

IPHONE TO IMAX:
THE SOCIAL IMPLICATIONS OF SCREEN SIZE

by
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ABSTRACT

Screen size changes the way the moving image affects viewers and specific content is more likely to be influential if screened on the most appropriate media type. The ever-increasing popularity of portable devices, like the iPhone, means that viewers are watching more content on smaller screens than ever before. At the same time, movie theatres and Imax screens are still as popular as ever and seeing something on the big screen holds some kind of magic for the viewer. This fact has not been lost on environmental filmmakers who are increasingly finding ways of using different sized screens to promote their cause. Ultimately, the size of the screen not only determines what viewers watch, and how they are affected by what they see, but can actually be the deciding factor for whether they take action on an issue.

INTRODUCTION

The enthusiastic reception of the video iPod, released by Apple in 2005, might have signaled the end of large screen viewing as we know it, but the continued popularity of movie going demonstrates that neither format out competes the other. Rather, different types of content have leant themselves to consumption on different sized screens. Despite film industry fears, one hundred million iPods sold have not closed down movie theaters (Taub). More signs point toward the continued coexistence of portable screens alongside immobile screens at the movies.

This multiplicity of simultaneous visual formats is well grounded in the history of art. The first form of recognizable art, cave paintings (known by the best examples throughout Europe as “the Magdalenian art system”) did not adhere to a certain size or shape of presentation. The famous bulls of Lascaux, France, for example, stretch over 20 feet long, and in the Pyrenees there is a huge horse painted fourteen feet above floor level (Wachtel 134). At the other end of the spectrum, the human figures in the cave of Addaura in Palermo, Sicily, are only ten inches high (Janson 78). Though scholars continue to disagree over the purpose of cave art, it is nonetheless clear that scale of visual images has always been meaningful to the interpretation of an image, from the humble postal stamp to the Sistine Chapel.

The present age of film and video is no different in this respect from the world of art except for the rapid rate which new formats have become available. In just over one hundred years of film, formats have simultaneously increased and decreased in size at a dizzying pace. The current range of sizes available to producers and consumers of

moving images is perhaps exemplified by the difference between the Imax cinema and the iPod. The director Ron Frike intended his lush, 70mm film Baraka for projection on a five-story Imax screen, but approximately one hundred thousand people have chosen to watch at least part of the film online at YouTube, a ten-centimeter screen. The vast difference in size and resolution between the two formats means that thirty thousand YouTube screens fit onto one Imax screen. In addition, the resolution of the screen would need to be increased by 200 hundred times to be comparable (<http://en.wikipedia.org/wiki/YouTube>). The disconnect between how Frike intended the film to be shown and the way so many viewers have seen it, shows that consumers of an image do not necessarily respect how images are meant to be viewed and begs the question of what might be lost from one screen to the next.

This paper will explore the difference between viewing a film in a small format, such as an iPod, or a large one, such as the Imax theater, and to what extent two people who watch the same film in such different ways even have the same experience of the content. Does it affect them in the same way? How does screen size change the very nature of what viewers watch? Specifically, does content with a call to action, such as environmental film, have more power when viewers see it in one format or another?

A HISTORY OF SCREEN SIZE AND SHAPE

The invention of film came only after the railroad had paved the way by exposing much of the world to “panoramic” vision (Schivelbusch 54). Before it was possible to sit in a train and watch the landscape fly past at great speeds, paintings and photographs were shaped as if looking through the window of a house in a “portrait” style. This style consisted of a longer vertical axis, roughly twice the length of the horizontal axis. Once the railroad provided a view of surrounding countryside, with the foreground details blurred and clear views of distant mountains or valleys on the horizon, the panoramic view of the world was born, and paintings and photographs that reflected this new shape soon followed. Since the invention of the moving image, every common screen format has reflected this trend, with a longer horizontal axis than vertical.

Forty years after the invention of film, television became widely available in homes throughout America and with it, competition between the small and large screen brought a multitude of screen shapes. For a period of time in the 1940s, film and television screens had the same shape with a ratio of horizontal to vertical axis of 4:3. The movie industry invented “widescreen” to differentiate itself from television in the 1950s due to fears the home television screen would reduce numbers of filmgoers if the cinema experience was not unique. Widescreen offered a much larger ratio of horizontal to vertical of 1.85:1 or 2.39:1. The change in cinema screen shape created problems for television broadcasters, who now had to fit a widescreen image onto a 4:3 television set, either by “letterboxing” edge-cropping, or using the much-maligned “pan-and-scan” process (Campbell 43).

Letterboxing an image maintains the full horizontal dimensions of the panoramic film screen and preserves the original cinematic framing of a film, however, it also forces a reversal of the hierarchy between television and film (Tashiro 14). The film image becomes smaller than the television image and the grand nature of film is lost. Charles Tashiro suggests that these black frame lines produced when “letterboxing” shatter the classical diegesis of film, much like seeing film equipment in a shot. Frame lines are part of the editing process and the creation of the film, Tashiro points out, so their presence on a television screen is a constant reminder to viewers that they are watching a construction. Once the classical diegesis is lost from a film, much of the original meaning and story is also lost, because the viewer is less likely to suspend their disbelief and become immersed in the film.

Both cutting off the right and left ends of a frame (edge-cropping) and the process of pan-and-scan preserve the vertical information of a movie, and fill the entire television screen, thus avoiding the reversal of hierarchy between television and film, but both processes come with problems of their own. Most obviously, as much as 43 percent of the film frame is lost to the viewer altogether. Drew Campbell describes pan-and-scan as “one of the film industries greatest indignities” because it can change the entire feeling and story of a film (45). The Graduate is often sighted as one of the best examples of a film that has suffered much from pan-and-scan. In the final scene of the movie, Dustin Hoffman and Katherine Ross sit on the back seat of a bus with a large gap between them. On a movie screen, the two sit in the same frame, and the gap between them highlights their doubt and discomfort. In the “pan-and-scanned” version, the camera seems to move

from one face to the other, rendering the gap between them meaningless. Thus, at the most important part of the film, the story is not conveyed (Campbell 46).

None of these solutions have successfully brought a true cinematic experience into the home, a fact evident to television manufacturers. The latest movement in TV design is toward bigger screens with a shape closer to widescreen (Clapperton 2). The resolution of the home TV is also approaching that of the cinema, as high definition becomes widespread. These changes reflect the true differences that have always existed between the home television and the movie theatre, as manufacturers are trying to make the television a more engaging medium by replicating film. Broadcasters have caught on to these changes also, and in February 2009 will no longer broadcast an analog, terrestrial signal and will change to a higher resolution, high definition signal with more content shown as “widescreen” (<http://www.dtv.gov>). This change brings the competition between film and television full circle, as the cinema was changed to widescreen to differentiate it from television in the 1950’s and now, 50 years later, television is changing to become more like film.

The cinema has conditioned viewers to see 16:9 as a narrative-rich form since this is the predominant content screened in the film environment, while 4:3 televisions, which show a multitude of content types, represent the more adaptable screen. The difference is exemplified in the way game consoles like the X-box and Play Station alternate between the two formats. Interactive games employ 16:9 cinematix to explain the game and tell characters’ stories, then switch to a 4:3 mode once the game play is underway. The story

of the game is the narrative structure of the game, similar to a fiction film and the game play fits more into the adaptable nature of the 4:3 screen.

While film and television are beginning to converge in both shape and size, the newest development in watching the moving image, Apple's iPhone, is completely different from both as it is smaller, portable and offers a new and unique viewing experience. The iPhone is just one of a huge number of portable devices on which viewers can watch films, television, music clips and news media. These devices fit in a pocket and do not necessarily adhere to either 4:3 or widescreen shape. Unlike the cinema or television, viewers can watch this screen in any environment and the content choices are almost limitless in scope.

HOW DO PRESENT DAY MEDIA WORK AS ENVIRONMENTS?

All Media work us over completely. They are so pervasive in their personal, political, economic, aesthetic, psychological, moral, ethical, and social consequences that they leave no part of us un-touched, unaffected, unaltered. The medium is the message. Any understanding of social and cultural change is impossible without knowledge of the way media work as environments.

Marshall McLuhan, 1967

Adapting McLuhan's themes of "hot" and "cool" media environments to an analysis of screen size, reveals vital patterns of difference between the large and small formats. As screen size increases, becoming "hotter," the environment becomes more controlled, more social, the image is higher quality and there is less content selection. On the other end of the spectrum, with "cooler" media, screen size decreases, the environment is less controlled, antisocial, the image is lower quality and there is limitless selection. Thus, different sized screens affect viewers in dramatically different ways.

Screen size cannot be considered in a vacuum, because it is not merely a viewing device but also acts as its own environment. Marshall McLuhan is famous for coining the term "The Medium is the Message," by which he meant the way viewers experience content is more important than the content itself (45). Though more than 40 years old, McLuhan's observations are still relevant today, providing a framework to analyze effects of media on viewers. Following from his main theme, McLuhan suggests, "Different media invite different degrees of participation on the part of the person who chooses to consume a medium" (49). According to McLuhan there are "hot" and "cool" media, which differ in how intensely they occupy a viewer's senses and how much effort they demand to interpret meaning. McLuhan used comics and movies as two examples of

cold and hot media respectively (among many others). Comics, which McLuhan refers to as a “cool” or “low definition” medium, need attention and active participation to derive meaning. Cool media, furthermore, do not control the environment where the viewer engages with them. Hot media, such as movies on the other hand, are in the controlled environment of the cinema, and require less active participation by the viewer, but demand total concentration.

McLuhan wrote about many of his ideas in the 1960s and lived until 1980, but his paradigm remains helpful to an examination of contemporary media. Imax theaters currently occupy the McLuhan defined “hottest” spot for visual media in the world today. The Imax theater presents an environment where inactive senses like temperature, smell and comfort are regulated and where active senses are stimulated to the full extent enveloping viewers with massive, high definition images and 5.1 surround sound. YouTube represents a modern day “cool” or “low definition” medium. Now the most popular website in history, YouTube is closely related to McLuhan’s “low definition” comic books requiring attention and active participation on the part of the viewer. None of the external stimulus experienced while watching YouTube is controlled and as with comic books, the environment where a viewer can watch YouTube are almost limitless. In a sense, YouTube viewers also move from page to page to get to the next viewing experience.

McLuhan’s theory of “hot” and “cool” media suggests viewers receive different experiences from different media, even when watching the same content. Producers of media are not happy about this trend. The director David Lynch, for example says in an

interview posted on YouTube that “it’s such a sadness that you think you’ve seen a film on your fucking telephone. Get Real!”

(<http://www.youtube.com/watch?v=wKilroiCvZ0>). Lynch sculpts his feature films for the big screen using cinematic techniques, his comment on YouTube reflects a common problem filmmakers have with consumers watching films on such a small screen, in an uncontrolled environment, because they were not created to be viewed in this way. The “hot” medium of cinema provides an environment in which the viewer is not distracted from the screen and has little else to concentrate on. When a viewer watches a film on an iPod or iPhone, he or she sees a lower definition image, and because of the portability of the screen, is in an uncontrolled environment. The screen size controls the viewer’s environment, which in turn, influences how he or she views the content.

Large screens cultivate an environment with a social dimension lacking in small screen environments. Moviegoers meet friends at the cinema to watch a film and discuss it when it is finished. Most cinemas seat over one hundred patrons, all viewing the same film at the same time. Conversely, iPhones and iPods are almost exclusively personal. Viewers watch iPhones alone, with headphones, which excludes even the people sitting right next to them. The environment of small screens is in fact antisocial, because even if an iPhone owner wanted to share their content, no more than one person at a time can see it.

Another important difference between cinema and the iPod is that while the cinema can only provide a narrow selection of films at any one time, an iPod user can select from an almost limitless body of content. Cinemas show the latest release films, for

a short period of time, so viewer selection is restricted. With a much larger range of channel selections, television made selection options wider, but until the invention of time shifting devices like “TiVo,” channels still locked viewers into certain schedules that they could watch certain content. Time shifting started with VCRs that had the functionality of recording a television program for a later viewing (<http://www.museum.tv/archives/etv/T/htmlT/timeshifting/timeshifting.htm>). While such systems have evolved since the VCR, the principle remains the same. The iPod takes time shifting one step further than television by not having any scheduling at all. The content options are not dependent on viewing times as content can be downloaded and viewed any time. iPod/iPhone users need only wait until the download is available from host websites. Moreover, the content options are many times greater than film or television and are potentially limitless in scope.

The iPod provides the widest choice of content to viewers of any media, because it combines everything that television and film offers with new media sources, designed specifically for the small screen, many of which are free. The first “video podcast,” produced specifically for small screen viewing, became available in 2003 and since then, an uncountable number of web series, vidcasts and pods have been made available on almost any topic from cars, to comedy, to science to sports and can be found on a myriad of websites (<http://www.washingtonpost.com/wp-srv/mmedia/podcastfront.htm>). The Apple application—iTunes—alone carries over one hundred thousand podcasts (www.apple.com/itunes/podcasts). This huge body of content is constantly growing and allows iPod users unrestricted access to choose viewing material at any time.

EXPOSITORY CONTENT VERSUS SCOPAPHILIC IMAGERY

A 2004 study into the effects of screen size on viewers by Nokon Heo and Sundar Shyam showed seventy-five participants three types of content on either a small, television screen (32 inches) or a large, wall mounted screen (150 inches) and monitored their physical responses through their heart rate and skin conductance and non-physical responses through a questionnaire. The participants viewed news, advertising and entertainment to gauge the difference between media types on differing sized screens and were questioned about the type of content they found most engaging and exciting. The results of the experiment showed that viewers were more excited and engaged while watching fast-paced entertainment and advertising on the large screen and more engaged to news than entertainment or advertising when watching them on the small screen (Heo and Shyam 7). Participants also had better recall of what they had seen when watching the large screen.

Heo and Shyam concluded from their research, that because of the fast pace, quick cutting production techniques of entertainment and advertising, it was more desirable to see on a big screen . At the same time, the familiarity of watching news at home on the television, meant content of that nature was preferred on the small screen. The pacing and production of news content is completely different to that of entertainment and advertising with less cutting, more repetition of images and the presence of talking heads, and thus was not enjoyed as much when compared with the fast paced content on the big screen, but was seen as more interesting than entertainment

and advertising on the small screen. This research shows that certain types of content are preferred on certain sized screens.

It follows that the importance of screen size is in part, tied to the relationship between the word and the image in the particular content-type. Rarely is the image (moving or still) in news more important than the story. News video production is cheap, rough and quick. Viewers are more interested in the stories news sources provide, not the quality of the pictures supporting them. The image is there to give news consumers a visual signifier of the story. It does not matter how the news is viewed, as long as it is delivered fast. The advent of moving images accompanying news stories has not departed far from traditional news delivery sources like radio and paper. There is no question that written news, in the form of newspapers or magazines, provide a different experience of the news than television. However, both forms convey the story and whether the image associated with the text is moving, in the form of video, or still, in the form of a photo, it has the same effect by providing a visual cue to keep in mind while listening to, or reading the story (Chaffee and Frank 48). Watching the news on an iPhone or iPod makes sense, because the viewer can get it fast, watch it anywhere and not be concerned that the picture is small and of low quality. In this way, the portable viewing device is similar to the newspaper much like YouTube is similar to comics. Reading a newspaper and seeing an accompanying black-and-white image still leads to understanding or meaning of a story in a similar way to watching the story on a television or iPhone.

The relationship between the word and image in feature films is completely different from that of news content on television, because the image is vitally important

to the story and at least as important as the text. Reading the novel Gone With The Wind and watching the feature film version of it, is a completely different experience. The image dominates the story of the film and is precisely manipulated by feature filmmakers to create meaning. Silent films from the first days of cinema in the early 1900s exemplify this point as their stories had to be told with images only (Eyman 16). Feature films do not create the kind of viewer urgency to get information fast like the news, because it does not matter whether viewers see a film the first night it comes out, or a month later on the last night it is available on the big screen. It is more important to experience the film in its most scopophilic setting rather than to see it when it first comes out.

While news is just one of many types of content shown on television, it is important to note that all television content is similar in that it adheres to a formula. Regardless of whether it is soap operas, reality TV, comedy or education, television is episodic and short format. Unlike film, television is segmented and based around commercials, so much of the content is repeated with summaries, recaps and overviews all made to fit into a specific segments of time, in between commercial breaks.

As home televisions start to get bigger with higher definition, widescreen images and television content adapts accordingly, becoming more film-like, the void left by the small, 4:3 TV screen is being filled by this new iPhone/iPod technology. Television broadcasters no longer need to manipulate a film image through “pan-and-scan” or “letterboxing” because television screens are becoming comparable to the cinema screen. Nor do viewers need to worry about not getting the same sound or “big screen” feel from a film, because modern television screens are larger and have accompanying sound

systems to simulate the cinema form. Content development for television is paralleling these technological changes. The show Lost, for example, uses Hollywood actors and crew, is shot on 35mm film and is the most expensive television program ever made. David Lynch and filmmakers like him, need not worry about the iPhone taking over the feature film, because all evidence suggests this technology is replacing television, in effect providing a smaller, “cooler” form of TV which in turn, is contributing to the technological push of home television towards the cinematic film screen.

HOW DOES SCREEN SIZE AFFECT THE POWER OF FILM MESSAGES?

How could changing the size of the screen viewers watch content on, really change anything about how a message is interpreted? Heo and Shyam's experimental results show that most people enjoy watching entertainment rather than news on large screens and watching news and current affairs rather than entertainment on smaller screens. But what does that mean when examining how an audience responds to a film with a call to action? Al Gore's film An Inconvenient Truth is not a conventional fiction film, yet played on large screens and is an example of what happens when small screen content is made big.

An Inconvenient Truth was more popular than other contemporary environmental films, because it was released on the big screen, in the environment of the feature film, which made it "hotter" than if it had been released on television or on the web. Gore's film consisted of a news-like story. It contained news-style editing, was dense and information heavy and discussed issues that face today's society. In every way, An Inconvenient Truth was similar to news stories viewed daily on television. The one glaring difference and the reason it is important to discuss here, is that it was released as a feature film at the movies, on the big screen, not as a documentary to be watched at home. Many big-budget documentaries have tackled the issue of global warming effects on society and the environmental issues that face the planet. In addition, some of those films have used celebrities to make them popular. Examples include: Strange Days on Planet Earth, Planet Earth and The 11th Hour. Yet, unlike these films, An Inconvenient Truth won an academy award and reached an audience of millions.

When the filmmakers behind An Inconvenient Truth released it at the cinema, they made an unspoken statement that film screens carry more weight and power than televisions. David Silvera conducted an experiment to test whether audiences responded to larger images more than smaller stimulus. The results showed participants not only preferred larger stimulus, they also took more positive meaning from them (Silvera 198). There is power in the big screen. Most moviegoers see approximately ten films a year (UK Film Council). It is expensive and impractical to go to the movies every single week or every day. The fact that cinemas are still popular at a time where more visual platforms are available than ever before, shows the demand for large images.

Filmmakers behind An Inconvenient Truth made what should have been small-screen content “hot,” by changing the format and subsequently the environment, it was viewed in. The scientist Wallace Broecker coined the term “Global Warming” in 1975 and the issue had been well documented and discussed previous to An Inconvenient Truth. Human caused environmental degradation is not a new concept, yet An Inconvenient Truth brought more attention to it to consumers, than ever before. One reviewer says of the effectiveness of the film: "The result is truly moving, even to someone who feels rather tuned into the issue" (Jervey). An Inconvenient Truth was powerful and brought attention to the issues not because it was significantly different from other environmental films, but because viewers were unused to seeing such content presented on the big screen, in the social, controlled environment of the cinema.

While it is impossible to know how An Inconvenient Truth would have been received if it had been released as an iPod only film, two theories help understand the

possible outcomes. Firstly, constant exposure to small images that represent important topics can desensitize viewers to issue based films. Desensitization by society to what should be shocking images in the media is common. It has been shown through many studies that the more violence a person is exposed to through media, the more they will be desensitized to it in the real world (Rudy 4). The same can be said for desensitization to negative and persistent images in the media of problems to do with the environment. Presenting An Inconvenient Truth in the “cool” environment of the small screen could have had a desensitizing effect, since it would have been less social than the cinema. In addition the film would have been subject to competition with the large body of iPhone content. At the cinema, An Inconvenient Truth was only competing against a few films, on the iPhone, it would have competed against millions of video podcasts.

With over one hundred thousand iPods in circulation, the prevalence and sheer number of viewers with access to this media might mean that issue based films like An Inconvenient Truth will be seen by more viewers in the future than via television or the cinema today. While it is possible the messages in issue-based films are diluted due to the small screen and antisocial elements of the iPod, it is also feasible that large numbers of views could make up for these shortcomings. Additionally, the current surge in consumers making their own programming on YouTube and other video sharing sites, provides opportunities for the creation of new types of media that have never been seen before to reform environmental, issue based film. Just as some documentary filmmakers have harnessed the power of the big screen as a “hot” medium, new types of media

production could harness the small screen in unforeseen ways to use the “cool” medium more effectively.

What is certain is that just as the invention of television introduced specific genres of media and the internet gave birth to web programming, the iPhone is sure to spawn new types of content designed specifically for it. For example, popular reality television was a completely new genre and sprang up just ten years ago and now it claims a huge piece of television audiences around the world. Whether this new content is created using YouTube and viewed on the iPhone or in another, unpredictable way, new genres of widespread media specific to the small screen are on the way.

The latest technological leap in viewing devices and perhaps a sign of future developments is closing the gap between the best elements of both the small screen and the large screen. Known as “Virtual Video Glasses” they simulate watching a 50-inch screen while being attached to a small device like an iPod. These devices are paving the way for consumers to have the best of both worlds, where the time shifting capability and portability of the iPod is combined with the scopophilic enjoyment of the big screen. The invention of these glasses so soon after portable viewing devices have become popular, shows that consumers and manufactures are aware of the benefits of all types of media. Technology developers are trending towards giving the viewer the whole range of experiences.

CONCLUSION

In 1883 Thomas A Edison built a studio underneath his laboratory in New Jersey and showed audiences a remarkable new concept - the cinema. In over one hundred years since the moving image was first viewed in Edison's studio, it has undergone many remarkable transformations and today viewers can watch films, television programs, podcasts and slideshows on a huge variety of screens, in many different environments and on a wide diversity of media. All of these factors contribute to how each individual viewer understands and interprets the content they watch, and how consumers as a group are influenced by messages that films contain. In this day-and-age of multiplatform distribution and widespread access to content, modern filmmakers are becoming aware that size matters more than ever before. The size of the screen that content is shown on is as important to the meaning of moving images as the cinematic and production techniques used to create them.

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