back at you!"

FORECAST: From Print to Video Literacy

Abundant video technologies will catalyze new languages of video production, distribution, and viewership.

The new vernaculars are being created by amateur vloggers, DIY video cultures, and other media "outsiders." New genres, idioms, conventions, and aesthetic practices are being invented. Knowledge of fonts, layouts, and kerning was once the domain of a small cadre of print designers and typesetters, until word processing programs brought this obscure expertise into the hands of everyday users. User-friendly video production and editing tools will make terms like frame, fade, depth of field, and render part of our common vernacular.

STRATEGY: Language Immersion | Access to and proficiency with video production technologies, learning the language of video production and performance, and learning to translate meaning and information into video media will become standard and essential competencies. Make this literacy a priority.

FORECAST: From Grey to Greyer
Movements and counter-movements in intellectual property control will become more complicated and ambiguous, with no side gaining a strong upper hand.

Technological advances and social shifts are changing what it means to "own" what we create, and makers and producers around the world are wondering just how we know who owns what. Staking a claim on rights to an image, a lyric, a performance or even a likeness can generate dozens of opinions of right and wrong. Duplicates, derivatives, and Digital Rights Management (DRM) practices are complicating an already muddled landscape of rights and distribution.

Strategy: Stop, Collaborate, and Listen | Video and music may be the front lines, but read-write culture affects every industry. Content creators will learn to add value by building a wider experience around the actual content, much as musicians have live shows and sell merchandise in addition to recorded content. Instead of treating remixers as enemies and using law and policy as a weapon of first and last resort, content owners are better off engaging the community and adapting to the existing rules, thus learning how sharing and remixing delivers value.

FORECAST: From Front Stage to Back Stage
Video will create opportunities and standards for authenticity.

People seem inexorably drawn to any semblance of authentic human experience and emotion. Billions are being drawn to the profoundly personal form of video found on sites like YouTube and to live video communication platforms. The perceived immediacy and intimacy of Web and mobile video, both live streaming and recorded, has given video the power of authenticity. The aesthetic conventions and social contexts associated with Web video are becoming the de-facto language of visual authenticity, and are being used to create closer relationships between maker and audience.

STRATEGY: Common Sense | For whatever reason—whether the close intimacy and symmetry of user and viewer and of their technologies, or the media savvy of the participatory video culture—the inauthentic can be more acutely sensed in video communication than in other media. The simple, commonsense strategy is: don't be something you are not, do not try to fool or disrespect your audience, and do not try to buy authenticity off a shelf. Acknowledge your intentions when using video to communicate, understand the language of your audience, and understand the viewing context (the web, a mobile device, etc) for your productions.

Endnotes

[1] In *The Godfather, Part II*, Michael Corleone observes that his rival Hyman Roth "has been dying of the same heart attack for years." Video, on the other hand, has been living on the same revolution for over 50 years. Cf Marshall McLuhan, 1962, The *Gutenberg Galaxy*

[2] Stephens, Mitchell (1998) *Rise of the Image, Fall of the Word*. P.7

[3] Kelly, Kevin (2008) "Becoming Screen Literate," *New York Times Magazine*. http://www.nytimes.com/2008/11/23/magazine/23wwln-future-t.html

[4] Crowd-sourced subtitling is being done at sites like www.dotsub.com.

[5] Bickerts, Sven *The Gutenberg Elegies*, p. 235.

[6] HR Rheingold, Social Media Classroom. http://socialmediaclassroom.com/

[7] See FoV Prezi Map http: //prezi.com/51261/

[8] See IFTF Technology Horizons Report (2008) *Blended Reality: Superstructing Reality, Superstructing Selves* (SR-1221) for the many ways the distinction between the physical and digital worlds is blurring.

[9] http://moconews.net/article/419-youtube-sees-400-percent-jump-in-mobile-video-uploads-since-new-iphone-/

[10] Wesch, Michael (2008) An Anthropological Introduction to YouTube, http://www.youtube.com/watch?v=TPAO-lZ4_hU

[11] Kevin Kelly, ibid.

[12] Ito, Mimi (2009) conference presentation at "Everyone Is a Media-Maker" panel IFTF: The Future of Video: Becoming People of the Screen, May 14, 2009.

[13] Richmond, Will (2009) http://www.videonuze.com/blogs/?2009-07-01/Video-Companies-Raised-64M-in-Q2-09-Notching-Another-Stellar-Quarter/&id=2228

[14] Pescovitz, David commentary at IFTF Future of Video Research Exchange, May 14, 2009.

[15] See IFTF report *The Engagement Economy* (SR-1183) for a more detailed discussion of the elements and strategies to create engagement.

[16] http://www.believermag.com/issues/200606/?read=article_wolk

[17] The Gregory Brother's "Auto-Tune the News" http://www.youtube.com/user/schmoyoho

[18] cf Brokeback to the Future, http://www.youtube.com/watch?v=8uwuLxrv8jY

[19] cf Kutiman's brilliant musical remixes. http://www.youtube.com/user/kutiman?blend=1&ob=4#play/uploads/7/tprMEs-zfQA

[20] http://www.youtube.com/watch?v=wfd5g8Y_Jqo

21 http://blog.delvenetworks.com/2009/01/20/search-inside-obama%E2%80%99s-inaugural-speech/

22 see *Blended Reality*, p. 5-6.

23 There are already several film festivals solely for mobile films, including Mobifest (http://mobifest.net/), the Dogma Mobile Film Festival (http://www.dogmamobile.com/), and the Pocket Film Festival (http://www.festivalpocketfilms.fr/)

24 Machinima is 3D animation rendered graphically, and look much like video games or cartoons.

25 Sloan, Robin from his presentation at T*he Future of Video* Research Exchange, May 14, 2009.

26 Swarm of angles (http://aswarmofangels.com/)

27 http://www.starwreck.com/faq.php

28 www.nytimes.com/2009/07/16/movies/16mass.html?_r=1&hpw

29 www.readwriteweb.com/archives/video_goes_open_source_on_wikipedia.php

30 Smith, Anthony (1998) *Software for the Self*. P.98

31 http://news-service.stanford.edu/news/2008/october15/microdoc-101508.html

32 http://www.nytimes.com/2009/01/18/business/media/18ping.html

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34 Stelter, Brian (2009) Rise of Web Video: Beyond 2-Minute Clips, the *New York Times*. July 5, 2009 accessed at: http://www.nytimes.com/2009/07/06/business/media/06video.html?_r=2&em

35 Walsh, Mike "Future-Tube: Online Video in Asia" http://blog.mike-walsh.com/2009/02/futuretube-online-video-in-asia.html

36 http://www.businessinsider.com/analyst-youtube-will-take-half-a-billion-off-googles-bottom-line-this-year-2009-4

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38 Wesch, Michael. The Anthropology of YouTube.

39 See Empire of the Senses, ed. Howes. P. 57.

40 Ito, Mimi (2009) conference presentation at "Everyone Is a Media-Maker" panel IFTF: The Future of Video: Becoming People of the Screen, May 14, 2009.