

THE PLACE OF THE PRINTING PRESS IN THE REFORMATION

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The Reformation did not develop in a technical, political, economic or social vacuum. Rather, it is the conviction of conservative Protestant historians that God through a variety of means accomplished His determined end--the recovery of the gospel and the reformation of His church. These observers draw a comparison between the "fullness of time" (Gal. 4:4) when God sent forth His Son to announce the good news in the first century and the sixteenth century Reformation in the "fullness of time" which recovered the good news which had been distorted during the interim. Employing this analogy, the counterpart to the Greek language, which was widely known during the early church era, is the newly introduced printing press which preceded the Reformation era. Dissemination of the gospel message in both cases would have been far less effective in both speed and extent.

This study examines the impact of the invention of the printing press upon sixteenth century society in general as well as its importance for the initiation and development of the Protestant Reformation in particular. Also explored are the reasons why Protestants aggressively used the press to great advantage while in contrast Catholics aggressively restricted use of the new medium. Finally, observations are made regarding Protestantism's comparably timid use of this century's technological advances which are the modern equivalent of the printing press – radio, television and the personal computer.

I: The Technology, Spread and General Impact of the Press

1. The New Technology

Johann Gutenberg (c. 1394-1468), a goldsmith from Mainz, introduced movable-type printing to the western culture about 1450, sixty years prior to Luther's ninety-five theses. [1] Actually, Gutenberg combined two technological advances in the introduction of the press. First, Gutenberg introduced a process capable of producing inexpensive, reusable "replica" letters. The process involved the cutting of a letter in hard metal, called the "punch," with which he stamped a mold, the "matrix." A lead-tin alloy poured into the matrix formed individual, uniform "replica" letters which could be set in a case for printing a page. Afterwards, the letters could be stored for reuse. [2] This simple but ingenious process predated the theory of interchangeable parts by three centuries. [3] To this process Gutenberg added a second technological advance--an ink of proper composition and viscosity to adhere to metal letters.

The introduction of paper to the western culture was a third essential technological advance that preceded the press. [4] Paper, which was less expensive and more available than vellum, facilitated the mass production of printed material.

With the development of this new technology Gutenberg and Fust, his assistant, were able in 1488 to pull three hundred sheets per day. [5] Steinberg, commenting on the lasting impact of the

Gutenberg press states, "(Gutenberg) reached a state of technological efficiency not materially surpassed until the beginning of the nineteenth century." [6]

2. The Rapid Spread

The absence of patent restrictions facilitated the rapid geographical spread of the presses. Printing was introduced to the lands and cities of the Reformation during the last half of the fifteenth century, reaching Italy in 1465, Paris and Nuremberg in 1470, Augsburg in 1472, London in 1480, Stockholm in 1482, Lisbon in 1490, Madrid in 1499, and Edinburgh in 1506. [7]

By the end of the fifteenth century virtually every major geographical area of western and central Europe had presses. By the end of the century in 238 European communities, more than 1,100 printers are known. [8] This extensive communication network was well established prior to the Reformation.

3. The General Impact

The following testimonies reflect the historical significance of the new invention for the Reformation. Philip Schaff, noted church historian, states, "The art of printing, which was one of the providential preparations for the Reformation, became the mightiest lever of Protestantism and modern culture." [9] Elizabeth Eisenstein, a prominent Catholic historian and authority on the impact of printing, says

The advent of printing was an important pre-condition for the Protestant Reformation... At the same time, however, the new medium also acted as a precipitant. It provided the "stroke of magic" by which an obscure theologian in Wittenberg managed to shake Saint Peter's throne. [10]

Contemporaries of the Reformation could also foresee the value of the new medium in shaping public opinion. Martin Luther (1483-1546) called printing "God's highest and extremest act of grace, whereby the business of the gospel is driven forward." [11] Luther's opponent Erasmus (c. 1469-1536) in a letter to Henry VIII exclaimed with frustration, "Here in Basel nobody dares to print a word against Luther, but you may write as much as you please against the Pope." [12] English reformer John Foxe (1516-1587) observed, "The Lord began to work for His Church not with sword and target to subdue His exalted enemy, but with printing, writing, and reading ..." [13]

II: The Consequences of the Advent of Printing and Its Influence on the Reformation

Printing changed society, and these changes greatly benefitted the Reformation.

1. A New Industry

Prior to the Gutenberg press clerical and secular scribes filled the need for mass produced books. The Brethren of the Common Life specialized in the copy of philosophical and theological books

for a market that extended over all of northern Europe. [14] One secular bookseller of Florence, Vespasiano da Bisticci, employed up to fifty scribes in his lucrative business. [15] With the spread of printing came the decline of the scribal profession and the rise of a new industry--printing.

During printing's earliest period 1450-1550, called the incunabula (i.e. "swaddling clothes") era, the industry was dominated by the printer-seller. [16] There was little division of labor during this highly competitive, free-for-all era; thus, the printer-seller was his own type founder, printer, editor, publisher, and bookseller omitting only papermaking and bookbinding. Most of the printing operations were small and many printers were itinerant.

In the second half of the sixteenth century printing developed and diversified, consequently natural divisions arose between production and distribution; publishing and printing, wholesaling and retailing. London, Paris, Geneva, Basel and Augsburg became great printing centers as the new industry expanded. The new industry provided employment for many reformers. John Foxe, a Marian exile, is one example of many who found work in Europe as proof corrector and printing consultant. [17] Many of the Radical Reformers (John Hut, John Denck, Louis Haetzer, et al.) found employment in the printing industry during their itinerant preaching. [18] In general, close ties were established between printers and reformers throughout the cities of the Reformation.

Similarly, it is important to note the rise of the scholar-printer (e.g., Robert Estienne of Paris and later Geneva, and Etienne Dolet of Lyons.) These scholar-printers gave the Reformers linguistic tools (lexicons, dictionaries, and grammars) as well as editions of earlier theological works necessary for educational advance, while at the same time giving the reading public the current works of the reformers.

The advent of printing gave rise to patronage systems. Authors sought the patronage of both princes and printers. [19] Likewise, the publishing houses sought the patronage of the sovereign to assist in underwriting expenses. Patronage created important links between the Reformers and the rising economic and political classes which facilitated application of reform.

2. Increased Communication

The proliferation of presses caused an abrupt increase in printed literature. [20] Both the number of titles and the size of editions were greatly multiplied. During the first century of printing over 100,000 titles were issued. [21] English printers, between 1475 and 1700, issued 120,000 editions or about 60 million books. [22] In addition, innumerable pamphlets were printed.

Not only the quantity of printed material but also the speed of communication was greatly increased. Plentiful presses, absence of controls, and the efforts of diligent book peddlers made rapid transmission of printed materials possible at even the earliest stages of the Reformation. The almost instantaneous dissemination of Luther's Theses is the classic illustration of this new potential.

Thus, the Reformation was characteristically a movement of printed material. The new medium

allowed the message to penetrate the entire range of society to an unprecedented degree.

3. The Expanded Audience

Literacy increased markedly with the advance of the press. Most notably this occurred among the emerging middle class of the cities. [23] This audience was essential to the success of the Reformation. The doctors, lawyers, and merchants of the cities opposed Catholic clergy and the power of the Catholic church which drew the gold from their cities into the coffers of Rome. [24] This new middle class could well afford the Reformer's books and consequently became the core of the Reformation. From this class came leaders like Calvin and Knox.

Literacy was extended, to a lesser degree, to the lower classes. To persuade the partially-educated the Reformers issued a barrage of pamphlets. Even the illiterate could be significantly influenced by printed cartoons, caricatures, and broadsides. Eisenstein states,

By pamphleteering directed at arousing popular support and aimed at readers who were unversed in Latin, the Reformers pioneered in mass communication techniques. They also left ineradicable impressions in the form of broadsides and caricatures. Designed to catch the attention and arouse the passion of sixteenth century readers, their anti-papist cartoons still have a strong impact when encountered in history books today. [25]

Indeed, the printing revolution cut across the entire spectrum of society. [26] No sector was beyond the scope of the press.

4. The Rise of Propaganda

Presses made extensive propaganda possible. Given access to the presses and booksellers routes, only a handful of towns were required to create an unprecedented stir. [27] The language of the pamphlets, particularly those of Luther, was often incendiary--filled with attacks on ideas, institutions and individuals. In fact Richard Cole, following Philip Schaff, suggests a causal relationship between the propaganda of pamphlets and the Peasant Wars of the 1520's. [28]

This new ability to inspire and to conspire, although available to all ideological groups, was uniquely employed by Protestant forces to win support for their movement. Ironically, this tool of Protestant expansion was also instrumental in solidifying differences among Protestants. That which conquered also divided.

5. Changes in Disputation

Public disputation of issues was not new to the church. The history of the church prior to the Reformation is largely the history of disputations. Printing, therefore, did not introduce disputation but it did significantly change the method and results of disputation. Printing extended the circle of disputational participation far beyond those present, allowing others to be "vicarious participants." [29] Much of the literature of the period was intended for extended audiences and for polemical purposes rather than for libraries of scholars. [30] Preserved Smith observes, "The reading public became the supreme court before whom, from

this time, all cases must be argued." [31]

The "fixity of type," a consequence of the press, further affected debate. Scholars could now cite specifically both current and earlier literature by title and page. [32] Also, once disputation was printed, reversal of opinion was more difficult. Therefore, dissent became more indelible; edicts and pronouncements became more available and irrevocable. Excommunication, for example, could not be impulsively pronounced and then swept under the carpet.

Widely available printed theological positions intensified the emphasis on individuals. The terms Calvinist, Lutheran and Mennonite reflect the personal polarity of the era. Biographies and memoirs, while comparatively rare in the fifteenth century, became common in the sixteenth, especially in the later half. [33] Anonymity declined, partisan groups (sects and denominations) flourished.

6. Educational Improvement

The Gutenberg press is pivotal in the history of the educational progress. The changes occasioned by printing in both formal and informal education directly aided the success of the Reformation. Both the university and the family were central to the character of the Reformation, and the press served both.

The founding of universities increased greatly in the last half of the fifteenth century. In Germany, between 1450 and 1517, nine academies were started including Basel in 1460, Ingolstadt in 1472, Tübingen in 1477, and Wittenberg in 1502. These institutions were ecclesiastical in nature yet were under the direction of civil government. During this same period France opened three universities while Spain opened seven, including Alcalá in 1494. Student attendance steadily increased. [34]

Universities sought the services of printers to meet rising demand for texts. Initially printers operated at their own financial risk, yet later in the sixteenth century printers were employed on contract by the university. [35] The university press not only provided texts but also disseminated faculty thinking beyond the confines of the school. Luther had access to the press of Grunberg which was located in the Augustinian Convent, Luther's residence at Wittenberg. Such direct access to a press greatly increased his influence beyond Wittenberg, a small town of 3,000.

Universities profited from Gutenberg's invention in another important area--the development of institutional and personal libraries. The universities were expanding their collections of both contemporary and classical works. No longer did a scholar have to travel to consult different texts. [36] Overprinting enabled individuals to build libraries as well. Luther and Calvin had access to the works of Augustine, Bernard of Clairveaux, and others that had a significant impact on their thinking as reflected in their citations.

Education was not only aided by the quantitative increase of printed books but also by the refinement and improvement of the format of the book itself. The inclusion of conveniences: a title page, table of contents, uniform punctuation and cross references facilitated study. The emphasis in education shifted from a focus on analysis of a few texts (due to scarcity of

manuscripts prior to printing) to an emphasis on synthesis of many sources. Faculty and students could examine the works of a number of authors and then develop their own synthesis. The necessity of memorization declined and the concept of the lecture changed. Prior to printed texts, the teacher dictated a portion of the text to the pupils after which the instructor's comments were noted in the margin of the student's copy of the text. This pre-printing lecture process was slow, yet it did allow a detailed study of a few works. Printed texts, however, enabled the instructor to present his own synthesis of the lecture topic drawn from many sources. These lectures could be printed for a wider audience as well. The commentaries of Luther, Calvin, and other Reformers extended the impact of the author on religious thinking throughout the lands of the Reformation. The works of Calvin, for example, translated into English were constantly referred to by English divines. George Williams states that Caspar Schwenkfeld (1489-1561) was "turned to an evangelical understanding of Christianity by reading Luther's commentary on the penitential psalms." [37] Many other examples of the impact of the writings of other educator-reformers (Zwingli, Bullinger, Knox, Owens, et al.) could be cited. The pen became as influential if not more influential than the sermon.

Informal education in the home was also transformed by printed material. Printing brought a shift from "learning by doing" to "learning by reading." [38] Vernacular Bibles and catechisms enabled a father to oversee household devotions. English Puritans were especially prominent in this family education emphasis. [39] Domestic religious training, via catechisms, extended an unified education of the Protestant laity--a practical application of the Reformers' doctrine of the priesthood of the believer.

To sum up: The preceding by-products of the Reformation--the new industry, increased communication, an expanded audience, the rise of propaganda, changes in disputation, and educational improvement provided the climate and the tools necessary for the rapid spread of Protestant doctrine and commitment. The Reformation can not be isolated from its environment, an environment significantly changed by the press.

III: Reasons for the Reformation's Unique Exploitation of the Printing Press

We have generally discussed the impact of Gutenberg's invention on the Reformation era and more specifically we have discussed the potential of by-products of the press for the spread and shaping of the Reformation. The question remains: Why did Catholicism not employ and profit from the press to the extent that the Protestants did? Few historians would deny Protestant dominance of the press,[40] yet the reasons for this dominance are more difficult to determine. In this section we suggest three: the effect of early success, the effect of censorship, and the effect of the printed Bible.

1. The Effect of Early Success

The first clue to the dominance of the press by Protestants is found in the early, infancy, phase of printing. As previously mentioned, the new enterprise was characterized by financial risk and fierce competition.

Bankruptcy was common among early printers and a prosperous printer was the exception. [41] Paper, though less expensive than vellum, was still quite costly during the incunabula era. Printing machinery, whether custom made or purchased ready-made, was very expensive and the added expense of wages increased the capital investment. [42] Thus, the fledgling printer who misjudged the market for his materials was soon bankrupt and forced to sell his equipment to another entrepreneur.

Competition, in addition to fixed costs, made the endeavor uncertain. The absence of guild regulation or copyright laws allowed piracy and republication of works. A printer having invested heavily in the issuing of a work always faced the possibility of a reduced market as the result of a competitor's publication of the same work. A printer in Parma, for example, in 1473 wrote an apology for his careless work explaining that others were bringing out the same text, and so he had to rush it through the press "more quickly than asparagus could be cooked." [43]

An author at this time could not expect to make a living by writing for publication. [44] Compensation usually took the form of free copies of the finished work, rarely was a cash payment made. All of this served to remove the profit motive from writing, yet under these conditions the Reformers issued large amounts of literature. The motivation of these early Reformers was not profit, but rather conviction--the gospel must be published at all costs. Luther, as previously mentioned, saw the press in terms of its persuasive potential and exploited it. This commitment factor present in the Reformers, was not found in a corresponding degree in the establishment of the Roman Catholic Church which was occupied with other serious internal and external concerns. Consequently, the Reformers from the outset outdistanced the Roman church in the use of the press to spread their doctrine. [45] Protestant usage of the press resulted in success and this same success encouraged further employment of the press. The adage applies, "Nothing succeeds like success." Protestants, from the earliest stirring of the Reformation, were uniquely attracted to the press as a tool of proclamation and persuasion, while Rome continued to print indulgences.

2. The Effect of Censorship

Closely related to the preceding discussion is the subsequent rise of censorship. Schaff states,

But while the progressive Reformation gave wings to the printing-press, the conservation reaction matured gradually a system of restriction, which, under the name of censorship and under the direction of book-censors, assumed the control of the publishing business with authority to prevent or suppress the publication and sales of books, pamphlets, and news-papers hostile to the prevailing religious, moral, or political sentiments. [46]

This restrictive reaction to the power of the press, as we shall see, was strongest among the Roman Catholics. During the Reformation Protestant censorship existed but was implemented by local civil authorities for the most part. A moderate press law, for example, was passed in Geneva (1560) which provided for placing the press under supervision of three "prudent and experienced men." [47] These men had the authority to appoint printers, to examine every book before it was printed in an effort to prevent popish, heretical and infidel publications and to protect the publisher against piracy. Other examples of Protestant censorship could be cited, yet

Schaff in summary says, "these petty restrictions are nothing compared with the radical and systematic crusade of the Papists against the freedom of the press." [48]

Catholic censorship during the Reformation era began in 1498 when Pope Alexander VI prohibited, on pain of excommunication, the printing and reading of heretical books. [49] Alexander further restricted the press in 1501 with the issuing of a bill providing for the burning of old publications which were heretical and the censorship of new books. The fifth Lateran Council (1513) recognized printing as a "gift from heaven intended for the glory of God," yet considered legitimate publication to require the sanction of Rome through a bishop or inquisitor. Leo X reinforced the Council in 1515 by forbidding upon penalty of confiscation and burning of books, and the fine and excommunication of the printer (or author) or works not bearing the approval, the imprimatur, of Rome's book censor (or the censor of the bishop in areas outside of Rome). This level of censorship was in place prior to the issuing of Luther's theses and indicates Rome's growing concern over the use of the press.

Further Roman restrictions developed in the middle of the sixteenth century. In 1557 and 1559 Pope Paul issued the first Index of prohibited books which was expanded by the Council of Trent's Tridentine Index of 1564. On this Index appeared the following categories: books printed before 1515 that had been condemned by a pope or council, books of heretics, versions of the Bible, obscene books, and occult books. This Index was updated in 1590, 1596, 1604 and 1664. Roman censorship was not able to restrain the avalanche of Protestant printing. Even in areas where Roman policy was most rigidly and forcefully applied, secret presses, false imprimaturs, anonymous pamphlets, and simple defiance were employed by Protestants determined to publish the glad tidings of the gospel.

Roman censorship, while unable to silence the reformers did have an impact on its own laity. Roman censorship stifled the incentive of the individual devout Catholic to learn to read. Emphasis was placed, for the devout Catholic, on learning by doing rather than learning by reading. Eisenstein describes a cartoon printed during the English Reformation showing the differing attitudes of Protestants and Catholics toward the new medium,

Here the contrast registered on the title-page illustration of Foxe's Actes and Monuments – showing devout Protestants with books on their laps and Catholics with prayer beads in their hands – seems to be highly significant. After the Council of Trent, vernacular Bibles that had been turned out previously in all regions were forbidden to Catholics and were almost compulsory for Protestants. An incentive to learn to read was, thus, eliminated from the former and reinforced among the latter. Books and markets were apt to expand at different rates thereafter. [50]

Ignatius Loyola (c. 1491-1556), the founder of the Jesuits in 1553, made the following observation regarding Protestant dominance of the press. This citation clearly shows that at least some within the camp of Rome in mid-sixteenth century saw the gravity of the situation,

The heretics have made their false theology popular and presented it in a way that is within the capacity of the common people. They preach it to the people and teach it in the schools, and scatter booklets which can be bought and understood by many, and make

their influence felt by means of their writings when they can not do it by their preaching. Their success is largely due to the negligence of those who should have shown some interest; and the bad example and the clergy, have made such ravages in the vineyard of the Lord ...

The heretics write a large number of booklets and pamphlets, by means of which they aim at taking away all authority from the Catholics, and especially from the society, and set up their false dogmas. It would seem expedient, therefore, that ours here also write answers in pamphlet form, short, and well-written, so that they can be produced without delay and bought by many. In this way the harm being done can be remedied and sound teaching spread ... With these measures it would seem that we could bring great relief to the Church, and in many places quickly apply a remedy to the beginnings of the evil before the poison has gone so deep that it will be very difficult to remove it from the heart. [51]

Loyola's insight, which was acted upon by the Society of Jesus, was instrumental in the successes of the Counter Reformation; yet the response came too late and captured the interest of too few to overshadow the ever expanding Protestant printing enterprise. The impact of the Society of Jesus is indicative of the potential of the press which was available to Catholics.

3. The Effect of the Printed Bible

A third avenue of investigation in explaining the phenomena of Protestant dominance of the press is the Bible—the most important work to be mass produced by the press. Appropriately, the average student of history remembers two accomplishments of Gutenberg, his invention of the press and the issuing of the "Gutenberg Bible." The printed Bible, both in the original languages and in the vernacular, was a sine qua non of the Reformation as well as a critical factor in expanding the Protestant reading market.

The humanist emphasis on investigation of the ancient classics and their corresponding emphasis on the mastery of the languages of the classics assisted the Reformation. In 1516 Erasmus, the prince of the humanists, issued the first published Greek New Testament. [52] This printed work profoundly influenced the Reformers: Luther, Calvin, Zwingli and Tyndale among others. The text of Erasmus allowed scholars to challenge the accuracy of the Vulgate and to recover apostolic teaching which had been clouded and distorted in the Latin translation of the Roman church. Furthermore, the Greek New Testament stimulated the publishing of commentaries by the Reformers. The commentaries of Luther, Calvin, Owens and others gained an extensive readership among the educated middle class and university students.

Not only did the publishing of the Bible in the original tongues stimulate Protestant printing, but to an even greater extent the vernacular Bible, banned by Rome, penetrated the breadth of society establishing an eager reading audience for the reformers.

Pre-Reformation Bibles were costly, bulky, scarce, and unintelligible to the masses. The press removed each of these obstacles to biblical literacy. The German New Testament of Luther clearly illustrates this. In 1522, a time characterized by risk for a printer, the first edition of

Luther's translation was issued. The five thousand copies, moderately priced, sold in three months.[53] One printer, Hans Luft, printed 100,000 copies of Luther's New Testament at Wittenberg. In Basel, in the years 1522 to 1525, Adam Petri and Thomas Wolfe issued twelve editions. [54] The impact of the vernacular Bible both quantitatively and socially is described by Schaff,

the precious little volume, which contains the wisdom of the whole world, made its way with lightening speed into the palaces of princes, the castles of knights, the convents of monks, the studies of priests, the houses of citizens, and the huts of peasants. Mechanics, peasants, and women carried the New Testament in their pockets, and dared to dispute with priests and doctors of theology about the gospel. [55]

In a similar manner, early English Bibles attained a wide readership and played an important role in the progress of the English Reformation. [56] The "Matthew" Bible (1537) and the Geneva Bible (1560) included marginal notes which created both interest and controversy.

The impact of the vernacular Bible was indeed profound--strengthening family devotions, encouraging small group study (conventicles and prophesyings), eliciting companion literature (prayer books, catechisms, and commentaries), and generally expanding the Protestant reading market. [57]

CONCLUSION

The press, as has been demonstrated is foundational to understanding the unfolding of the Protestant Reformation. Marshall McLuhan writes, "Societies have always been shaped more by the nature of the media by which men communicate than by the content of the communication." [58] This dictum applied to the Reformation overstates the case, for few objective historians would relegate the message of the Reformers to a place of secondary importance. The proclamation of the message of God's grace through faith had and continues to have a profound impact upon society. Yet, McLuhan's dictum does remind us not to minimize the impact of the press; for the press was indispensable to the starting and shaping of the Reformation.

The occurrence of the Reformation after the advent of the press is significant. Luther's advantage over Wycliffe, Hus, and other forerunners of the Reformation can not be ignored. A.C. Dickens speaking of Lollard reform effort states, "(It was) a Bible-religion, (yet) it lacked access to the printing presses until after 1530. So limited and debarred, it could become no more than an abortive reform." [59] Eisenstein observes,

Earlier heretics, such as Wycliffe or Huss, might aspire to place the vernacular Scriptures in the hands of every layman, and the new semi-lay orders such as the "Brethren of the Common Life" might try to bring literacy and prayer books to the "people." Only after Gutenberg, however, could such programs be fully implemented. [60]

Protestants believe God sovereignly provided not only the men but also the medium for starting the Reformation. This congruence of men and medium is noted by Cole,

The development of Luther's theology coincided exactly with the period in which European culture moved from the age of manuscripts to the era of printed books. [61]

The preceding discussion of the employment by Protestants and the hesitancy in employment of the new medium by Catholics during the Reformation serves as the basis for one final, practical admonition. Those who stand in the historic Protestant tradition are today the benefactors of new technology far beyond the imagination of Luther or Calvin. Radio, television and the personal computer have unmistakably shaped twentieth century culture at least to the degree that printing shaped the culture of the reformers. Radio, television and the worldwide web offer great potential for the advance of the gospel. Fifty years, in the case of radio; thirty years, in the case of television; and fifteen years, in the case of the personal computer, have passed since the introduction of this new technology, yet comparatively little has been accomplished through them by those who espouse the doctrines of the Reformers. In the last three decades there has been a vigorous employment of radio, television and especially the internet by non orthodox religious groups; yet comparatively little has been broadcast through these media which presents the gospel of the sovereign God of the Bible.

This author, ironically, finds himself in a position comparable to that of Ignatius Loyola cited earlier. Loyola, sadly acknowledged that his side, through negligence, was missing a great opportunity that was aggressively being taken by "the heretics." Rome did not fully heed the warning of Loyola, and Protestantism flourished. Should the current tepid interest in the use of the media continue among those who stand in the tradition of the Reformers it will be too little and too late. Doctrinal darkness will prevail and many ill instructed in the doctrines of grace will be seduced by the anthropocentric message they continually see and hear.

Calvinists, who have consistently advocated that culture is to be effectively employed to the glory of God, can not neglect the new media and remain true to their heritage. The followers of the Reformers must follow their example as well as their doctrine.

=====NOTES=====

Notes

1. Printing of the block type was probably first invented in the sixth century by the Chinese. The Chinese advanced to movable type but abandoned it since it was ill suited to their language and script. See George Unwin and Philip Unwin, "History of Publishing" in New Encyclopedia Britannica in 30 Volumes, Macropoedia Vol. XV (Chicago, William Benton, Publisher, 1974), pp. 221-57.
2. Preserved Smith, The Age of the Reformation (New York: Henry Holt and Co., 1920), pp. 8,9.
3. S.H. Steinberg, Five Hundred Years of Printing (New York: Criterion Books, 1959), p. 26.
4. Paper was invented by the Chinese as early as A.D. 105. It was not introduced until much later

to Europe (Spain XII; Italy XIII; Germany XIV; and England XV). Unwin and Unwin, "History of Publishing," p. 224.

5. Frederick R. Goff, *The Permanence of Johann Gutenberg* (Austin, Texas: Frederick R. Goff, 1970), p. 12.

6. Steinberg, *Five Hundred Years of Printing*, p. 23.

7. Smith, *Age of the Reformation*, p. 9. The press also spread rapidly from Europe to other lands; reaching Mexico city in 1539, Indian in 1561, China in 1589, Japan in 1591, and Russia in 1563.

8. Goff, *Gutenberg*, p. 21.

9. Philip Schaff, *History of the Christian Church* (Grand Rapids: William. B. Eerdmans, 1910), 8:560.

10. Elizabeth Eisenstein, "The Advent of Printing and the Protestant Revolt: A New Approach to the Disruption of Western Christendom," in *Transition and Revolution*, ed. by Robert M. Kingdon (Minneapolis, Minn.: Burgess Publishing Co., 1974), p. 241. Emphasis is mine.

11. Cited in *Ibid.*, p. 236.

12. Schaff, *History of the Christian Church*, 8:561.

13. Cited in Eisenstein, "The Advent of Printing," p. 237.

14. Steinberg, *Five Hundred Years of Printing*, p. 25.

15. *Ibid.*, p. 25.

16. *Ibid.*, pp. 19-21. Steinberg argues for an extended incunabula period instead of the traditional 1450-1500.

17. Leonard J. Triterud, ed. *Elizabethan Puritanism* (New York: Oxford University Press, 1971), p. 41.

18. George Hunston Williams, *The Radical Reformation* (Philadelphia: Westminster Press, 1975), *passim*.

19. H.G. Koenigsberger and George L. Mosse, *Europe in the Sixteenth Century* (London: Longman Group Ltd., 1968), pp. 306-7.

20. Elizabeth Eisenstein, "Some Conjectures About the Impact of Printing on Western Society," *Journal of Modern History* 40 (1968): 3. Eisenstein rejects current conjectures of a gradual increase of output as probably inaccurate.

21. Rudolf Hirsch, *Printing, Selling and Reading, 1500-1650* (Wiesbaden: Otto Harasowitz, 1974), p. vii.
22. Goff, *Gutenberg*, p. 22.
23. Harold Grimm, *The Reformation Era, 1500-1650* (New York: MacMillan Publishing Co., 1973), p. 11. Grimm also states that by 1500 one-tenth of the population in western and central Europe resided in the cities, a significant proportion!
24. *Ibid.*, pp. 15-6.
25. Eisenstein, "The Advent of Printing," p. 236.
26. Richard Cole, "The Dynamics of Printing in the Sixteenth Century," in Lawrence P. Buck and Jonathan W. Zophy, eds. *The Social History of the Reformation* (Columbus, Ohio: Ohio State University, 1972), p. 96.
27. Eisenstein, "The Advent of Printing," p. 239.
28. Cole, "The Dynamics of Printing," p. 100. Also see Williams (*The Radical Reformation*, *passim*) for a detailed documentation of propaganda and the radicals.
29. Eisenstein, "The Advent of Printing," p. 251.
30. Cole, "The Dynamics of Printing," p. 100.
31. Smith, *The Age of the Reformation*, p. 10.
32. Here it is important to note the contribution of humanist scholars such as Erasmus in making important ecclesiastical works available for publication.
33. Koenigsberger and Mosse, *Europe in the Sixteenth Century*, p. 12.
34. Smith, *The Age of the Reformation*, p. 12.
35. Hirsch, *Printing*, p. 52.
36. Maria Grossman, "Wittenberg Printing, Early Sixteenth Century," in *Seventeenth Century Essays and Studies Vol. I ed.*, by Carl S. Meyer (Saint Louis, Missouri: Foundation for Reformation Research, 1970), pp. 65-6.
37. Williams, *The Radical Reformation*, p. 109.
38. Eisenstein, "The Advent of Printing," p. 257.
39. See Levin L. Schucking, *The Puritan Family* translation Brian Battershaw (New York:

Schocken Books, 1970), pp. 56ff.

40. Both Eisenstein ("The Advent of Printing," pp. 235-6) and Koenigsberger and Mosse (Europe in the Sixteenth Century, p. 14) state plainly that Protestantism was the first religious movement to take full advantage of the invention.

41. Koenigsberger and Mosse, *Ibid.*, p. 306.

42. Hirsch, *Printing*, p. 34.

43. Cited in Unwin and Unwin, "History of Publishing," p. 226.

44. Schaff, *History of the Christian Church*, 8:563.

45. An interesting study could be made of the comparative use of new media by groups of an established opinion as opposed to groups of an emerging opinion.

46. Schaff, *History of the Christian Church*, 8:563.

47. *Ibid.*, 8:465. Also note that censorship by those of the radical reformation was almost non-existent, a logical result of adherence to separation of church and state.

48. *Ibid.*, 8:566. See Smith (*The Age of the Reformation*, p. 421) for a similar testimony.

49. For a summary see Smith, *Ibid.*, pp. 417-24.

50. Eisenstein, "Some Conjectures," p. 37.

51. Cited in Hans J. Hillerbrand, *The Reformation: A Narrative History Related by Contemporary Observers and Participants*, (New York: Harper and Row, 1964), pp. 446-8.

52. Francisco Ximenes (c. 1436-1517), archbishop of Toledo, completed a Greek translation of the New Testament as early as 1514 but his work was not published until 1520.

53. This quantity should be compared to the average edition size of the era, that is, approximately five hundred copies per edition.

54. Schaff, *History of the Christian Church*, 8:561-2.

55. *Ibid.*, 8:562.

56. See A.G. Dickens, *The English Reformation* (New York: Schocken Books, 1976), pp. 129-38.

57. Vernacular Bibles and other publications standardized language. Unity of language within a geographical area was of assistance to the efforts of the Reformation. See Unwin and Unwin,

"History of Publishing," p. 226.

58. Marshall McLuhan and Quentin Fiore, *The Medium is the Message* (New York: Bantam Books, 1967), p. 7.

59. Dickens, *The English Reformation*, p. 37.

60. Eisenstein, "Some Conjectures," p. 35.

61. Cole, "The Dynamics of Printing," pp. 94-5.