

TECHNOLOGY AND THE CHURCH
THROUGH THE CENTURIES

March 17, 2006

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A Paper Presented at the 25th Annual Conference
Association of Nazarene Sociologists and Researchers
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Assembly Minutes

June 19, 1908

Mr. Grueber introduced the following to be discussed:

Nine reasons not to introduce the typewriter into our church.

1. The paper must be put into the machine and aligned properly, tabs must be set.

This is not easy. When writing by hand, one simply begins, exactly where you want with no restrictions.

2. With a typewriter, you have to constantly remember to capitalize and put in punctuation. It is easy to forget, and to go back and change things is hard.

When writing by hand, such things are automatic.

3. With the typewriter, you have to have been trained to find the proper keys.

This takes time. We already know how to write.

4. With the typewriter, you are limited to the size and spacing of the type. When writing by hand, you can use any size letters or style you want.

5. With the typewriter, centering and setting margins is [sic] not easy; when writing, it is no problem.

6. A typewriter breaks down and costs to be fixed. Writing does not.

7. Correcting a mistake after something has been typed is a problem; when writing by hand, it is not.

8. The church has gotten along for over 1900 years without a typewriter; why do we need this now?

9. Instead of learning a machine with all the above drawbacks, time should be spent on penmanship (Maxwell, J. in Galloway, D. ed., 2001, p. 23-24)

Advancements in technology and the ubiquitous presence of technology in human experience today is such that we cannot help but chuckle over these points of discussion regarding the use of a typewriter in 1908. Debating the use of typewriters in 1908 proved just about as fruitful as the research devoted to perfecting the manufacture and sale of the buggy whip when the automobile was accelerating into the lifestyles of an increasingly mobile population in First World Countries. And no doubt future generations will derive a certain humorous pleasure in reviewing the record of our debates over technologies that will one day be deemed completely obsolete.

The focus of this paper will be to trace the enduring influence of selected technological advancements on the Church from New Testament times to the present. By the Church, I will be referencing the Christian tradition as a whole up until the Protestant Reformation of the 1500's. From that point on until the present I will be primarily focused on the Protestant stream of Christianity.

In this paper I argue that technology can be evaluated in terms of its influence on the Church on four dimensions: Authority/Control, Evangelism, Community and Worship. The historical overview of selected technological advancements will serve as a platform from which evaluations may be launched regarding the current relationship between technology and the Church.

The body of this paper begins with introductory material in which the origins and definition of technology are examined. Section two compares the influence of selected technologies along the four dimensions of Authority/Control, Evangelism, Community

and Worship. The final section of the paper brings together the four dimensions with questions concerning the influence of technology on the Church of today.

SECTION I ORIGINS AND DEFINITION OF TECHNOLOGY

Jacob Bigelow (1829) is credited with being the first to coin the word *technology* in a series of papers on the integration of the useful arts and science (Noble, 1997).

Noble (1997) summarized the concept by stating that “the term ‘technology’ came into use to describe the realm of the useful arts, reshaped by science...” (p. 223).¹ The word *technology* finds its roots in the Greek language with such ideas as the revealing or expression of useful arts, that is, causing something to appear (Noble, 1997; Szerszynski, 2005). Heidegger (1975; 1977) explores the origins of *techné* and suggests that in ancient Greek the term had to do with the presencing of what was being made to appear.

The record of ancient times reveals only a minor link between science, or natural philosophy, and those who created technology (Lewis, 2004). Natural philosophy (science) was viewed as being on an equal footing in most respects with revealed philosophy (religion), and both were the means by which humanity might know and understand God. Tirosh-Samuels (2005) asserts that “in the ancient world ‘science’ and ‘religion’ could hardly be understood apart from each other” (p. 34). Natural and revealed philosophy were thus on a much higher plane than the mundane pursuits of those engaged in the useful arts (technology).

Although the Church made use of technologies, as will be discussed later in this paper, it wasn’t until the Middle Ages that the useful arts emerged as meaningful forms of worship. The world came to be seen as more than a dwelling place for humanity, but

¹ See also Szerszynski (2005) who uses the term “practical arts” (p. 820) for the same concept.

also as “a creation whose study can reveal the mind of its creator” (Szerszynski, 2005, p. 816). Funkenstein (1986) summarized it well by saying “[t]he world turned into God’s temple, and the layman into its priests” (p. 6).

As theologians embraced the notion that common work was an act of worship (Noble, 1997), the development of means for accomplishing work took on a spiritual dimension hitherto unknown in the history of humanity. The Church, largely through its religious orders, became the leading force in research and development of technology whose intention it was to aid humanity in the pursuit and worship of God. The concept is well stated by Szerszynski (2005) in these words:

The Western understanding of the practical arts was transformed in the seventeenth century as knowing nature became synonymous with intervening in it, and conversely, intervening in nature became grounded in the claim to know nature objectively, from the viewpoint of its creator. (p. 819-820)

Technology was the means of creating efficiencies so that more time might be devoted to contemplation and prayer (Noble, 1997). Incidentally, this viewpoint was further shared by both Jewish and Muslim philosophers who “considered the scientific study of God’s world to be a religious obligation of the highest order” (Tirosh-Samuelson, 2005, p. 35).

As technology developed it became clear that the useful arts were capable of contributing to improved lifestyles for humans. Adams (1996) observes: “As with other human products, most new technologies were invented and applied to serve immediate ends” (p. 3). In his typical succinct analysis Peter Drucker (2001) suggests that technology’s focus is to make complicated stuff accessible to the common person. The 20th Century philosopher Martin Heidegger (1977) posits that technology is at one and the same time “a means to an end” and “a human activity,” (p. 4) or conceptualized in

terms of “the instrumental and anthropological definition of technology” (p. 5). He also reminds the reader to make the clear distinction that the essence of technology is not technology. The pragmatic dimension is seen in the more ancient term of “useful arts”. The human activity dimension can be seen in the way in which embedded technologies within a society reshape the values of the society that produced them (Bruce, 2006).

Technology has shifted away from the notion of serving man in his quest to know and worship God. The egocentrism of humanity has in many ways exploited technology merely for productivity, profitability and the resulting creature comfort. And in this shift we observe the marriage of science and technology, a relationship that is increasingly devoid of theological anchors. Adams (1996) underscores the point by stating: “At both a global and a national scale, we are encountering an increasingly unified science-and-technology enterprise” (p. 17). He goes on to say: “This science-and-technology nexus is at the heart of powerful trends toward global interdependency. The greater sense of identification with place of an earlier generation is eroded by a kaleidoscopic succession of near and remote interactions” (p. 18). This point will become important later in this paper during the discussion of technology’s influence on the Church as community.

The advance of human history is marked by corresponding advances in technology. To study technology’s development is to study the development of human societies. Braudel (1981) makes the case that “[T]echnology ultimately covers a field as wide as history and has, of necessity, history’s slowness and ambiguities. Technology is explained by history and in turn explains history” (p. 334).

SECTION II

TECHNOLOGY ALONG FOUR DIMENSIONS OF THE CHURCH

In this section I will examine selected technological advances and their influence on the life and work of the church along four dimensions: Authority/Control, Evangelism, Community and Worship. Briefly defined these four dimensions are understood as follows:

- Authority/Control: The methods and means of establishing and maintaining adherence to a set of beliefs among a population of humans.
- Evangelism: Propagation of the Gospel message of Jesus Christ among the unconverted and bringing them to faith in Jesus Christ as Savior and Lord.
- Community: The gathering of believers into functioning groups for education, nurture, and fellowship.
- Worship: Corporate gatherings for adoration, praise, and celebration of the mighty acts of God.

The Roman Road System

The fledgling new religious movement known as the “Christ-followers” (Christians) inherited a major technological marvel known as the Roman road system. The Roman Empire was largely held together because of the relative ease and safety by which people and materials could be transported throughout the region. The quality, purpose and extent of the road system are highlighted by Wicks (1999) in these words:

“The Romans were highly skilled at constructing roads with smooth surfaces, firm foundations, and a camber to ensure proper drainage. These roads, built mainly to facilitate military transport, and notable for their very long, straight sections, extended east-west from Mesopotamia to Britain, and north-south from the Black Forest to North Africa” (p. 36).

Through the road system the Roman government was able to maintain relative peace through which the early Christians could work to spread the message of the Messiah. No doubt the Apostle Paul utilized the road system throughout his missionary travels and on more than one occasion he was protected by the Roman soldiers so that his message about Jesus could advance unhindered (Earle, 1955; Alexander, and Alexander, eds., 1987). Thus the association of this inherited technology with evangelism is commonly derived.

However, it should also be pointed out that travel along the Roman road system no doubt facilitated the efforts of early Christian leadership to establish and maintain authority and control over the growing numbers of believers scattered throughout the region. In Acts 8:1-2 and 4 we find reference to the scattering of Christians as a result of persecution in Jerusalem. Later, in Acts 15 we find the account of the Council at Jerusalem and subsequent letter to Antioch, accompanied by select leaders along with Paul and Barnabas in which detailed instructions were dispensed concerning religious practices. The same road system that facilitated travel in which evangelism took place also facilitated travel for exerting authority and control over the Church.

Further still, the road system facilitated the travels of Paul as he revisited groups of believers gathered in community as well as aiding in the distribution of his letters to those same communities of believers. Thus the technology of the road system also had an influence on the Church as community.

The one dimension for which the road system does not appear to have had a large influence would be worship. Paul wrote to the Church at Ephesus admonishing them to “Speak to one another with psalms, hymns and spiritual songs. Sing and make music in

your heart to the Lord, always giving thanks to God the Father for everything, in the name of our Lord Jesus Christ” (Ephesians 5:19-20, NIV²). To the Colossian Church he wrote: “Let the word of Christ dwell in you richly as you teach and admonish one another with all wisdom, and as you sing psalms, hymns, and spiritual songs with gratitude in your hearts to God” (Colossians 3:16, NIV). These letters were delivered to the churches and no doubt the couriers utilized the Roman road system. However, it is beyond the scope of this paper to extensively investigate how traveling Christians may have transported ideas and methods of worship from one congregation to another. The materials I did review did not draw any links between the road system and enhanced worship among the early churches.

The influence of the Roman Road system along the four dimensions of life in the Church is illustrated in Figure 1.

Architecture

Cathedral building of the Medieval period is widely accepted as one of the finest achievements in the advance of technology and its influence on the Church (Smith, 2005). The aesthetic goal of the cathedrals in the Gothic era was aptly characterized as “maximum height and maximum light,” a phrase coined by Robert Fitchen (1961).³ However, it is helpful to be reminded that the construction of the great cathedrals was more than an effort to bring together architecture, art and religion. Technology played a role through the work of engineers “because when at last financial, locational, artistic and liturgical decisions had been made, somebody had to build something, a structure which

² Scripture passages noted NIV are taken from the Holy Bible, New International Version, 1978, New York International Bible Society.

³ See also Lewis (2004) for an extended discussion of this concept and its practical application to the construction of Gothic cathedrals from an engineering point of view.

Figure 1.

TECHNOLOGY'S INFLUENCE

	Authority/Control	Evangelism	Community	Worship
Roman Rds.	Yes	Yes	Yes	Marginal

could be put up and which would stay up” (Smith, 2005). Thus technology played a vital role of influence upon the life and work of the Church.

That the great cathedrals of the Gothic period were centers of authority and control is evidenced by the relationship between the Church and government of that era (Noble, 1997). And indeed, the loyalty of parishioners was garnered through employment, taxation, and competition with other cathedral projects throughout the region (Lewis, 2004). The cathedrals served as the centering focus of authority and control in the Church.

From an evangelistic standpoint, however, the cathedrals distracted from expansion efforts as human and material resources were focused on the great projects of construction. This same phenomena has been repeated countless times right through to current times as local congregations experiencing a growth mode have witnessed their

growth slowed, stalled, or even reversed during and immediately following a significant building project. Incorporating the latest technology in a building project does not substitute for human activity in evangelism.

So while the cathedrals centralized authority and control, and expansion through evangelism was slowed, the community of faith found new avenues for education, nurture and fellowship. Consider the development of stained glass in this regard. The darker, northern climes of Europe called for maximizing open space through which sunlight could penetrate and illuminate the interior spaces of the cathedrals (Lewis, 2004). As a protection from the cold stained glass was designed to fill the openings in the walls, utilizing space creatively to tell the great narratives of the community of faith. Those narratives included theological lessons as portrayed in the images of biblical characters as well as images of the great patrons, builders and artisans whose labors were manifest in the cathedrals. Further, the cathedrals served as common meeting places for both religious and civic gatherings (Lewis, 2004).

In terms of worship, one need only step into a great cathedral with its enormous spaces, ornate decoration, and a body-vibrating organ thundering forth the anthems of the Church to know that the cathedrals have indeed influenced worship. The sense of awe and wonder created by these great spaces is indeed magnificent, giving a sense of the majesty and greatness of the Almighty. On the other hand, the transcendence represented in the great cathedrals also perpetuates the remote God concept and requires efforts to make God accessible via other mediums and messages.

The influence of architecture on life in the Church along the four dimensions of authority/control, evangelism, community and worship are seen in Figure 2.

Figure 2

TECHNOLOGY'S INFLUENCE				
	Authority/Control	Evangelism	Community	Worship
Roman Rds.	Yes	Yes	Yes	Marginal
Cathedrals	Yes	No	Yes	Yes

The Printing Press

It is a given that the printing press revolutionized the Church, serving as a major catalyst to the Protestant Reformation. Brown (1992) asks the question: “Without printing, would there have been a Protestant Reformation? Would Luther have ever survived” (p. 33)?

As early as the Second Century C.E. the Chinese may have been the first to develop means of printing for the mass duplication of written materials (Wicks, 1999). However, it was in 1450 that Johann Gutenberg developed a technique for commercial printing using movable type. The “process became known as letterpress, and enabled Gutenberg to produce printed books of high quality. Most notable of these was the Guttenberg Bible of 1455” (Wicks, 1999, p. 97). In a breathtakingly short period of time, roughly 50 years, more than eight million volumes had been printed, estimated to be

more books than all the combined scribes of prior human history had produced (Eisenstein, 1979). And while the printing press has made impressive advances technologically, it is the original concept of moveable type and mass production that is at the heart of the multi-billion dollar industry that printing and publishing is today. Despite the claims that the modern computer would bring about a paperless society, books and articles line our shelves, lay stacked on our desks, and call for larger and larger libraries.

The printing press has had enormous influence on the Church in each of the four dimensions being examined in this paper. For instance, it is the press that produces the written documents upon which the Church articulates its doctrines, establishes its polity and recounts its history. The written word, whether it be the Scriptures, the precedent-setting documents of legal entities within the Church, or the writings of leaders within the Church, is a powerful means of authority and control.

Interestingly, however, the press is also capable of breaking the authority/control of the Church as witnessed in the Protestant Reformation. Luther's break with Rome was fueled significantly by the groundswell of support he received from Germany's common people. "Martin Luther spoke to Europe from two pulpits—one in the church, and one in the print shop" (Brown, p. 33). The citizenry became informed and mobilized thanks primarily to the pamphlets Luther printed by the millions. The Scriptures became accessible to all strata of German society once Luther completed the translation and the presses rolled them out. And in so doing the Church of Rome lost its authority/control over the totality of Christianity as Protestants engaged in reform on spiritual, political and social levels (Ozment, S.E., 1980; Eisenstein, 1983).

With the invention of the printing press, the Church, now tracking on Protestant lines, reengaged in evangelism (Brown, 1992). Common people were learning to read and the reading materials produced from Lutheran sources were designed to articulate the Gospel of Jesus Christ in terms that were understandable, practical, and believable. People throughout Europe came to faith and were educated in the faith thanks to the availability of printed materials.

Continuing with that thought of the education of believers, the Church as community has continued to rely upon the technology of printing. From the most elementary lesson materials produced by such companies as Word Action Publishing to the complex and technical theological materials printed by companies like Beacon Hill Press of Kansas City, the Church as community makes constant use of printing technologies. Further, printed materials are available from a wide range of publishers with themes for nurturing believers in their faith. And millions of believers gather in groups large and small in which they experience fellowship while studying some form of printed material.

Worship has also benefited from the technology of printing. Lectionaries and printed music are just two examples of the printing press influencing the life and work of the Church. Indeed, the Church has made extensive and productive use of the technology of printing across the centuries.

The technology of printing and its influence on life in the Church is added to the chart seen in Figure 3.

Figure 3

TECHNOLOGY'S INFLUENCE				
	Authority/Control	Evangelism	Community	Worship
Roman Rds.	Yes	Yes	Yes	Marginal
Cathedrals	Yes	No	Yes	Yes
Printing	Yes	Yes	Yes	Yes

The Technology of Electricity

“Mysterious affair, electricity” (Samuel Beckett, “Theatre II”, cited in Bodanis, 2005, p. vii). Electricity is a most amazing discovery and it has absolutely revolutionized the ways in which we live. Likewise, the Church has been forever impacted by the technologies fueled by electrical current.

In this section I will discuss electronic communication on two levels, namely long-distance person-to-person communication via the telephone and long-distance mass communication through radio and television.

Telephone Communication

It was the manipulation of electrical current that created the first telegraph, thus opening the era of immediate long-distance communication (Wicks, 1999). In 1837 British scientists Charles Wheatstone and William Cooke were inventing an electric

telegraph system right at the same time as Samuel Morse, working with Alfred Vail, was also inventing a workable system. A mere 39 years later Alexander Graham Bell invented the first practical telephone (Canby, 1968; Wicks, 1999). Twenty-five years after that Guglielmo Marconi gave us transatlantic wireless signals in 1901, reaching from Poldhu, in Cornwall, England to St. John's, Newfoundland in Canada (Canby, 1968; Wicks, 1999). Today the cell phone has made instantaneous long-distance communication portable, thanks to the work of Dr. Martin Cooper in 1973.

Wikle (2002) has succinctly captured the essence of change in society with respect to long-distance voice communication:

Until the invention of the telegraph, long-distance communication required people to move messages physically from place to place, a time-consuming activity involving travel by horse, boat, stagecoach, or other vehicle. Because of the difficulty of this type of one-way communication, messages were simple and utilitarian. The telegraph, and later the telephone, helped decrease the dependence of communication on transportation, making the space between people less important and their messages longer but often less consequential. (p. 47. See also Thayer, 1994)

He goes on to describe how wireless communication via the cellular telephone now includes capabilities for e-mail, fax, paging, and Internet access. While the thrust of his article addresses the impact of cell phone towers on a changing landscape, we can also see how long-distance communication has had an impact on the life of the Church.

For example, immediate long-distance voice communication has extended the reach of authority and control in the Church. Authority figures spend significant amounts of their time talking with colleagues and subordinates on the telephone (just try to get a hold of one of them and you will likely encounter a busy signal!). Independent leadership and entrepreneurship at the grassroots level of the Church is now under much tighter control thanks to the telephone.

The work of evangelism does not appear to have been significantly influenced by the invention of the telephone. There are no doubt isolated instances of a believer calling a non-believer on the phone for the purpose of sharing the Gospel message of Jesus Christ. But that has not produced sufficient results to have become incorporated into the Church as a regular evangelism strategy; the strategy of telemarketing for church planting developed by Norman Whan called “The Phone’s For You” notwithstanding (Herron, 2003).

At the same time, the use of long-distance voice communication has influenced the Church in terms of Community. Local church members are able to speak with one another with ease, frequency, and relatively low cost. Pastors can commonly be heard admonishing parishioners to pick up the phone and call a friend for nurture and fellowship.

In terms of worship, telephone technology does not appear to have had significant influence. The exception would be the obnoxious ringing of cell phones during worship service—but that would be a negative influence that the Church has attempted to prevent via requests that parishioners turn off their cell phones before entering the place of worship.

Figure 4 adds telephone to the chart being built by this study of technology’s influence on life in the Church.

Radio and Television

Marconi’s transatlantic wireless signals of 1901, reaching from Poldhu, in Cornwall, England to St. John’s, Newfoundland in Canada (Canby, 1968; Wicks, 1999), ushered in more than the era of wireless person-to-person long-distance communication.

The era of long-distance mass communication also came to life with that first transmission.

Figure 4

TECHNOLOGY'S INFLUENCE				
	Authority/Control	Evangelism	Community	Worship
Roman Rds.	Yes	Yes	Yes	Marginal
Cathedrals	Yes	No	Yes	Yes
Printing	Yes	Yes	Yes	Yes
Telephone	Yes	No	Yes	No

In 1915 a former telegraph operator by the name of David Sarnoff suggested to a Vice-President of the Marconi Wireless Telegraph Company of America that he had an idea to produce a “Radio Music Box” that would be capable of receiving radio signals on several different wave lengths. In a memo he wrote: “If only one million families thought well of the idea, it would...yield considerable revenue.” (cited in Bodanis, 2005, p. 111). That idea was rejected and about a decade later Sarnoff’s company, RCA, was selling enough radio sets to establish it as a world leader among industrial firms (Bodanis, 2005).

The technology of radio, and later the television, has advanced in ways too numerous to mention here. However, one significant development has been the way that

radio and television have expanded the choices available to consumers across the nation and around the world.⁴ In its initial stages of development radio programming tended to draw families and communities together around limited broadcasts and limited sets. The radio was a focal point in the family home, a coveted and somewhat expensive piece of furniture. But with the invention of transistors and battery operated devices, first seen on the market in the 1950's, it was not long until each member of the family had the luxury of their own radio. Further, the proliferation of radio stations brought about niche marketing both in terms of programming and advertising. The radio in first world countries is no longer a unifying element in society but rather a contributor to fragmentation of families and communities (Bodanis, 2005).

The Church continues to use radio technology in each of the four dimensions of Church life under consideration in this paper. To a lesser extent the radio contributes to the dimension of authority/control as the Church may sanction certain broadcasts deemed to be doctrinally sound. To a greater extent, however, the radio continues to be used for purposes of evangelism, especially in areas more difficult to reach with the Gospel message of Jesus Christ through traditional means. In North America the National Association of Religious Broadcasters count among their membership numerous radio stations, networks, and individual programmers. It is my observation, however, that the programs produced in North American markets contribute very little to evangelism despite claims to the contrary. Rather, I see radio as a tool for the Church as community, educating and nurturing believers while also building a sense of belonging. Millions of listeners find great help in their Christian journey through the messages they hear weekly

⁴ See Bodanis (2005, Chapter 10) for an extended discussion of this material summarized here.

or even daily on the radio. And the radio is a widely used source for discovering new worship music, thus contributing significantly to the worship dimension of the Church.

Figure 5 expands the chart showing technology's influence on life in the Church with radio.

Figure 5

TECHNOLOGY'S INFLUENCE				
	Authority/Control	Evangelism	Community	Worship
Roman Rds.	Yes	Yes	Yes	Marginal
Cathedrals	Yes	No	Yes	Yes
Printing	Yes	Yes	Yes	Yes
Telephone	Yes	No	Yes	No
Radio	Marginal	Yes	Yes	Yes

One of the helpful benefits of radio technology is that it works well in multi-tasking situations. Humans are capable of driving a car, cooking a meal, applying make-up, performing certain tasks in a work setting, all the while listening to the radio. Further, the radio remains a portable means of maintaining contact with a larger world. Having said that, it would behoove the Church to reinvestigate the radio as a technology to be employed for the good of the Kingdom of God.

The television, on the other hand, finds some of its power by virtue of the fact that it is *not* portable. The television generally demands the full and direct attention of the

viewer. Whereas with the radio we may refer to the audience as *listeners*, with the television the screen calls for *viewers*. Multi-tasking with the television may still be possible, but the range of second-task options is severely limited.

So what of the television in terms of the four dimensions of Church life? As with the radio, the television has limited impact in terms of authority/control. In the same way that certain radio programs may be sanctioned by the Church, so also the Church may sanction television programming.

The television has had powerful influence on the Church in terms of community. Indeed, millions of viewers each week find their spiritual education, nurture and fellowship via favorite television programs. Additionally, millions of people experience worship via the television. For huge numbers of people, both the infirm and the healthy, their church *is* the television.

One aspect of the Church and its relationship to the television that troubles me is the absence of evangelism, bringing nonbelievers to faith in Jesus Christ. The evangelistic message of Billy Graham's televised crusades is unmistakable, including the offer of counselors that can be reached by toll-free numbers on the telephone. But the Graham crusades are ending and the rest of the menu of religious television programming is, in my opinion, overwhelmingly focused on the already converted. See Figure 6 for television's influence along all four dimensions of life in the Church.

It is curious to me to note that my own denomination, Church of the Nazarene, has no appreciable presence in television broadcasting. I have interviewed two entrepreneurial leaders in the denomination who made attempts in the early 1970's to launch the church into television programming. But both have stories of barriers within

Figure 6

TECHNOLOGY'S INFLUENCE

	Authority/Control	Evangelism	Community	Worship
Roman Rds.	Yes	Yes	Yes	Marginal
Cathedrals	Yes	No	Yes	Yes
Printing	Yes	Yes	Yes	Yes
Telephone	Yes	No	Yes	No
Radio	Marginal	Yes	Yes	Yes
Television	Marginal	No*	Yes	Yes

*Except Billy Graham

the denomination that could not be overcome. My concern is that our failure to utilize television technology for the advancement of our holiness doctrine has resulted in significant and dangerous loss of authority/control in the church. Our membership is being fed a steady diet of Calvinist Fundamentalism and Pentecostalism, not only in the programs they watch but also in the radio programs they hear. Further, our people are reading the publications of the personalities they know from the radio and television. I do not believe I am being protectionist. Rather, I believe there are dangerous flaws in the doctrines of the above-named groups and our own denomination is failing to counter and meet these errors on equal ground using television and radio. That concerns me.

There are some who have argued that the television and other electronic technology are bringing the world closer together in a unifying milieu. Barnett and Cavanagh (1996) have said, "Satellites, cables, walkmans, videocassette records, CDs,

and other marvels of entertainment technology have created the arteries through which modern entertainment conglomerates are homogenizing global culture” (p. 71). They go on to assert: “Literally the entire planet is being wired into music, movies, news, television programs, and other cultural products that originate primarily in the film and recording studios of the United States” (p. 71). By contrast, Misa (2004) observes that popular shows are regionalized and programs such as MTV are created in multiple channels to accommodate local culture and language. The diversity of such programming offers rich opportunity for the Church to engage the culture through the technology of television.

Computers

It was Thomas Jefferson who advanced the concept of the free library system in which information in printed form could be transferred and made accessible to large numbers of people. One wonders what Mr. Jefferson might think of the information superhighway available today on computers via the Internet (Negroponte, 2000). Throop (2005) observes:

With cell phones that access web mail to wi-fi systems for computers to DVD burners, often to orchestral sounds on small keyboards to dynamic websites to immediate digital graphics and webcams for virtual attendance at worship services, churches have global access and reach, and the power to create a kind of digitally-based holiness for members and non-members alike (p. 27).

And the story of technology in computers continues to unfold as computers “have begotten computers of escalating internal power...” (Bodanis, 2005, p. 187).

As with many technological advances, it was the military that developed command and control systems using computers (Augarten, 1984). In the Church we find computers influencing issues of authority and control as well. Data is stored,

manipulated and transmitted with remarkable speed and in mind-boggling quantities (Negroponte, 2000). The Church is able to document its beliefs and through the Internet those beliefs can be examined and opinions reinforced or reformed on a global scale.

Church web sites and Internet blogs are increasingly being seen as opportunities to engage the culture with the message of Jesus Christ. The Church as community is also experiencing the influence of the computer, though this technology is yet to be thoroughly developed for the church. Plude (1994) has encouraged the Church to move beyond group media such as audio and video programs in order to develop interconnecting or interactive or link communication technologies. E-mails, instant messaging, and the full range of resources available on the Internet all contribute to the potential for education, nurture and fellowship within the Body of Christ.

And where would our churches in North America be today without computers? Worship would not be the same if pastors had to revert back to using a typewriter for their sermons and worship teams were limited to the music available in a hymnal. However, I would like to make an observation regarding what I perceive to be some losses in the Church as printed materials give way to the ubiquitous electronic projection systems in the Church today. The losses are in the dimensions of community and worship as experienced in the act of corporate singing.

First, observe the multiplication of worship songs (both hymn style and chorus style) being written throughout the Evangelical Christian world and made available on a wide scale using computer technology. Second, notice that individual congregations are developing their own unique repertoire of most often used songs. Third, members of the Body of Christ are no longer able to step into an unfamiliar congregation's worship

service and have any assurance that they will know any of the congregational songs in a given worship service (Beach, 2005). Fourth, the presence of lyrics on a screen without printed musical notation is not sufficient for the visitor to “catch the tune” and join in the singing (Beach, 2005). Fifth, churchgoers are losing their ability to read music and thus be leaders in musical groups in schools and community settings. Sixth, when the Church gathers in large regional and global assemblies they are no longer able to worship together because they cannot sing together. The diversity of music styles, individual songs, and lack of musical notation have taken away a primary anchor of worship and that is corporate singing. And in so doing, community has been lost. The printing press gave to the Church a common hymnal and in so doing not only was worship enhanced, community was made possible. My hope is that the Church will empower some of its best minds to develop the technologies necessary, computer or otherwise, for enhancing music as a point of community and worship both locally and globally.

See Figure 7 for the completed chart in which the influence of the computer is shown in relation to the four dimensions of life in the Church.

Figure 7

TECHNOLOGY'S INFLUENCE				
	Authority/Control	Evangelism	Community	Worship
Roman Rds.	Yes	Yes	Yes	Marginal
Cathedrals	Yes	No	Yes	Yes
Printing	Yes	Yes	Yes	Yes
Telephone	Yes	No	Yes	No
Radio	Marginal	Yes	Yes	Yes
Television	Marginal	No*	Yes	Yes
Computers	Yes	Immerging	Yes	Yes

*Except Billy Graham

SECTION III QUESTIONS AND OBSERVATIONS

Despite the common assumption that churches always lag behind the movement of culture, the Barna Group has documented that Protestant congregations are quickly embracing new technologies (Associate Baptist Press in Christian Century, 2005). Fifty-seven percent of all Protestant churches now have a Web site, an increase from 34 percent in 2000. Further, 62 percent of all Protestant churches employ large-screen projection technology, another jump from 39 percent in 2000. In that same article George Barna is quoted saying: “During the next half of this decade we expect increased broadband access, podcasting, and ubiquitous adoption of hand-held mobile computing devices by consumers to further alter the way churches conduct ministry” (p. 18). It would appear that the Church has heeded the sage advice of Avery Dulles (1971) who said in a prophetic document: “The Church cannot wall itself up in a cultural ghetto at a

time when humanity as a whole is passing into the electronic age” (p. 13). By all appearances the Church is moving forward to employ technology, especially electronic technology, in its life and work.

But is all of that for the good? Haring (1979) raised issues of concern regarding the use of technology-for-its-own-sake. Throop (2005) advises that decisions regarding technology and the Church “must be based on ministry development and expansion, not on ‘coolness’” (p. 28). Nonetheless, the discussion above reveals that technology has had a more or less positive influence on the Church along the four dimensions of authority/control, evangelism, community and worship.

Yet there are questions that remain and in this section I will raise some of those questions that have been prompted out of a year of contemplation regarding “technology and the church through the centuries.” These questions are not in priority order.

1. In the period from 800 to 1700 C.E. the Church was the leader in technological advancement for theological reasons (Noble, 1997). Ferguson (2005) asserts that “Religion has traditionally been one of the first elements of society to embrace technological advances, from moveable type to radio to online ordinations through the Internet” (p. 2). Despite the Church’s effort to embrace technology, as alluded to above in the Barna research, there is still ridicule from without and resistance from within for its dealings in technology—its retardation in the former and its collusion with worldliness in the latter. The question, then, is this: ***Should the church seek to recapture the spirit of those Medieval times and reemerge as leaders in technological advancement?***

Pope John Paul II (1989) called upon the Catholic Church to make such a commitment. He said,

Whether we are young or old, let us rise to the challenge of new discoveries and technologies by bringing to them a moral vision rooted in our religious faith, in our respect for the human person, and our commitment to transform the world in accordance with God's plan (p. 3).

It is my opinion that the Church can reemerge as leaders in technology. But to do so means more than merely offering seminars and workshops to local church leaders on how to better use the computer. The Church must empower its best minds and hearts to engage the arts and sciences for spiritual purposes. That is the purpose of our work in the Sciphre Institute, promoting balanced inquiry in science, philosophy and religion. We are committed to bringing sound scholarship to secular university campuses so that Christianity may be rediscovered as an attractive, promising alternative to secularism.

2. Can the Church engage technology with both an inward and outward focus?

Again, in the discussion above I have suggested that the Roman road system, the printing press and the radio have influenced the efforts of the Church in its evangelistic outreach. By contrast, the cathedrals and television appear to have been dominated by an inward focus. The computer offers opportunity for both evangelism and community and I suggest that we will do well to maintain a balance of emphasis by moving from information delivery to evangelism (see Ferguson, 2005).

Going further, I am wondering if the flow of technology may become circular with respect to evangelism and community among cultures outside and inside North America. For decades the Church has beamed radio programming into unevangelized areas of the world and with many encouraging stories of successfully reaching people for Christ. That has been an outward focus both culturally and evangelistically.

The continued growth of immigrant groups in North America has included believers from other countries as well as millions of unbelievers that will be difficult to

reach through the churches of the predominant culture. I am wondering how long it will be before the Church will use technology to bring the voices and images of the best churches in other countries to the ethnic groups of North America. North America has beamed its brightest and best into other lands for cross-cultural ministry. What I have in mind is for the brightest and best of other lands to beam their messages into North America—not cross-culturally—but within a culture to reach displaced persons for evangelism, community and worship.

3. *Was man made for technology or technology made for man?* I attend a wonderful, small Church of the Nazarene tucked away in a rural community of 1,500 people. It was only a few weeks ago that the technology of high speed Internet finally found its way into this small town. Even so, the church is among those that have installed computers and video projection in the sanctuary for use in worship.

The individual who spearheaded the project was quite enthused to show me the software program he was using for projecting words on the screen for singing. He advised me that I would a) need to submit song selections several days in advance; b) choose songs that were in his data base; c) be prepared to adopt wording that was different than what is found in the Nazarene hymnal; and d) never attempt to sing a verse or chorus out of the sequence recorded prior to the service.

While I appreciate the good brother's passion for the technology, I felt suddenly constricted. Where was the freedom to repeat a verse or chorus on the spur of the moment under the leading of the Spirit? Where was the opportunity to follow the Spirit's spontaneous inspiration and insert an unplanned song? Has technology robbed us of the mystical moments of worship that Heidegger (1975) called "poetizing" in the realm of

Nature?⁵ With all due respect to our esteemed keynote speaker, I am asking whether the careful scripting of a worship service in a wired world (Sample, 1998) allows enough room for the Spirit of God to break in and do something unprogrammed. We must be careful that technology not control worship either in terms of unbendable scripting or mere amusement.

CONCLUSION

In this paper I have given an overview of the influence of technology with examination of selected technological advancements through the lens of four dimensions of life in the Church. A brief treatment of the origins and definition of technology concluded that practice is the revealing of useful arts, making the complex simple and accessible to the common man. The examination of technologies against the four dimensions of life in the Church pointed up the reality that the Church has more or less benefited from each of the selected examples. And the paper closes with the posing of these three questions:

1. *Should the church seek to recapture the spirit of those Medieval times and reemerge as leaders in technological advancement?*
2. *Can the Church engage technology with both an inward and outward focus?*
3. *Was man made for technology or technology made for man?*

I leave the reader with a timely reminder from Jacobsen: “We need to use technology thoughtfully in worship, always seeking to distinguish between entertaining and encountering God” (p. 8).

⁵ See also Harvey (2002) for a discussion of Heidegger’s notion of “poetizing.”

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