

## **How Tomorrow's Movies Will Differ**

Tomorrow's movies will differ from today's in many ways. The differences will be so extensive and so profound that a new term might be coined to designate the new product. With their wealth of new elements, tomorrow's movies might come to be called "newvies." The new elements will bring interactivity to the movies and will offer consumers a wide range of options in how movies will be presented and used – so they might come to be called, instead, "interactives." The new elements will enable consumers and producers to commune with each other in ways that are not presently possible – so an appropriate name for them would be "communities." The new elements will make movies far more fun and fulfilling for both the producers and the consumers – so they might rightly be called "whoopies." The new elements will greatly increase the size and scope of potential audiences by providing access to most of those who are now excluded from movie audiences – so, with virtually everyone able to consume the new products, they could be called "everybodies." This paper discusses some of the new elements that will be found in tomorrow's movies – and the different roles that movies will play in people's lives.

### **The changing role of the consumer**

Tomorrow's movie consumers will be able to do many things that today's consumers cannot do. Today's movies are, for the most part, immutable one-way products that are unaffected by audience needs or reactions. Today's audiences have little or no control in how movies are presented. But, tomorrow's movie productions will have many tracks, branches, handles, and switches not found in today's movies – and consumers will have available an array of tools they can use to direct and control movie presentation, including some of the tools that are now only in the domain of the cinematographer, the sound engineer, the special effects people, the director, the editor, the writers, the researchers, and the translators. Tomorrow's consumers of movies will be able to make – and often will make – many decisions about the presentation and use of the products before, during, and after they are run. In tomorrow's movies, the consumer can function as coproducer.

### **The analog to digital shift**

A sweeping change in technology that is now underway will be a major change agent in movie viewing. That change is the analog to digital shift. In analog movies the contents are usually packaged as a succession of images and sounds on film or tape. Analog movies offer consumers slow access and limited control in how the product is presented. Digital movies are very different kinds of creatures. With their data stored on optical discs or comparable media, digital movies can offer a high degree of control to consumers. Digital movies can be readily searched, manipulated, and reformed by the consumer. With digital movies, a high degree of interactivity between the product and the user becomes possible.

### **Big new stores**

Related hardware and software advances that will also change movie consumption and production are the rapidly increasing storage capacities of today's media. The ability to store many gigabytes of data on a single compact disc – along with rapidly advancing compression technologies that greatly

reduce video storage requirements – will enable the moviemaker to incorporate many features not found in today's movies. The ability to store hundreds of thousands (and, in the near future, millions) of video images, plus large numbers of pictures, graphic images, and words, on a single low-cost optical disc will make the movie a radically different kind of product. It will be a product that will allow both the producer and the consumer to do many things they couldn't do before. And, it will be a product that will enable producers to reach many more consumers than they could ever reach before.

### **Tomorrow's smaller audiences**

The analog to digital shift and the increased storage capacities of the media will lead to marked changes in audience makeup. Movies in digital media will come to be consumed more and more by audiences of one, rather than by groups who have assembled to see them. Today's non-interactive movies are suited to groups of consumers who are willing to sit still and let the productions unreel like spools of yarn. But, interactive movies lend themselves more to individual viewing. Interactive movies will be most effective when they are interacting with, and are being directed by, one person at a time. Except for their use in teaching and games, interactive productions won't work well with group audiences. A group of individuals attempting to direct the presentation of an interactive movie would be much like a group trying to drive a bus, fly a plane, read a book, use a personal computer, or directing a movie production. Such group activities would tend to leave most participants dissatisfied. The conflicts could even lead to bloodshed.

### **Smaller, but wider**

Many people are denied admission to today's movies. People with vision problems. People with hearing problems. People with cognition problems. People with language problems. People with location problems. And people with financial problems. But, with tomorrow's movies, most of the barriers will be lowered or removed. In the future the very large numbers of people who are excluded from today's audiences will be able to become regular moviegoers – as described in the paragraphs that follow. So, although most audiences may come to be one-person audiences, the cumulative audiences of the best-liked movies may be numbered in the billions instead of millions.

### **Blind movie "viewers"**

Individuals who are completely blind will be able to view tomorrow's movies verbally. One element in tomorrow's movies that is not found in today's movies will be verbal descriptions of the images and events presented on the screen. In tomorrow's electronic books each picture, drawing, graphic, and all of the other non-text elements in the books will be accompanied by verbal descriptions of the images. Readers of electronic books will be able to have any of the descriptions called up and presented as speech (or as text in print). Similarly, many of the movies produced in the future will include descriptions of each scene – descriptions that can be called up whenever desired by the unseeing "viewer." Just as deaf movie viewers will have closed-captioning tools to show what performers are saying, blind movie consumers will be able to use the movie's "closed-imaging" or "closed-viewing" tools to hear about the images and actions that (1) are about to appear, (2) are appearing, or (3) have just appeared on the screen, whichever they choose.

## **Partially-sighted movie viewers**

Viewers who have some, but limited, vision will be able to change the presentation of movie screen images to accommodate their particular needs and limitations. For example, viewers will be able to isolate and magnify screen elements (by aiming and zooming in); to pan, expand, or make other changes in the scope or view of screen elements; to change the colors, shades, contrasts, and brightness of the screen images; to make split-screen images; to freeze frames; and to manipulate or modify the images in other ways that will help enhance the individual's perception of the images presented on the screen.

Further, most movie consumption will involve the use of optical/electronic instruments that will correct and give better definition to the visual images that are presented to the users' eyes. With tomorrow's display devices it will be unnecessary for consumers to wear eyeglasses when they watch movies (or when they read text or view other visual presentations – see Mudoc Corporation's monograph, "[The Telereader Terminal: The High Definition Muvie Machine](#)"). The display devices' optical and electronic components will, in combination, enable viewers to optimize their particular visual capabilities, however extensive or limited those capabilities may be. The optimized visual environments provided by the display devices will enhance the pleasure and comfort of all movie viewers and will contribute positively to their visual well-being by reducing the incidence of myopia, eyestrain, retinal desensitization and degeneration, and other visual problems.

## **Deaf movie viewers**

Viewers of tomorrow's movies will be able to have the speech elements presented as printed text. Viewers will have several options in how the text is to be displayed. They can have the dialogue in each scene closed-captioned – or they can have the scene's script displayed after the scene is shown, before the scene is shown, interspersed in the scene, or at any other time they wish to have it presented. This will especially benefit the viewers who cannot hear, but both deaf and hearing viewers will be able to have any part of the script, or all of the script, displayed at any time. (But, except when balloons are chosen for dialogue displays, text images will usually appear in boxes separate and apart from the movie images so the text will not obscure any portion of the movie images.) The availability of the script in the movie package will permit viewers, whether they are deaf or hearing, to extract more meaning and to better understand the movie's contents.

## **Hearing-impaired movie viewers**

Movie viewers who have some, but limited, hearing will be able to amplify and modify the sounds of movies to satisfy their particular needs and limitations. The multichannel three-dimensional sound tracks that will be provided with many of tomorrow's movies, in combination with the controls and special capabilities of the sound systems of the display devices that will be used, will give both normal and hearing-impaired consumers many options in how movie sounds will be presented for their particular hearing capabilities. (See Mudoc Corp's monograph, "[The Telereader: The 3D Sound Machine](#)")

## **"Linguistically-impaired" movie viewers**

Movie viewers who don't know the language or languages used in any particular

movie may have several options in how they can consume that movie. A script in the viewer's primary language may be available from the movie's producer or from another provider. The scripts can be used to provide subtitles or can be employed in other ways, as described in the paragraph "Deaf movie viewers," above. Or, viewers may use the kind of linguistic tools that will be available to the readers of tomorrow's electronic books – tools that will include dual-language reference substructures (see Mudoc Corp's one-page monographs, "[Reading Mudoc Publications](#)" and "[What is a mudoc anyway?](#)"). For those who have some, but limited, competency in the movie's original language – and for those who are learning or studying the language used in the movie – the dual-language reference substructures will enable the viewers, with some extra effort, to understand the movie in its original language.

### **A new language for movies**

A computer language now being developed may have some impact on movie production and movie consumption. The new language, a computer language that can be used like a natural language, may come to be the lingua franca of movies. Such a language is described in "[Mudoc Corporation's New Tools for Learning, Reading, Working](#)" and in *The Mu Primer* and *The Mudoc Technology* (where the language is called "Easy"). The new language will facilitate translation from a movie's original language into other languages.

The new language may also come into wide use in the composition and production of movies. In some cases, two versions of a movie may be shot, one in a natural language (such as English, Spanish, or Chinese) and one in the new computer language. In other cases, the movie may be shot in only the new computer language, with that version used to produce versions in many other languages. If and when the new computer language comes into such use in movie production, many consumers will choose to use the version of the movie with the computer language because of the language's ease of use, because of its many advantages as a linguistic tool, because of its elegance and euphony, and because of its extensive use around the world.

### **The print-rich environment of tomorrow's movies**

Unlike today's movies, most of tomorrow's movies will be delivered to the consumer in a print-rich environment. The scripts and verbal descriptions of images will not be the only new text elements found in tomorrow's movie packages. If the movie has been derived from a novel, the novel may be included. If the movie is based on historical figures or events, relevant historical data and documents may be included. If the movie involves scientific analysis, investigation, processes, or discoveries, relevant scientific papers and data may be included. Other background data or documents used by the writers and/or researchers in the preparation of the movie will often be included. In addition, information about the performers, the writers, and other principals involved in the production may be included. Thus, in addition to the basic movie production, the final movie package may include a host of supplemental elements with thousands or millions of words of text complemented by pictures, drawings, maps, and other graphics. Many consumers will choose not to use any of the supplemental materials in the movie package. Others will spend more time exploring the supplemental materials than in watching the basic movie production itself. But all of the movie's

viewers will know that virtually any question they have about the story that is being told, about the language that is being used, or about production of the movie, can be asked – and immediately answered.

### **The blurring distinction between movies and books**

Just as more and more print information will be incorporated in tomorrow's movie packages, more and more movies will be incorporated in tomorrow's books. Most of the books that are published in the future will be "printed" on the same kind of media that are used for movies – that is, DVDs (digital versatile discs, which are just now coming on the market) or other high capacity digital media. And most of the books that are read will be read with the same kind of display systems used for watching movies (see "[The Telereader: Tomorrow's Interactive Television Terminal](#)"). Book readers and moviegoers will both employ the same basic tools and supporting casts (i.e. interactive movable type software, reference substructures, and personal navigators) to answer questions they have about any of the words, terms, or topics that are encountered in either kind of product. Electronic books will often include video sequences (and sometimes full-blown movies) to illustrate or explain subject matter treated in the books. So, many of tomorrow's movies will include supplements with millions of words of text – and many of tomorrow's books will include short and/or long movie productions.

### **The use of tomorrow's movies in education**

In the 21st century much greater portions of the education that people acquire will come through home instruction and self instruction than through instruction in academic institutions. The melding of movies and books will greatly increase the effectiveness of books as educational tools, particularly as tools for use in home and self instruction. The educational and entertainment value that well-done movies will add to books will make the books more interesting and easier to remember, greatly increasing their usefulness as instructional tools. The low cost of reproducing, distributing, and presenting books that incorporate digital interactive movies will make it possible for everyone to commune with the world's best teachers, demonstrators, and motivators. And, with their text set in interactive movable type (see Mudoc Corp's script for the interactive movie, [The Coming Revolution in Writing and Reading](#)) they will be books that can be read by everyone.

### **Exporting bootstraps to the LDCs**

Digital interactive movies and publications that are set in interactive movable type will make it possible for the less-developed countries (LDCs) to achieve high levels of literacy and education. Educational systems like those now operated in the U. S. and other wealthy nations are costly and inefficient. They are highly labor-intensive and require great investments in the development and operation of physical facilities and administrative superstructures. The LDCs clearly don't have the resources needed to develop and operate such systems. But, through the use of movies with built-in books, books with built-in movies, and other educational products that lend themselves to self-education, the LDCs will be able to provide everyone with an opportunity to become literate and to reach higher levels of education. For the next decade, most of these digital products will be produced in the advanced nations and exported to the LDCs (see Mudoc Corp's monograph, "[The New Computer Marketing Paradigm](#)"). But, before long, the new

tools will enable the LDCs to become productive, self-sufficient, and independent. And, because education has been shown to be the most effective method of birth control, the new tools will muffle the population explosions now occurring in the LDCs.

### **The road to universal literacy**

Almost everyone will consume and enjoy tomorrow's movies. In the process, most of those who don't already know how to read will learn to read. Most movies will be consumed through telereader terminals or equivalent display systems, systems that will provide the tools needed to learn to read. Telereaders will use interactive movable type software and single-language or dual-language reference substructures that will enable the nonreader to start reading immediately. So, those who don't already read will be led to literacy through tomorrow's text-laden movie packages. Nonliterate people who look to movies simply for entertainment may, without intending to, acquire the knowledge and skills needed to read. Their interest and curiosity about movies' topics will lead them to ask questions – questions that will be answered with words they can understand, words that can be both seen and heard and, when appropriate, illustrated and/or demonstrated.

### **Tomorrow's movie theaters**

Tomorrow's movie theaters will differ greatly from today's. The most common kind of movie theater will be the home theater (a special room called *the mu room*, which is described in some detail in Mudoc Corp's monograph, "[The Home of Tomorrow](#)"). The mu room is a combination computer/information/communication/education/entertainment center. In the future, most movie consumption will occur in mu rooms in homes – and in larger mu rooms in schools, in libraries, in business and government offices, in correctional facilities, and in neighborhood information convenience markets.

The mu room will usually contain one large high-definition display for group viewing and/or instruction – and telereaders or other small terminals for individual viewing. The kind of small public auditoria that are now used for showing movies will become, to a great extent, vestiges of the 20th century. They will gradually decline in number because of their cost, inflexibility, and limitations (for example, they won't be able to show fully interactive productions or special productions like the 360 degree panoramic stereoscopic movies that can be viewed with personal display devices like the telereader).

As public facilities, movie theaters will come to be replaced, in large measure, by *MuCenters*, neighborhood information convenience markets (described in detail in [The Mudoc Technology](#), The Mudoc Corporation's business plan), a new kind of neighborhood store that will become as ubiquitous around the world as the convenience markets and video stores that now dot the U. S. landscape. *MuCenters* will offer movie viewing and previewing in their facilities. In addition, they will sell, rent, and deliver movies, electronic books, telereaders, large displays and other presentation devices, computers, software, and a wide variety of other communications age products and services.

### **The expanding role of movies in tomorrow's society**

Tomorrow's movies will play a far larger role in people's lives than today's movies, especially in the less-developed countries. Movies will continue to provide

entertainment and pleasure in growing measure. But movies will also come to play a central role in the education of most individuals. Tomorrow's digital interactive dramas and documentaries will be a major source of information about ourselves and our planet. They will help each of us discover, understand, and employ useful and powerful tools that can improve our lives and better our world.

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