

TALKING PICTURES

NORA BARRY

Mankind's earliest texts were, in fact, images. Written communication was based on a series of images, or pictograms, strung together. Even after the development of the written language, images dominated media communications. Now, at the dawn of the 21st century, society seems to be returning to an image based language: the written (electronic) language is filled with icons and images. Camera and video phones are rapidly replacing the spoken language.

It is interesting that in the years in between cuneiform and camera phones, man refined, extended and pushed the boundaries of language. An educated man was called "a man of letters". Today, with all of the assets available, and the global reach of education made possible by the Internet, it would seem logical that the next step would be more, new and improved languages. Instead, man is turning away from the written language and back to images.

Technology has played a key role in this return to image dominated communications, specifically telephone and motion picture technologies. The merging of those two technologies at the dawn of the 21st century has resulted in the phenomena of networked pictures. Networked pictures—e.g., digital pictures transmitted via a digital network—are rapidly becoming the language of communication. In essence, the ability to take a picture with a mobile phone and transmit it to another person is fundamentally re-shaping communications and replacing our written languages with a visual, photographic one.

Interestingly, telephone and motion picture technologies emerged during the same period of time in the 19th century. Their parallel development and their new, merged status make for a unique window into the history of technology and the history of communication and storytelling.

In the late 1830's, at the beginning of the age of mass emigration, Daguerre was at work on the daguerreotype and Fox Talbot on the development of the early telegraph. Photographs gave immigrants the ability to literally carry their memories with them; the telegraph enabled fast communication across great distances. These two technologies (photographic and telegraphic) proceeded to leapfrog each other in development for close to twenty-five years, from the mid-1870's until the end of

the 19th century. In 1876, in the United States, Alexander Graham Bell filed a patent for the telephone, a word which means “distant voice” in Greek. A year later, the Praxinoscope was introduced, a machine which allowed for the projection of animated pictures. In 1878 the first telephone switching office was opened in Connecticut, laying the framework for telephone networks. In 1888, Edison and Dickson patented the kinetoscope; by 1890 the telephone network had expanded to include (domestic) long distance capacity. In 1895 the Lumiere Brothers debuted their first films and in 1896 Marconi introduced the wireless telegraph.

The way people communicated with each other, the way they told stories and received news, had fundamentally shifted from the opening of the 19th century to the closing. In the early 1800's, letter writing was still the most dominant form of human communication. Newspapers transmitted information as well as serialized novels; pictures were mostly oil portraits. Less than one hundred years later, photographs had replaced oil portraits, motion pictures were becoming popular (if novel) and the telephone, while not routine, was at least accessible. Communication, however, still turned mostly on the written word.

During the early part of the 20th century, the distribution networks for cinema and voice communication were built out. Venue based motion pictures gave way to broadcast television, which in turn migrated to telephone and cable lines. Telephone networks moved from physical land lines to satellite and then wireless technologies. However it was not until the 1970's that the two technologies began another series of parallel developments. As they did one hundred years earlier, telephone and motion picture technologies began to leapfrog each other in development. This time however, instead of splitting and moving in different directions, the two began to merge.

In the 1970's, the telephone network began its evolution into a digital, broadband network with the development of Packet switching and Ethernet. In television, producers started experimenting with analog video as a replacement for film.

In the early 1980's, telephone companies agreed to build ISDN, a fully digital, circuit switched telephone system, for voice and non-voice data communications. At the same time, analog video gained wide-scale acceptance with the popularization of VHS players.

At the beginning of the 1990's, Asymmetric Digital Subscriber Lines enabled greater services to be delivered over the POTS (plain old telephone system), and HTTP and HTML established reliable transmission over the internet (also POTS-based). Later in the decade, advanced packet switching technologies enabled the simultaneous transmission of voice, video and data on one phone line.

As telephone network technology went digital and formed the framework for the web, picture technologies also went digital, and began generating content for the digital web network. Sony introduced its first digital motion picture cameras in the mid-90's, dial-up videoconferencing emerged in 1995 and Real launched

streaming video online in 1997. Online digital video quickly picked up steam with streaming video sites emerging in 1996, 1997 and 1998. As online digital video sites spring up, desktop videoconferencing began to emerge. These developments paralleled the emergence of 56k dial-up modems and broadband able modems in 1998/1999. At the same time, mobile phones grew more sophisticated, as wireless networks began to take hold.

By the close of the 20th century, digital web video, while not widespread, had certainly gained a foothold. Telephone networks were turning digital, and wireless.

In addition, email (first introduced in 1972) was everywhere by 2000. Its widespread use and instantaneous communication gave rise to a shorthand alphabet, which was image based (emoticons). This image based language moved effortlessly from email to IM online, and then became the basis for text messaging on wireless phones. In response to the success of text messaging, mobile phone manufacturers introduced models with larger screens, to accommodate the images.

With larger screens, higher bandwidth networks and increased processing power, mobile phones were a natural platform for digital photography, which had increasingly edged out traditional film cameras in the years following Y2K. The cost of camera phones dropped as their popularity increased, to the point where they are now almost ubiquitous.

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Smoke signals may seem like a rudimentary communication system to people in the 21st century and yet smoke signals involve the transmission of image based signals or icons over great distances—as does IM'ing or sending digital images over mobile phones. As a language, photographic images are easy to understand and require no special knowledge of verb tenses. If a picture is truly worth a thousand words, perhaps an image based language is the most efficient (and effortless) mode of communication for a world separated less and less by geography, but still miles apart in understanding.

Druid Media
P.O. Box 343
Narberth, PA
USA 19072
norabarry@druidmedia.com