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THE PRESS, PAPER SHORTAGES, AND REVOLUTION IN EARLY AMERICA

Roger Mellen

The printing press helped to spread literacy, civic discourse, and even political dissent in colonial America. Without paper, however, the invention of the moveable type printing press would have been insignificant. This crucial communication medium was hobbled by a critical shortage of the raw material needed for printed matter. Paper was in short supply in the colonies and in the new nation as it could only be made from rags, and there was constant difficulty in obtaining enough rags to keep the presses rolling. Pleas for this essential ingredient were constantly seen in the newspapers in early America and there were severe shortages of both paper and the rags from which it was made during the American Revolution. This article examines how desperate were the early Americans for the paper which was necessary both for firing the muskets and for spreading the rhetoric of Revolution.

KEYWORDS free press; colonial printing; American Revolution; paper shortages; early America; civic discourse

Introduction

Printed material helped to bring about an important cultural shift in Western civilization. In the centuries after Johannes Gutenberg's invention, 'An elite society gave way to a mass society,¹ both in Europe and in North America.² This transition from a society heavily dependent on handwritten manuscripts and oral communication to one dependent on the printed word was a key to the development of civic discourse or a less elite 'public sphere.'³ Such civic discourse was spurred on by the printed word,⁴ but this development was slowed in colonial America by a critical shortage: the raw material for printed matter was in short supply in European countries and their colonies for centuries.

Until the late nineteenth century, paper in the West was made exclusively from old rags of cotton and linen, and there was never enough of that essential ingredient to fill a growing demand. This led to constant pleas in the newspapers for saving and selling rags. As far back as 1731, the *American Weekly Mercury* in Philadelphia included a small notice on the back of the last page, announcing: 'Ready Money for Linnen Rags.'⁵

This constant shortage of the raw material for paper led to regulations, and both the British and local colonial governments were involved in encouraging the saving of rags, licensing and regulating the manufacture and importation of paper, and even legislating monopolies. While the rationalization for such regulation does have some parallels with the American justification for the regulation of broadcasting, the shortages in paper did not lead to content regulation of print in the USA as it did in radio and television. The shortage of paper became even more dire during the American Revolution, a watershed moment for both political freedom and freedom of expression. Without the stuff upon which words were printed, the rhetoric of such liberty could not have flourished.

Printing and Censorship

The printed word was important to the first British-American colonists. Literacy and reading was considered the primary weapon with which to battle ‘the three great evils of Ignorance, Prophaneness, and Idleness’⁶ for the Puritan colonists in New England, and literacy was the key to ridding society of superstition.⁷ In the colony of Massachusetts, the Puritan settlers established the first printing press in British Northern America in 1639. It was considered necessary for all to be able to read so they might interpret the Bible for themselves.⁸

For nearly 100 years, religious and governmental leaders tightly controlled the press there.⁹ The materials needed for any sort of printing—the press, the type, and the paper—all had to be imported from England. The first attempt at publishing a newspaper, *Publick Occurrences, Both Foreign and Domestick* by Benjamin Harris in 1690, included a promise to quickly correct any errors and to avoid ‘false Reports.’ But it reported critically on the colony’s war with the Indians and also that King Louis XIV of France ‘used to Lie with the Son’s Wife.’¹⁰ Whether it was this scandalous report or the criticism of the government’s defense of the colony is unclear, but the newspaper was ‘suppressed’ after only one issue as the colonial Governor and his Council declared ‘their high Resentment and Disallowance of said Pamphlet’ and decreed that a license would be needed before any such thing could be printed.¹¹ By 1704, John Campbell successfully published a newspaper, the *Boston News-Letter*, but he got permission and noted on the masthead that it was ‘Published by Authority.’¹² The floodgates had opened, and by the 1720s, handwritten newsletters were being replaced as printers published three newspapers in Boston and the government was being openly criticized, despite continued efforts at censorship.

In Virginia, Royal Governor Sir William Berkeley made it clear in 1671 that he would tolerate no printing press in his colony:

I thank God, *there are no free schools nor printing*, and I hope we shall not have these hundred years; for *learning* has brought disobedience, and heresy, and sects into the world, and *printing* has divulged them, and libels against the best government. God keep us from both!¹³

For many years, the colonial government allowed no printing there—using an even stricter measure of control than what was established in Europe. All books, newspapers, or other printed matter were imported at great cost of both money and time and the government tightly censored the most important medium of the time—the printed word. That form of communication, however, proved to be difficult to constrain, and heretical and revolutionary thoughts spread more widely than political and religious leaders may have wished.

In the beginning, printing in England and in the colonies was tightly controlled. Just as with all new communication technologies, the printed word was heavily regulated by those in power. By the 1500s—just a short time after the introduction of the printing press to England—only the few with licenses could print, and the king utilized the Court of the Star Chamber to curtail ‘the greate enourmities and abuses’ of printers and booksellers,¹⁴ and to strictly punish anything deemed seditious or blasphemous.¹⁵ Shuger suggests that in the early seventeenth century, regulation of the printed word was considered to be

right and proper in Britain and the ideas of individual right of expression had not yet developed.¹⁶ By the rule of King James I, press censorship had weakened to one that was no longer unitary nor completely stifled opposition opinion.¹⁷

Licensing did, however, remain in place and the printing of certain books was prevented, leading eventually to calls for increased press freedom to emerge. Poet John Milton argued against licensing in 'Areopagitica: A Speech for the Liberty of Unlicensed Printing' to Parliament in 1644. He suggested that such prior restraint by the government did not work and that it weakened society by preventing the study of opposing viewpoints.¹⁸ Opposition newspapers appeared briefly in the seventeenth century and eventually the practice of licensing and censoring such a growing international market commodity became too onerous. Those nations with heavy restrictions on printing lost business to those that were freer and the licensing of printing finally expired in 1694.¹⁹

By the time colonial newspapers were being published in the Americas, printing was no longer a new communication technology. Governmental and religious control of content was slipping away and the philosophic and political arguments for freedom of the press were solid and established. While regulations to encourage the saving of rags and the manufacture of paper were welcome, regulation of content was not. The public sphere had broadened and it was printed materials that helped to feed the fires of political debate. The 1735 Zenger trial in New York demonstrated that the colonists wanted the freedom to criticize their government—the power of exerting oneself in the civic sphere—and to attack the social order of 'superiors.'²⁰

By this time, juries on both sides of the Atlantic refused to convict writers and printers for seditious libel.²¹ Locke, Hume, Bolingbroke, and 'Cato' (John Trenchard and Thomas Gordon) were among the many who espoused the right to free expression and they, as well as radical politician and publisher John Wilkes, were all heavily quoted in the colonial press. In 1769, the *Pennsylvania Journal* reported on a gathering that honored Wilkes and expressed the wish that 'the liberty of the Press remain free from ministerial restraint.'²²

By the 1760s, British jurist Sir William Blackstone noted that the law in England had accepted the fact that 'The liberty of the press is indeed essential to the nature of a free state.'²³ By 1776, colonists considered the right to a free press so essential that they rejected the restraints that had been common in Great Britain: licensing the press, taxation of printed matter, and prosecution for criminal libel.²⁴ The leaders of the newly declared free states begin writing a guarantee of the right to a free press into their new constitutions, beginning with the Virginia Declaration of Rights.²⁵

Without the printed word in the Western world, the great ideas of the Renaissance, the Reformation, and the Scientific Revolution are unlikely to have occurred and spread.²⁶ With the expansion of printed material, more presses than could easily be monitored, plus the illegal importation of forbidden materials, governmental and religious authorities could no longer control what people could read and ideas proliferated with a relatively great speed.

Printing and Paper

The great invention of the moveable type printing press would have been worthless without the existence of paper. In fact, Fevre and Martin suggest that it was the

introduction of paper to Europe, rather than the printing press, that first led to the expansion of written material and the loss of Church control.²⁷ Shortages of paper inhibited the spread of the written word—a limitation that would continue for centuries in the Western world.

Colonial newspapers of the eighteenth century clearly demonstrate that printers and papermakers were constantly struggling to obtain the needed raw materials to make the paper to support their presses. An advertisement in a *Boston News-Letter* of 1734 suggested that the local paper mill was not getting adequate rags to make sufficient paper to serve the public interest:

it is the Duty of every Person, as much as in them lies, to help forward so useful a Manufactory ; Therefore I intreat all those that are Lovrrs of their Country, to be very careful of their Linnen Rags, and send them to Joseph Stocker in Spring-Lane, Boston, and they shall receive ready Money for the same.²⁸

Notices in colonial newspapers as far back as 1731 encouraged readers to sell their linen and cotton rags to the printers.²⁹

The limiting factor here was that European and colonial paper mills could only make paper from rags made of linen and cotton, with perhaps a small amount of hemp.³⁰ The Chinese apparently invented paper around AD 100, but it did not arrive in Europe—via the Arabs—until the twelfth or thirteenth century.³¹ However, the press in the West did not recognize the Oriental origins of paper. The invention of paper came much later, according to eighteenth-century colonial newspapers. The book, Mr. Anderson's *History of the Rise and Progress of Commerce*, was quoted as stating that paper made of linen rags was invented in 1417.³²

While the Chinese were able to use the fiber from rags, straw, and mulberry trees, the Europeans could only make paper from linen and cotton rags. Linen cloth was made from flax or sometimes hemp.³³ Several advertisements in the 1760s included 'old rope' in the plea for rags, indicating that at least one mill did use a small quantity of hemp in making paper.³⁴

This shift from handwritten manuscripts on vellum (usually made of calfskin) or parchment (made from sheepskin) to less expensive books printed on paper radically reduced the cost of printed material.³⁵ According to Febvre and Martin, without the introduction of paper the critical development of printing, the mass production of the written word, and the increased spread of ideas would never have taken place.³⁶ The shift in production led to an increase in available books, allowed for more secular materials, and lessened the control of texts by the Church.³⁷

While the shift to paper did make printed matter less costly and more readily available, in the British-American colonies printed matter remained more expensive than it was in Britain as all paper initially had to be imported from Europe. The mercantile policies of the British government discouraged any manufacturing in the colonies and forbade the legal importation of paper directly from other nations. Furthermore, the British were not the leaders in papermaking, as the people wore primarily wool clothing, leaving them with fewer linen rags.³⁸ Thus, the highest grade paper came from Holland, Italy, and France, but this was expensive, requiring either indirect shipping through Great Britain with higher taxes or illegal smuggling directly into the colonies.³⁹ The manufacture of paper within the

colonies did not begin until the end of the seventeenth century, leaving the cost of paper and printed materials extremely high.

As the need for paper began to increase in the later 1600s, the colonists looked for ways to develop their own sources of paper. The demand for printed material was growing: not simply books, but also newspapers and other periodicals. Yearly almanacs were becoming ubiquitous, purchased for a few pennies by even the poor farmers.⁴⁰ The call for paper stock was growing faster than what importation could supply,⁴¹ so the colonists turned to making paper locally, despite the British policies that encouraged the importation of such manufactured goods from the motherland.

The first paper mill was built near Philadelphia about 1690, but this was the only paper manufactory in the colonies for several decades.⁴² New paper mills did not solve the problem, however. As the demand for paper continued to increase, the shortage shifted to the needed raw materials. Fast-growing use of paper in the first half of the eighteenth century made it increasingly impossible for papermakers to obtain enough rags to keep up with demand.⁴³ While the colonies had enough water to power the mills and experienced papermakers were emigrating from Europe, the only thing missing was a plentiful source of rags to macerate into a pulp to create the cellulose from which paper could be made.

The most famous printer in colonial America—Benjamin Franklin—was constantly working to improve the supply of paper to keep his presses working. Franklin claimed to help start some 18 different paper mills; by loaning money, recruiting skilled laborers, ordering equipment, or even by trading rags for paper. He assisted his suppliers and hurt his competitors by monopolizing the essential printing supplies: presses, type, rags, and paper. Franklin did not own his own paper mill, yet he and his wife became wholesale paper traders⁴⁴ and probably were the biggest dealers of paper in the colonies.⁴⁵ In his autobiography, Franklin credited his wife with assisting him with her frugal ways, including by ‘purchasing rags for the papermakers.’⁴⁶

The first successful printer in Virginia, William Parks, bought some of his paper stock from Franklin but eventually built the first paper mill in the southern colonies with assistance from Franklin. His *Pennsylvania Gazette* of September 23, 1742 ran an advertisement that Parks was looking for help with papermaking: ‘An honest and diligent Person, that is capable of building a good Paper-Mill, and another that understands the Making of Paper, are wanted to undertake and to carry on that Business in a neighboring Colony.’⁴⁷ Franklin apparently found the needed experts, sent them to Williamsburg, and funded much of the construction.⁴⁸ Parks’ almanac for 1742 may have anticipated the operation of the new mill and ran an advertisement stating: ‘The Printer of this *Almanack* will give Ready Money for Old Linen Rags, to make Paper of.’⁴⁹ Another advertisement seven years later in the *Virginia Almanack* pointed out that the printer had a paper mill running, and he ‘desires all Persons to save their old *Linen Rags*, for making Paper. All Sorts are useful, from the coarsest Crocus of Sail-Cloth, to the finest Holland or Cambrick.’⁵⁰

This Virginia paper mill was so highly valued that shortly after Parks had it built, the local newspaper published a very long ode to him:

Tho’ sage Philosophers have said,
Of nothing, can be nothing made:

Yet *much* thy Mill, O *Parks*, brings forth
From which we reckon *nothing* worth.⁵¹

The author of this verse was heaping praise upon both the paper mill and the owner for creating an important product—paper—from something considered worthless—rags. The verse went on to encourage the saving of old clothes to turn them into ‘Sonnets,’ ‘Sacred Liturgy,’ and newspapers. Of course, the subject of this ode was not only the paper mill owner, he was also the only local printer, published the newspaper in which this was printed, and quite possibly could have been the pseudonymous author:

The Printer is the Poet’s Friend;
Both cram the News, and stuff the Mills,
For Bards have Rags, and—little else.⁵²

Another short poem common to that time, whose author is unknown, explored the cycle of rags to riches:

RAGS make paper,
PAPER makes money,
MONEY makes banks,
BANKS made loans,
LOANS make beggars,
BEGGARS make rags.⁵³

These poems and advertisements demonstrate the relentless need to collect rags from which to make paper, and the extraordinary efforts by both printers and papermakers to overcome a constant want of this indispensable ingredient. The continual shortages of the raw material needed to make paper led to government regulation, even after direct licensing and censorship of written materials had been abandoned.

Shortages of paper were so severe that running a paper mill required governmental permission and was often a licensed monopoly:

Papermaking was regarded as a sort of public utility—as indeed were other manufacturing industries—and it came under the watchful supervision of the public service commissions or trade commissions of the time, that is the great and general court, or the assembly, or the governor and council.⁵⁴

The making of paper in the colonies also faced another hurdle—indifference from the national government. British mercantile policy clearly discouraged manufacturing in the American colonies. The government back across the Atlantic Ocean expected the colonists to produce raw materials that British manufacturers could then use in British products, and such assembled commodities were then imported into the colonies from the mother country. Several acts of Parliament actually banned the sale of specific American manufactures.⁵⁵ British authorities at best *tolerated* manufacturing in the North American colonies.⁵⁶

Yet it was too expensive to ship over the Atlantic Ocean the cheaper paper needed for newspapers, almanacs, and other ephemeral printed material. So despite a lack of support from the mother country, colonists had established several paper mills by the eighteenth century. These were an important source of lesser quality but also less costly

paper. Without the local mills, such material had to be imported from England or illegally smuggled from other nations. Such imported paper—while often of higher quality—was very expensive, leading to higher costs for printed material in the colonies.

Even in Great Britain, the constant shortage of paper led to some unusual laws. Until 1818, newspapers were restricted to a maximum size of 22 × 32 inches as a way to conserve paper.⁵⁷ It was generally considered improper to bury the dead in linen or cotton. Burial clothes had previously been made of cotton, but to further conserve the raw material needed for making paper, Parliament passed a law as far back as 1667, requiring bodies to be buried in wool. This not only encouraged the manufacture of British woolsens, but saved an estimated 250,000 pounds of linen and cotton each year, rags that could then be made into paper.⁵⁸

Paper and the Path to Revolution

By the 1760s, literacy appears to have peaked in the colonies, and the number of pages printed had reached an apex.⁵⁹ As Weeks put it: ‘Paper-making did not keep pace with paper-using.’⁶⁰ The shortage of paper had become so severe that colonial printers and papermakers were taking drastic actions. Several newspapers still extant, including the *Boston News-Letter* of May 29, 1760 and the *New York Mercury* of July 30, 1764, have jammed onto their pages sideways printing in the margins. While there is no explanation published in the newspapers, Weeks claims this was an effort to squeeze more words onto less paper, and he even notes that some printers were forced to publish newspapers on what would normally be thrown out—ripped pages that were carefully pasted together.⁶¹

As the move toward colonial independence began, printed verse extolling the collecting of rags for paper became common in an attempt to educate the colonists not to throw out old clothes but rather to save their old linen:

Rags are as Beauties, which concealed lie,
 But when in Paper, how it charms the Eye:
 Pray save Rags, new Beauties to discover,
 For Paper truly, every one’s a Lover:
 By th’ Pen and Press such Knowledge is display’d,
 As wou’dn’t exist if Paper was not made.
 Wisdom of Things, mysterious, divine,
 Illustriously doth on Paper shine.⁶²

A ‘BellCart’ traveled the streets of Boston at this time, collecting old rags for a paper mill in Milton, MA.⁶³ One advertisement in the *New-York Mercury* even announced a contest that the person who brought in the most rags would win 10 dollars, in addition to the value of the rags.⁶⁴

The colonial Stamp Act of 1765, passed by the British Parliament to help pay for the debt caused by the Seven Years’ War, threatened to destroy not only the colonial printers, but also the papermakers. According to this new law, all published matter, including books, newspapers, and pamphlets, had to be printed on stamped paper. This added a cost of a halfpenny to a penny for each newspaper by imposing a tax on the paper, plus a two-shilling tax for every advertisement.⁶⁵ More costly was an indirect burden established by this new regulation—not often recognized by historians exploring the Stamp Act.

Printers would not only have to pay an added tax, but the paper also had to be imported at a much higher price from Great Britain, as that was the only way to legalize it with a stamp.⁶⁶ The tax stamps were not to be available in the colonies to put on locally manufactured paper.

This tax threatened to put the entire colonial papermaking industry out of business. For a short time, printers halted the publication of most colonial newspapers as no stamped paper ever made it onto American soil, and publishers faced a stiff fine if they published without the stamps. This made the financial future bleak for colonial printers, who therefore helped to lead the propaganda fight against the stamp tax.⁶⁷ The colonies united in their opposition to a British ministry that aimed to tax them without their own representation.

The Cost of Paper

As shortages increased, the cost of paper in the colonies apparently went up. The paper produced in the Rittenhouse paper mill, established in Pennsylvania in 1697, cost 10 shillings a ream. Printers often used this course, inferior paper for newspapers, almanacs, and other ephemeral publications. Higher quality writing paper cost 20 shillings a ream.⁶⁸ From the end of the 1600s until the 1740s, the price for the locally produced paper remained relatively constant at 10 shillings local currency or 6 shillings 8 pence sterling per ream.⁶⁹ Before 1747, Benjamin Franklin charged between 10 and 12 shillings local currency to sell a ream of paper to other printers; paper he had himself purchased from someone else's mill. Franklin's records reveal that the price he charged for paper went up to 15 shillings per ream by 1748.⁷⁰

As the dispute with Great Britain interrupted trade, colonial newspapers noted the shortage and increased cost of paper. One newspaper in 1775 noted that paper 'is now exceedingly scarce and very dear' and pleaded with subscribers to pay their bills.⁷¹ One year later, the same printer noted that paper was 'lately risen to more than triple its former value, and now can hardly be procured at any price.'⁷² Seven months later, the same printer raised the cost of subscriptions because of 'the extravagant price of paper' and other printing supplies.⁷³ While Wroth, the definitive historian of printing for this period, suggests that costs for the locally made paper went down over the years, the account books, newspaper reports, and pleas for raw materials show that in fact paper grew more costly, especially during the Revolution.⁷⁴

There were occasionally other sources of paper supplementing the normal supplies of local paper and paper imported from British merchants. Paper captured from enemy ships and smuggled paper would sometimes bring the cost of printing materials down, at least temporarily. Paper from a captured Spanish ship, presumably of a high quality, manufactured in Genoa, was offered for sale at an extremely low price of 3 shillings sterling in 1747, when Britain was at war with Spain. These 'prize papers' and that smuggled in from Holland undercut the normal trade in paper stock, but it was usually the higher quality paper not used for newsprint.⁷⁵ Despite these exceptions, the increasing pleas for rags and the extreme measures taken by printers to use every available scrap of paper indicate that the shortages grew worse and the cost of paper increased, at least through the Revolutionary War.

Paper and the American Revolution

Newspapers, political pamphlets, and other printed materials were key ingredients of the successful revolt. As early historian David Ramsay recognized, 'In establishing American independence, the pen and the press had a merit equal to that of the sword.'⁷⁶ Looking back, the second president of the USA, John Adams, wrote that the Revolutionary War was not the most important transformation of the time, but rather it was the transition of ideas that came prior to the fighting: 'This radical change in the principles, opinions, sentiments and affections of the people was the real American Revolution.'⁷⁷ Adams saw the press as one of the important influences on this change of sentiment.⁷⁸

Schlesinger theorized that it was printed materials that 'instigated, catalyzed, and synthesized'⁷⁹ other forms of propaganda, such as preaching from the pulpit and mob actions. He concluded that newspapers formed a unified and effective propagandist influence leading up to the Revolution. While Schlesinger did not allege that the printed word caused the Revolution, he did suggest the fight would not have been successful without the press. Davidson recognized both political pamphlets and the colonial newspapers as the key vehicles of propaganda: 'The written word,' Davidson notes, 'carries an authority of its own—people believe what they read.' The newspapers, the author concluded, 'became the most effective organ for the dissemination of written propaganda,' and that despite the fact that newspapers of this time did not circulate widely, they 'had an extensive appeal and exercised a vital influence on the minds of the reading public.'⁸⁰

Limiting this critical circulation of propaganda was the scarcity of paper, a shortage that became even more extreme during the Revolution. There simply was not enough of the raw material to make paper for books, for newspapers, for pamphlets, or even to fire the muskets in the Revolution. One contemporary news article about the dispute leading up to the fighting, printed in 1775, apologized for a delay in printing 'through want of paper for the Connecticut Courant.'⁸¹ The Pennsylvania Convention in 1775, while busy with political issues on the cusp of Revolution, found time to vote unanimously 'that we recommend the making of different kinds of paper.'⁸² By 1776, the lack of paper was worsening due to a British blockade, the cut-off of overseas trade, and an insufficiency of papermakers, as many were serving in one of the two armies.⁸³

The *Connecticut Journal* noted the importance of paper: 'we could not subsist, in a state of society without it ... but since our disunion with Great Britain, our supplies of paper from thence have totally ceased, and almost from every other part of the World.' This notice went on to announce a new paper mill and to plead to its readers to save and turn in linen and cotton rags.⁸⁴ Another advertisement noted that the great scarcity of paper for both printing and writing made the savings of rags an imperative without which it would be impossible 'to furnish a sufficient quantity of writing paper for schools, whereby a large number of children will be deprived of the means of acquiring learning.'⁸⁵

The shortages were so critical to the emerging nation, and the need for paper so widely recognized, that the various new state governments subsidized new paper mills, helped to repair existing mills, and exempted trained papermakers from serving in the military.⁸⁶ North Carolina, for example, gave 250 pounds to help to establish a mill that began operation in 1777. In Maryland, the new government advanced a 400-pound subsidy to help begin a papermaking operation.⁸⁷ The colonists had never manufactured

enough paper for their own uses—much of their paper had been imported from England, France, and Holland⁸⁸—and now that British naval blockades prevented most imports, the problem became serious.

Army officers complained that a lack of paper forced them to write their reports on whatever they could find and to ship them without envelopes. As General Philip Schuyler wrote to Connecticut's Governor Jonathan Trumbull, 'Having very little paper left, I am under the necessity of sending this without cover,' asking the governor to write to General Mott for him, due to his lack of writing paper, to request that Mott hurry to Fort Ticonderoga.⁸⁹ In a letter to his commander in chief, General George Washington, Schuyler excused himself for 'these scraps of paper; necessity obliges me to use them, having no other to write on.'⁹⁰

The problem became even more critical on the battlefield, where paper was an essential ingredient of war. Soldiers needed it to wrap the black powder used in firing the colonial musket. Bullets could not be fired without paper. A want of paper led to the patriots sometimes raiding collections of books to rip out their pages to use in the battlefields.⁹¹

Paper shortages were also a problem for civilians and the government. By 1778, The *Connecticut Courant and Hartford Weekly Intelligencer* complained that it was almost impossible to keep printing. Some issues cut to half the normal number of pages, reporting that 'the want of paper increases fast.'⁹² The paper scarcity was so bad that the *Connecticut Courant* reportedly had to sometimes print on 'wrapping paper.'⁹³ In Massachusetts, the legislature ordered every local Committee of Safety to appeal to residents to save rags and to appoint a rag collector.⁹⁴

The manufacture of paper was considered so important that the new American Congress in July of 1776 passed a resolution ordering that the papermakers in Pennsylvania be detained and not allowed to join the British in New Jersey.⁹⁵ A 1777 *Providence Gazette: and Country Journal* included an advertisement for rags with a patriotic twist: 'As paper is now much wanted for the army, and other necessary purposes (which cannot be manufactured without rags) it is hoped every friend to America will encourage the saving and collecting of them.'⁹⁶

The *North Carolina Gazette* attempted a different tactic, cajoling the young women:

that by sending to the Paper Mill an old Handkerchief, no longer fit to cover their snowy Breasts, there is a Possibility of its returning to them again in the more pleasing form of a Billet Doux from their Lovers.⁹⁷

In Virginia, the subscription rate for one newspaper went up in 1778, 'owing to the enemy's getting p[ossession?] of all the paper mills near *Philadelphia*, from where we derived our chief supplies.'⁹⁸

Paper and the New Nation

The end of the Revolution did not bring about an end to the problem. Mechanized papermaking and printing by the 1800s helped to make printed materials cheaper, but the shortage of raw materials remained.⁹⁹ The lack of sufficient rags hobbled the spread of printing until the manufacture of paper from wood pulp was perfected in the mid-to-late nineteenth century.¹⁰⁰ D. D. Smith argues that it was an increasing price of paper

combined with an increased literacy and the need in democracies for an informed public that 'led to an almost frantic search in the early and mid-nineteenth century for a rag substitute.'¹⁰¹ Supplies of rags were in such demand that American papermakers in the mid-1800s reportedly took to raiding Egyptian tombs and making paper out of the rags that wrapped the mummies, a supply then thought to be endless.¹⁰²

The price of rags in the USA had doubled by mid-1800s and experimentation to find a more plentiful raw material had increased. By the late 1800s, newspapers had switched over from paper made from rags to paper made from wood pulp, and the overall price of paper fell dramatically,¹⁰³ from 25 cents a pound in the 1860s to 2 cents a pound or less by the 1900s.¹⁰⁴ This was a crucial step in the development of print as a truly mass medium: 'As in the Renaissance, developments in the manufacture and marketing of paper were as important as developments in printing itself.'¹⁰⁵ With cheaper paper, along with mechanized printing, the amount of printed material grew dramatically.

Conclusion

As the scarcity of paper increased in colonial America, so did the cost. Shortages of paper and the raw material essential to its manufacture restricted the flow of printed material in the British-American colonies. The problem grew worse over time and the Stamp Act threatened to magnify the problem. The want of paper became even more severe during the American Revolution. Paper shortages led to government involvement and even regulation in Great Britain and her colonies and in the USA. In the new nation, these regulations were aimed at ensuring that paper was available for the free flow of information rather than at restricting the content. In the mother country—and while the colonies were still bound to Great Britain—some of the regulations did have a serious effect on the messages.

By making newspapers, almanacs, and other reading material more expensive, the Stamp Act threatened to limit the amount of printed materials. Hannah Barker theorizes that it was the taxation of newspapers between 1712 until 1855 (more than it was the limitations of paper and printing technology) that restricted the circulation of newspapers in Britain and her colonies. Printed matter strongly influenced public opinion and encouraged a broader range of common people to join the civic discourse in the mid-1700s, Barker suggests. Newspapers, this historian writes, encouraged a wider population to not only become interested in politics but also become more involved politically. Radical political ideology was actually developed on the pages of the newspapers.¹⁰⁶ Thus any impediment to the distribution of such printed matter—whether through taxation or through limitations on the manufacture of paper—limited the spread of potentially seditious ideas that accompanied such reading.

British regulations also restricted the size of the newspaper page. While this rule ostensibly was to conserve paper, it nevertheless constricted the flow of information.¹⁰⁷ Many colonists and some historians believed that the British ministry intended the American Stamp Act to stifle political dissidence, although the historical records do not substantiate this claim.¹⁰⁸ Whatever the intent, by increasing the cost and requiring the use of imported paper, the Stamp Act did threaten to make any use of paper dearer to colonists, to drive the papermakers out of business, and to increase the shortage of paper.

Deliberate or not, the tax threatened the business of those who controlled the flow of information, radicalizing the gatekeepers at a crucial time for the future of the British Empire in North America. When pushed to actual Revolution, the Americans suffered even more severe shortages, including a dearth of paper necessary for the new nation to function.

While the limited supply of paper in early America did threaten the flow of information and potentially the broadening of civic discourse, the colonists viewed government regulation of content as a more serious bottleneck to the free circulation of ideas. It was perhaps not as easy as it might have been to distribute printed material and the written words contained within, but with concerted and dramatic actions to reduce the shortage of paper, the colonists created an active print culture. Through the encouragement of rag collection, the development of local paper mills, and regulation that encouraged the making of paper, combined with importation of expensive paper and reusing of printed pages when the paucity got severe, new ideas did proliferate. Despite the problem of not having enough paper to cheaply produce printed matter, sedition did spread, civic discourse broadened, and the American experiment in democracy began.

Notes

1. Febvre and Martin, *Coming of the Book*, 12.
2. Of course, in the mid-fifteenth century, Gutenberg did not invent printing per se. He invented a printing press with interchangeable metal type. Printing had existed for centuries in Korea and China. See also Eisenstein, *The Printing Revolution in Early Modern Europe*; Innis, *Empire and Communications*; and McLuhan, *The Gutenberg Galaxy* (among others) for the transitional influences of the spread of the printed word.
3. Habermas, *Transformation of the Public Sphere*; Johns, "Acknowledge a Revolution," fn 34, 120. Manuscripts and scribal copying continued at least until the eighteenth century. In reality, a print culture has always coexisted with an oral culture, and for some time with a manuscript culture. See Febvre and Martin, *Coming of the Book*, 12.
4. Warner, *Letters of the Republic*; Schudson, "Was there a Public Sphere?," 154 and 161, denies that such "rational-critical discussion" actually did exist in colonial American society and suggests the public sphere is more of an ideal than a reality. He also notes, however, that just before the American Revolution, the press was a crucial part of political activity.
5. Bradford, *American Weekly Mercury*, 4. This article will quote the original sources without alterations or notations of what may appear to be typographic errors. Spelling had not yet been standardized in Colonial America.
6. Stone, "Educational Revolution," 71.
7. Postman, *Disappearance*, 38.
8. Hall, "Atlantic Economy," 119.
9. Thomas, *History of Printing*, 4–6.
10. Harris, *Publick Occurrences*.
11. Clark, *Public Prints*, 71–3.
12. Copeland, *Free Press*, 70 and 134.
13. Berkeley, *Letter*, 239.
14. Pool, *Technologies of Freedom*, 15.

15. Copeland, *Free Press*, 6.
16. Shuger, *Censorship*, 4–5.
17. Clegg, *Press Censorship*, 219–20.
18. Milton, *Areopagitica*, 49.
19. Pool, *Technologies of Freedom*, 15; Copeland, *Free Press*, 70–2.
20. Warner, *Letters of the Republic*, 51.
21. Mellen, *Origins of a Free Press*, 241.
22. Schlesinger, *Prelude to Independence*, 122.
23. Blackstone, *Commentaries*, 4:151.
24. Pool, *Technologies of Freedom*, 16.
25. Bogen, “Origins of Freedom,” 429.
26. Eisenstein, *Printing Revolution* 111–47, 148–86, 187–254. Eisenstein’s work has been heavily criticized as “technodeterminist[ic]” and failing to take into account other cultural and historical influences. (See for example reviews by Bouwsma, “Review Eisenstein,” 1356–7; Laslett, “Review: Printing Press,” 82–5; and the critique within Warner, *Letters of the Republic*, 5–9). In an interesting back and forth with Eisenstein, Johns, “Acknowledge a Revolution,” 106–25, suggests that she has an extremely narrow view of print culture, uses too few primary sources and that in relying on secondary sources, she often takes snippets out of context. See also Grafton, “Importance of Being Printed,” 265–86. Despite much criticism, Eisenstein’s work has been extremely influential within the history of the book field.
27. Febvre and Martin, *Coming of the Book*, 15–6 and 30.
28. Draper, *Boston News-Letter*, October 17, 1734: 2.
29. Bradford, the *American Weekly Mercury*, Sept. 2, 1731: 4.
30. Weeks, *History of Paper*, 260.
31. Febvre and Martin, *Coming of the Book*, 30; Hunter, *Papermaking*, 34.
32. Gaine, *New-York Mercury*, July 9, 1764. Many colonial newspapers repeated this apparently erroneous report.
33. Hunter, *Papermaking*, 4–5 and 34–5. The Oxford English Dictionary definition of linen, B.1. a, is a cloth woven from flax or hemp. It was also commonly spelled linnen.
34. Edes and Gill, *Boston Gazette* June 18, 1764: 4; Draper, *Boston News-Letter*, May 21, 1761: 4.
35. Hunter, *Papermaking*, 14–5; Pool, *Technologies of Freedom*, 12.
36. Febvre and Martin, *Coming of the Book*, 12 and 30.
37. *Ibid.*, 16–8.
38. Innis, *Empire and Communications*, 147.
39. Bidwell, “Printers’ Supplies,” 172–3.
40. Mellen, *Origins of a Free Press*, 97, 104.
41. Weeks, *History of Paper*, 15.
42. Jones et al., “Historical Sketch,” 315–33.
43. Hunter, *Papermaking*, 230.
44. Bidwell, “Printers’ Supplies,” 181.
45. Eddy, editor’s note in Franklin, *Account Books*, 2:16.
46. Franklin, *Autobiography*, 69. Franklin sold rags to papermakers for a penny and a half a pound, *Account Books*, 1:30.
47. Franklin, *Pennsylvania Gazette*, 3.

48. Goodwin, *William Parks Paper Mill*, 12–3.
49. Warner, *Warner's Almanack*.
50. *Virginia Almanack*, 1749, 2.
51. Dumbleton, "Paper Mill," 443–4.
52. *Ibid.*
53. Hunter, *Papermaking*, frontispiece.
54. Weeks, *History of Paper*, 18.
55. Henretta et al., *America Concise History*, 94.
56. Smith, "Market for Manufactures," 676.
57. Hunter, *Papermaking*, 257.
58. *Ibid.*, 232; Raithby, "Act for Burying in Woolen," 5: 598.
59. Hall, "Atlantic Economy," 156.
60. Weeks, *History of Paper*, 41.
61. *Ibid.*, 44–5.
62. Draper, *Boston News-Letter*, April 2, 1767: 4.
63. *Ibid.*, March 6–May 23, 1769.
64. Gaine, *New-York Mercury*, January 7, 1765: 4.
65. Stamp Act, quoted in Morgan, *Prologue to Revolution*, 40–41; Schlesinger, *Prelude to Independence*, 68.
66. Bidwell, "Printers' Supplies," 177–9.
67. Schlesinger, *Prelude to Independence*, 46 and 61–80.
68. Wroth, *Colonial Printer*, 128–9. A "ream" of paper was a constantly changing measurement. OED defines it as "A quantity of paper, originally 20 quires or 480 sheets, now 500 sheets. Also: (in full printer's ream) 21½ quires or 516 sheets of printing paper."
69. Bidwell, "Printers' Supplies," 172. Exact price comparisons are made difficult by the fact that the various colonies issued their own local paper money, the exact value of which fluctuated and cannot be compared directly to pounds sterling.
70. Franklin, *Account Books*, 1:18, 2:111–2; Wroth, *Colonial Printers*, 151.
71. Purdie, *Virginia Gazette*, December 29, 1775: 3.
72. Purdie, *Virginia Gazette*, December 6, 1776: 1.
73. Bidwell, "Printers' Supplies," 172, and others note that printers claims should not be taken at face value but may be exaggerated to make their point, but paper was certainly in short supply and expensive.
74. Wroth, *Colonial Printing*, 151.
75. Bidwell, "Printers' Supplies," 174–5.
76. Ramsay, *History American Revolution*, 319.
77. Adams, *Works of John Adams*, 2:154.
78. Schlesinger, *Prelude to Independence*, 4.
79. *Ibid.*, 46.
80. Davidson, *Propaganda*, 209 and 225.
81. Watson, *Connecticut Courant*, December 25, 1775: 1.
82. Purdie, *Virginia Gazette*, February 24, 1775: 2.
83. Weeks, *History of Paper*, 46.
84. Green and Green, *Connecticut Journal*, February 19, 1777: 4.
85. Dunlap, *Pennsylvania Packet*, April 29, 1776, 3.

86. Bidwell, "Printers' Supplies," 180.
87. Wroth, *Colonial Printer*, 133–6.
88. Smith, "Market for Manufactures," 2.
89. Schuyler, *Letter to Governour Trumbell*, 135.
90. Schuyler, *Letter to George Washington*, 443.
91. Hunter, *Papermaking*, 232.
92. Watson and Goodwin, *Connecticut Courant*, March 3, 1778: 2.
93. "Valiant Widow Saved the Courant."
94. Hunter, *Papermaking*, 231.
95. Purdie, *Virginia Gazette*, August 16, 1776: 1.
96. Carter, *Providence Gazette*, April 5, 1777: 4.
97. Davis, *North Carolina Gazette*, November 14, 1777: 4.
98. Purdie, *Virginia Gazette*, March 6, 1778.
99. Hunter, *Papermaking*, 259–61.
100. *Ibid.*, 281–96.
101. Smith, *History of Papermaking*, 121.
102. Hunter, *Papermaking*, 288.
103. Smith, *History of Papermaking*, 123 and 138–9.
104. Hunter, *Papermaking*, 285.
105. Pool, *Technologies of Freedom*, 19.
106. Barker, *Newspapers*, 1–4, 31, 125, 160 and 223.
107. Hunter, *Papermaking*, 257.
108. Mellen, "Stamp Act," 75.

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