Why We Should Save Newspapers

(Revised December 30, 2012)

In February 2009, I wrote a short essay entitled "Economic Stimulus without Industrial Policy Won't Work." For several years I was asked to update it, but could not get around to it until August 2011 when I wrote the follow-up essay "Economic Stimulus without Industrial Policy Won't Work (Update-Aug 2011)." Although these essays dealt with job creation, their main focus was on how to restore America's **declining** economic competitiveness.

During this two and one-half years, I wanted to write one other essay dealing with America's **declining** print medium as a vehicle for delivering news. This is a topic in which I have a personal interest. I read two print newspapers daily, would miss them if they did not exist, and have a stake in their survival. However, this essay had to wait two years and nine months, but I finally got around to writing it on the Thanksgiving holiday, 2011.

I. We should save the print medium as a news channel

From the time I entered college and majored in Industrial Engineering in the College of Engineering at UC Berkeley, I have been technically oriented. For the last 13 years, I have operated my own firm Jackman Statistics, providing statistical and SAS & SQL programming services. Yet despite my technical orientation, I get my news **exclusively** from the print medium, mainly newspapers, a medium which has existed since the early 17th century. (The German-language Relation aller Fürnemmen und gedenckwürdigen Historien, printed from 1605 onwards by Johann Carolus in Strasbourg, is often recognized as the first newspaper.)

No TV news for me

I haven't watched television news for at least 25 years even though TV is based on and incorporates much more advanced science and technology than newspapers do and is more "modern" than they are. (True regular commercial television network programming began in the U.S. in 1948, 343 years after the first newspaper was published).

No Internet news for me

The Internet is yet more modern and technically advanced than television. (The Internet did not become widespread in American culture until the mid-1990s, almost half a century after television did.) Yet I try to avoid reading or watching news items on the Internet. And when I am working in front of my computer, I move the monitor to a screen without Internet news items which alternate from moment to moment to catch viewers' attention and which distract me from my work. **More on this later.**

Benefits of newspapers

Newspapers work for readers for whom immediacy is not critical.

I do technical work which does not require that I keep abreast of local, state, national, and international news. However, I do keep abreast of these topics because I am interested in them and because it is my duty as a citizen. However, I do **not** need real-time (immediate) news

updates about virtually any of these subjects because **I do not provide input** to real-time decision making about them. Essentially my input to these items is voting every two years.

Secretary-of-State Hilliary Clinton, in contrast, **does** need immediate updates about conditions in Afghanistan, the killing of Bin Laden, etc., because she is involved in current decision-making about these developments. I do **not** provide input to these decisions. My role is that of an informed citizen, and for this role newspapers are very appropriate; it does not matter that I do not read my two morning newspapers -- *Oakland Tribune* and *San Francisco Chronicle* -- until that evening and often do not finish them until the next day.

Newspapers are ideally suited for citizens who want to stay generally informed and whose basic input to issues is voting every two years. Newspapers will wait for you until you have time to read them, and much of their information is pertinent even if you read them a week or more later, such as a summary of a new economic or medical report. **For most of us, the immediacy of news reporting as touted by TV and the Internet is largely irrelevant.**

Newspapers foster an informed electorate.

Newspapers are organized by section, and within sections items are roughly ordered by importance/significance; this facilitates staying informed and keeping news items in perspective. Even readers who just page through some of the sections are likely to happen upon significant articles they never would have thought to look for. This layout of newspapers is conducive to fostering an informed electorate.

There is concern that the Internet is not equally conducive to fostering an informed electorate. The following is from a June 27, 2011 article in the *San Francisco Chronicle* by Erin Allday entitled,
"FIELD POLL. Politics on fewer voters' radar. Experts say Internet lets users tune out information." (p. C1):

"A growing proportion of California voters is not paying much attention to politics and what's happening in government as they are increasingly drawn to the Internet as their primary source of news, according to Field Poll results released today."

"...political scientists said Sunday that they blame the Internet in large part for waning interest in government affairs, especially among younger persons.

"'While it's true that people may have access to much more information online, [but] by watching less TV and reading fewer newspapers, voters are less likely to stumble across political information that falls outside their realm of interest,' said Kimberly Nalder, associate professor of government at California State University Sacramento who helped prepare some of the Field Poll questions.

"'For example, newspaper readers can't help but see political articles next to the entertainment story they're reading,' she said, 'and television viewers will be exposed to the top political stories of the day whether they tune in for the weather.

"'We are segmenting our access to information because the Internet makes it so easy for us to tune in to only what we care about. That means fewer of us end up accidentally coming upon

political information,' Nalder said."

Newspapers are ideal for those want to choose the order in which they read the news.

Newspapers are laid out by sections, and within sections items are roughly ordered according to importance/significance. This gives you **lots of flexibility in how you read them**. For example, I do not watch sports on TV, but I like to be generally informed about what is going on in sports since it is a significant part of our culture. So often I first skim the sports sections of both newspapers I subscribe to. Then I might read the lifestyle, entertainment and other special sections such as food or gardening. Then it's on to the business sections of both papers. Then I finally get to the main sections of both newspapers which are often the last sections I read.

TV news certainly does not offer you the flexibility and control that newspapers do. Nor does the Internet where news is not conveniently organized by sections as it is in newspapers with important items toward the front of the section. Moreover, one can be overwhelmed by the plethora of unorganized, unprioritized information on the Internet. Also, you can skim rapidly through sections of newspapers much faster and more efficiently than you can click in and out on the Internet.

Many newspaper readers may only really read one or two sections, but are likely to quickly page through the other sections where they will see display advertising. This attribute of newspapers makes it less critical for advertisers to place their ads only where the most "unique visitors" or "hits" are expected. **More on this later.**

Newspapers help workplace productivity.

This is because those who get their news from print newspapers have to do this preponderantly on their own time, while those who read news on the Internet often do it at work. If I brought my morning *San Francisco Chronicle* and *Oakland Tribune* to work and spread them out on my desk, it would be very visible that I was not doing company work. However, those who are reading news items on the Internet on their work computer look like they are working. If someone walks up to them, they can quickly change the monitor to a work-related screen.

There is ample evidence that workers tend to take care of personal business using their work computer. For example, I consulted for several years for a large organization which provides personal services to consumers and has a well-developed website for its customers' use. (My work involved analyzing customers' web usage patterns.) Since personal services/items were involved, one would think that traffic to the website would be heaviest in the evenings and on weekends during non-work hours and lightest during work hours.

This was not the case, however. Visits to the website on weekends were about one-third of what they were on Monday, the first day people returned to work. In fact, the day with the most visits was usually Monday, with the 9:00 am or 10:00 am hours being the busiest. Apparently the organizations' customers used weekends for other activities and took care of their business items on the organizations' website from their work computers on Mondays.

Newspapers are easier on your eyes than Internet news.

I work all day in front of a monitor doing statistics and programming. It is a real relieve at night to turn off the computer -- which I do -- and read from the print medium.

Newspapers are ideal for those want to listen to their stereo with their legs elevated as they read the news while they stretch their arms and shoulders.

I have high-quality stereo equipment in my den which plays music much better than does the computer in my office. It is very convenient to be able to plop newspapers in my lap and read them with my legs elevated in my easy chair listening to KCSM's Jazz Oasis. And to do this, I have to stretch my arms and shoulders to turn pages. Compare this to using your thumbs or finger tips with a notepad, IPhone, etc

Newspapers are ideal for clipping articles; the Internet has not changed this.

When I worked as a senior economist in the 1990s, we used to clip articles which we would incorporate into economic reports. I had thought the Internet would eliminate this. However, I have found out that it has not. Many articles which you may read in newspapers are very hard to find later on the Internet -- if you can find them at all. For example, most of the quoted material in my recent essay "Economic Stimulus without Industrial Policy Won't Work (Update-Aug 2011)" and in this essay you are reading now came from articles I had clipped and filed or from books, not from the Internet. Also, often if I do find an article on the Internet, it was only because I was alerted to look for it when I saw it in newspapers.

Another advantage of referring to articles you have clipped is that when you read them thoroughly the first time, you highlighted with red pen the important parts you wanted to use for later reports. This speeds up using the articles later.

Newspapers help save a forest.

This certainly is at odds with common public perception, but it needs to be kept in mind that 56% of America's forests are privately owned. The following quote is from an article originally printed in *The Wall Street Journal*, March 31, 2011 entitled "Save A Forest: Print Your Emails. It's Okay To Use Paper. Trees Are Renewable, Recyclable And Sustainable." by Chuck Leavell And Carlton Owen.

"What many folks don't realize is that it [not printing Emails] also may indirectly hasten the conversion of forests to other uses like strip malls, parking lots and housing developments — because the nation's forest landowners can't keep growing trees without markets for this natural, organic and renewable product." **More on this later.**

Newspapers help capture greenhouse gases (carbon sequestration).

When trees are harvested in a program of sustainable harvesting to make wood and paper products, young trees replace older trees. Young, growing, vibrant forests are the largest carbon

sink on earth: CO2 absorption by U.S. forests has increased by 25 percent since 1990. (Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost? McKinsey & Company, 2007.)

When a young forest is growing, it produces 1.07 tons of oxygen and absorbs 1.47 tons of carbon dioxide for every ton of wood. But as the forest matures, growth slows, and the absorption rate drops off. Harvesting a mature forest sequesters the carbon in the wood, meaning it will not be released into the atmosphere. A 2,400-square-foot wood-frame house, for example, has 28.5 tons of carbon dioxide sequestered, roughly equivalent to seven years' worth of emissions from a small, light-duty car. Harvesting mature forests also allows new, young forests with a rapid rate of carbon absorption to take their places, continuing the cycle.

John A. Helms, Ph.D., professor emeritus of forestry at the University of California, Berkeley writes,
"...it's the young trees and forests that are most efficient in taking up carbon. Not that old forests don't contribute - they do. But when their capacity to remove carbon is measured against young forests, old forests come up short. In young forests, the uptake of carbon dioxide greatly exceeds the loss. The reverse can be true for very old forests."

"To maximize carbon sequestration and storage, we need forest management that results in healthy forests of all ages on the landscape."

"What's good for forest health is good for carbon sequestration. Active forest management can certainly increase carbon sequestration."

Newspapers help our trade deficit with China.

Bestselling author Clyde Prestowitz reported in his 2010 book *The Betrayal of American Prosperity*: "...while China's number one export to the United States is $46 billion of computer equipment, the number one export from the U.S. to China is waste—$7.6 billion of waste paper and scrap metal." Think about the paper needed to make the cardboard boxes for all the consumer goods China exports to the U.S.

Newspapers make safer insulation than fiberglass.

The following excerpts are from an *Oakland Tribune* article of June 16, 2008, Business section:

"'Energy doc' uses recycled products to insulate house, reduce cooling costs."

"WHEN YOU finish reading this newspaper, drop it into the recycling bin carefully. It might end up insulating your attic.
"Recycled newspapers, shredded telephone books and other paper products make up the cellulose insulation Berkeley-based Advanced Home Energy sprays into attics. Insulation can help homeowners reduce heating and cooling costs as much as 20 percent.

"'Fiberglass rules the market because it is simple to install. But it can get in workers' and homeowners' lungs and contains formaldehyde, which may be carcinogenic,' said Dvir Brakha,

who founded the 10-employee company in 2005. 'And foam, another alternative, is a petroleum byproduct. We decided cellulose is the greenest approach.'" (*Oakland Tribune* , Business section, June 16, 2008)

Newspapers make earth-friendly milk bottles.

The following excerpts are from a *San Francisco Chronicle* article of March 29, 2011, D1:

"Bottle made from recycled paper uses less plastic, is easier to ship"

"Oakland's Julie Corbett is plotting a revolution in the world of packaging, where waste still runs rampant.

"She's invented a bottle made from recycled newspapers and cardboard. The molded fiber container, and its slim inner plastic pouch, can be recycled -- and it uses 66 percent less plastic than typical rigid-plastic bottles."

..."Corbett, 44, an investment fund manager and the mother of two daughters, was shocked by how many plastic jugs and bottles her family used and wanted to devise a better solution."

Newspapers make your garden grow.

The following excerpts are from a *San Francisco Chronicle* article of July 8, 2009, E6:

"Gardener gets the dirt on big crop secret -- newspaper"

"Newspaper has helped Lewis Brady go greener.

"Brady, who lives in northeastern Anderson County [South Carolina], credits newspapers with the success of his garden this year.

..."Lewis took the shredded [recycled daily *Anderson Independent-Mail*] newspaper and laid it on his garden plot. After the paper started to decompose a little, he said, he tilled it into the ground. After applying a 10-10-10 fertilizer and rainwater, he planted his seeds.

"The corn he planted the first of April has grown to be more than 12 feet tall. His tomatoes became wide bushes nearly 5 feet tall. And the green pepper plants reached more than 3 feet tall, heavy with blooms.

"'I don't know what happened, but I have to believe it's the paper,' he said. 'I've just never seen anything like this.'"

Jim Lasley, vice president of operations at the *Independent-Mail*, said a lot of gardeners use newspaper for mulch.

"'The ink we use is soy based, and the paper is recycled,' he said. 'I don't know if that makes a difference, but we get calls from people looking to use the newspaper in their garden.'"

"Brady says he thinks it controls the ants, too.

"'Wherever there is newspaper, there are not ants,' he said."

II. The Problem with Television News

Television is much more modern and "high-tech" than newspapers which have existed since the early 17th century. So why are media experts so harshly critical of such a high-tech medium as television?

- Professor Arthur I. Blaustein teaches community development, public policy and politics at UC Berkeley. He was appointed by President Bill Clinton to the board of the National Endowment for the Humanities. He wrote in a March 6, 2009 essay in the *San Francisco Chronicle* (Insight, H6-H7),

  "The decline in our political culture has occurred in direct proportion to the increase in TV-driven soft news, celebrity scandal-mongering and superficial political coverage. Every day the electronic media -- in particular cable TV -- feverishly compete to hype news into entertainment.

  "And when they get a Paris Hilton, Michael Jackson, Elliot Spitzer or Larry Craig -- especially if it has a sex angle -- they stage extravaganzas which would make Barnum and Bailey blush.

  "With the attention span of viewers decreasing with each generation, and with the networks and cables competing for a large audience, what counts is who can make the fastest and most enjoyable images. Faster images may tickle the pleasure centers of viewers and achieve higher ratings and more money for media owners, but they make America dumb."

  As part of Blaustein's "commonsense prescription for change," he proposes: "Pull the plug on television news, and stick with serious print media."

- Howard Kurtz who writes the column "Spin Cycle" in *Newsweek* magazine wrote in the May 23 & 30, 2011 edition of *Newsweek* (p. 35),

  "Much of the time, the media wallow in frivolity. Television, especially cable news, has a fatal weakness for the superficial and the shiny. Covering Charlie Sheen is cheap; covering Afghanistan is expensive. Boots-on-the-ground reporting may win awards, but it doesn't pay the bills."

- Joshua Alston who writes on Culture/Television for *Newsweek* magazine referred to the "if-it-bleeds-it-leads local newscast[s]" in the January 10 & 17, 2011 edition of *Newsweek*, (p. 52).

Television News' Sequencing Problem

Television News' Sequencing Problem can best be understood by comparing television to newspapers which are not constrained by sequencing considerations. Subscribing to a print newspaper is an on-off decision: you do or you don't, and once you do, the editors of newspapers don't have to worry about sequencing the articles to maximize "viewers" at every instance.

So, if you subscribe to the *Oakland Tribune* as we do, you may go first to the Obituary section, then to the crossword puzzles, then sports and then finally quickly page through the other sections, including the main section. However, the *Tribune* has not "lost you" because you bypassed the main page and went directly to Obituaries. Nor does the *Tribune* have to dilute the quality of the main page or make it more titillating to attract you there. No matter what section you choose to go to first, the *Tribune* still "has" you.

However, the situation television news shows face is very different. Television news viewers can change channels at any time because they're bored, want something more exciting, or for any reason. Once they change channels, Network A, for example, has lost them -- at least for the time being. If a rating agency such as Arbitron, Inc. did a survey of the audience of Network A at that point, it would report a smaller audience for Network A than it would have had if the bored viewers had not changed channels. This would mean less profit for Network A since advertising rates are based on estimated audiences.

So television news shows have to sequence items to maintain large audiences with the demographic characteristics attractive to advertisers. These economic forces drive TV news networks to cater to the "lowest common denominator." And this is reflected in the items which lead on television news shows and the sequencing of the items which follow. TV networks do this to maintain the most profitable mix of viewers at every moment.

Newspapers are not subject to the sequencing problem. Whether readers go first to sports, obituaries or entertainment rather than to the main section, the newspaper has not "lost" them, nor, as noted above, does it have to dilute the quality of the main news sections to retain them. Newspapers' circulation which determines advertising rates is unaffected by which section of the newspaper readers start with and the order in which they read the other sections and whether they read all the sections.

III. The Problem with Internet News

When the Internet first came into widespread use in the mid-1990s, you had to read most of the news items. This made it different in this respect than an audio-visual medium like television. However, news items on the Internet are increasingly becoming audio-visual also, i.e., you watch them like TV rather than read them.

In Part II, I discussed the "sequencing problem" TV news broadcasts face because they can lose viewers who switch channels; this can result in lower audience ratings and less profit. Advertisers, using these ratings, decide where to spend their advertising dollars. With television, advertisers decide between a relatively limited number of TV networks which viewers visit regularly. And since many TV viewers switch back and forth between a few channels, advertisers know that if they buy advertising on, for example, Network A rather than Network B, viewers who regularly switch between networks A, B, C, D, and E will likely see their ads on Network A at least some of the time.

With the Internet, companies' decisions about where to invest their advertising dollars is more complicated than with television because the number of potential web sites for placing advertising is so much greater. There are thousands of websites where advertisers can place their ads.

Where Are They Going to Click First?

And within a given website, advertisers have to decide which item (or link) to put their ads in. This will be the link they think visitors to the website are going to click first. This is a critical decision for advertisers and website designers because once a visitor clicks on a link, they tend to get pulled further in to other links within that URL and tend not to back out and go to other links on the website they started at.

Here is an actual example. Suppose an advertiser decided to buy advertising on the website http://att.my.yahoo.com (my Internet service). On November 19, 2011, there were eight "headline" items near the top of the website as of 03:12 pm PST. They were

Gadhafi's son captured
Natalie Wood's last night alive
Best U.S. places to raise kids
What men look for in women
SUVS shine at LA Auto Show
Black Friday doorbusters
Steven Tyler's odd beach look
Loud daughter helps coach

Once visitors click on one of these eight links, they tend to be drawn further in to other links within that URL and to not return to the other seven "headline" items where they started. Thus it is critical for advertisers and website operators to be able to accurately predict where visitors to the website will click first. A whole consulting industry has grown up to help website operators and advertisers maximize "unique visitors," "page views," time spent at a given website, etc.

Just as TV news gravitates toward the lowest common denominator to maximize its audience and advertising revenue, Internet news has similar tendencies in order to maximize "unique visitors," "page views," time spent at a given website, etc.

The eight items above are typical of "headlines" which grow out of the economics of Internet news and advertising. Many people who say they "read the news" on the Internet are referring to such items which appear on websites such as att.my.yahoo.com, www.aol.com, www.msn.com, etc.

Some people who read news on the Internet seek out online copies of print newspapers such as the *Oakland Tribune*, *San Francisco Chronicle*, *Los Angeles Times*, *New York Times*, etc. This news is organized like a print newspaper, **but it is only there in this form because the print newspaper from which it is obtained exists.** It reflects the economics and nature of print newspapers which are relatively immune to the sequencing problem of television news and to the "where are they going to click first" problem of Internet news. If print newspapers did not exist, this news would be presented in a form which reflects the economics of the Internet, not that of the print medium.

Internet News' Prioritization Problem

Print newspapers are organized by section, and within sections items are roughly ordered by importance/significance; this facilitates staying informed and putting news items in perspective. The Internet, in contrast, is often criticized for posting a plethora of information which is hard to sift through and cull and hard to put in perspective.

For example, suppose the Department of Energy (DOE) completed a major study of the United States' energy supply during the next 20 years which included important findings about our nation's natural gas supply. This study, which took several years to complete and entailed thousands of person hours, is put on the Internet. Suppose also that several energy-related trade organizations had their annual conferences and that their press releases, conference proceedings, etc. are put on the Internet.

On the Internet, there is no prioritization which distinguishes a major (and costly) energy study from routine press releases of trade organization conferences. Anything put on the Internet is treated as they equal of everything else there. There is no prioritization nor hierarchal structure. So the important DOE energy study will quickly get pushed down on the list by the daily deluge of less significant items related to this subject posted to the Internet.

With so many entries on the Internet, how would one even know that DOE published this important energy study? Don't depend on seeing it on Internet news because this is not the kind "hot" item that is likely to get clicked on first. For example, on November 24, 2011 at 11:35 a.m., http://att.my.yahoo.com (my Internet service) had a large "headline" story with photo "Divorce settlement hit Hulk Hogan hard." Among the other seven "headline" stories were "Octopus caught walking on dry land" and "Wife tries to unload hubby on Craigslist." Try to imagine these "headlines" on the front page of the *Oakland Tribune* or the *San Francisco Chronicle*.

Below these eight "headline" stories were seven "regular" news items such as "Egyptian military say vote won't be postponed." (Print newspapers, in contrast, carry **at least** 25 such news items.) If visitors to http://att.my.yahoo.com click on this news item about the Egyptian military, they are likely to then click on one of the ten links near the top of this second URL such as "'Alien' Skull discovery Tops South American Bone Finds" rather than backing out and clicking on another of the seven "regular" news items where they started. For Internet news, the first click is critical and drives the economics of Internet advertising.

Print newspapers carry an abundance of news items, and reading one item ("clicking on one") does not mean you are unlikely to see the others because several news articles can be on the same page waiting for you. Even if you do go to page 7 of your newspaper to finish an article which began on the main page, it is easy to flip back to the main page, much easier than clicking back through multiple levels on the Internet.

Newspapers not only carry way more news stories than Internet news does, they also prioritize information which the Internet does not do. This greatly helps the reader to put news items in perspective. The article previously cited about the major DOE energy study would be featured prominently in newspapers, possibly on the main page. The press releases from trade organization conferences might be mentioned in items in the business section, but they would not be given the same priority as a major DOE energy study with important findings.

IV. Can we and our planet afford the benefits of newspapers?

The sections above presented many benefits of print newspapers and showed that print newspapers are relatively immune to the sequencing problem of television news and to the "where are they going to click first" problem of Internet news. At what cost, real or imagined, do these benefits come? Can we and our planet afford these benefits which newspapers provide?

"Save a tree" by not reading a print newspapers?

The "save a tree" argument against printed material is not usually directed at newspapers. It is usually used to get you to sign up for online bill payment (more on this later). Nevertheless, we will address this "save a tree" argument here since paper products, including newspapers, are made from trees.

Renewable versus non-renewable natural resources

The slogans about "saving a tree," while usually well-intentioned, fail to make a critical distinction between **renewable** resources such as forests, the source of the wood pulp for paper, and **non-renewable** (or exhaustible) resources such as petroleum and natural gas. Trees are renewable, recyclable and sustainable.

Sustainable harvesting of timber

Sustainable harvesting of timber was already in practice in German forests by the mid-1800s, and these methods have been improved and refined since then. Today, net annual forest growth in the United States exceeds harvests by more than 70 percent. Forest growth in the U.S. has continually exceeded harvest since the 1940s. The United States Forest Service estimates an

average of 1.74 billion trees are planted in America every year. Their most recent data shows that United States forestland is roughly as abundant today as it was 100 years ago.

Sustainable harvesting supports the preservation of forests

Fifty six percent of America's forests are privately owned, and private landowners plant about 3-4 times more trees than they harvest. The harvest gives them the income they need to maintain, renew and manage this valuable forest resource sustainably. Without this income, landowners face economic pressures to convert forestland to other uses, including growing other crops that are more profitable or selling the land for development. In both cases, the forest is removed forever.

In fact, this conversion of forestland to other uses has been occurring. Between 1990 and 2000, more than one-third of the urban expansion across the U.S. occurred on forestlands. And this trend is likely to continue: More than 57 million acres of rural forestlands are projected to experience a substantial increase in housing density from 2000 to 2030.

Fifth or sixth generation pulp-wood forests

Some well intentioned persons may fear that the pulp for making paper is coming from irreplaceable trees such as old-growth redwoods. This is definitely not the case: New paper is almost always made from trees specifically grown for papermaking. A tree harvested for papermaking is soon replaced by another, so the cycle continues. Most of the trees cut for paper come from fifth or sixth generation pulp-wood forests.

Replant a harvested tree with a young tree with high carbon-sequestering capacity

Trees are a renewable, sustainable resource. When trees are harvested in a program of sustainable harvesting to make wood and paper products, young trees replace older trees. Young trees and forests are the most efficient in taking up carbon, and young, growing, vibrant forests are the largest carbon sink on earth. The carbon sequestered in the harvested trees is subsequently stored in products made of wood, such as paper, and this carbon storage is further prolonged by recycling paper.

Newspapers can be made from low-grade recycled paper.

About 72 percent of newspapers in the U.S. were recovered in 2010. (source: US EPA) About 37 percent of the fiber used to make all new paper products in the U.S. came from recycled sources in 2010. In Europe, "paper is the most recycled material, and more than half of the paper produced comes from recycling. Nine out of ten corrugated boxes are made from recycled fibre, and nine out of ten newspapers feature on recycled paper." (source: 2011 European Paper & Packaging Industries)

"After paper has been recycled five to seven times, the fibers become too short to bond into new paper. New fibers are added to replace the unusable fiber that wash out of the pulp during the recycling process. A single piece of paper may contain new fibers as well as fibers that have already been recycled several times." (source: US EPA)

Newspapers can be made from lower grade recycled paper. Paper recovered for recycling is

categorized in grades. "Generally, the lower grades [of recycled paper], such as corrugated and newsprint, go back into the same new products." (source: Earth911.com)

More than 85 new paper mills with recycling capabilities have been built in the United States . Today, many paper companies are eager to get their hands on as much used paper as possible. Now news print producers are worried that there may not be enough old newspapers to meet their demand.

Conclusion

The question asked at the beginning of this section was, "Can we and our planet afford the benefits which newspapers provide?" The above facts have affirmed that **yes, we can**. Most importantly, the benefits which print newspapers provide far exceed their costs.

By the way, packaging, not print, is the single largest category of paper use.

This section dealt with the pulp demands of print newspapers, but it should be noted in closing it that "although paper is traditionally identified with reading and writing, communications has now been replaced by packaging as the single largest category of paper use at 41% of all paper used." (Source: Wikipedia). Packaging includes the boxes that contain the products we buy in "brick and mortar" stores and those we buy on-line, e.g., from Amazon, which are delivered to us by the USPS, UPS, FedEx, etc.

V. Save a tree. Pay bills online?

This essay is about the benefits and costs of print newspapers. However, as noted earlier, the "save a tree" argument against printed material is not usually directed at newspapers. It is usually used to get you to sign up for online bill payment. So this subject will be addressed briefly in this last section of this essay.

Trees are a renewable, sustainable resource.

The "save a tree" appeals to get you to sign up for online bill payment give the impression that if a tree is harvested, it cannot be replaced. However, this is not the case. Trees **are** a **renewable**, **sustainable** resource. Trees are **not** a non-renewable (or exhaustible) resource such as petroleum and natural gas which are being inexorably depleted. When trees are harvested in a program of sustainable harvesting to make wood and paper products, young trees replace older trees. Young trees and forests are the most efficient in taking up carbon, and young, growing, vibrant forests are the largest carbon sink on earth.

Today, net annual forest growth in the United States exceeds harvests by more than 70 percent. Forest growth in the U.S. has continually exceeded harvest since the 1940s. The United States Forest Service estimates an average of 1.74 billion trees are planted in America every year. Their most recent data shows that United States forestland is roughly as abundant today as it was 100 years ago

What about those "hard copies" printed at home?

Banks regularly make claims about how many trees their customers saved by signing up for online statements. For example, there is a news release (dated March 11, 2010) posted on the Internet by Wells Fargo saying, "Wells Fargo Customers Save 100,000 Trees Through Online Statements and Envelope-Free ATMs." It says that these figures were obtained by using http://www.papercalculator.org.

At this website, you can plug in information about how many customers now only receive online statements to find out how many trees are saved. But this calculation **assumes that customers are not printing "hard copies" of their statements and bill payment receipts at home**. This is not something banks have looked into because their findings might weaken their pitch for online banking.

There is no published evidence about what percentage of online bill-payment customers are printing "hard copies" of their statements and bill payment receipts at home. However, anecdotal evidence suggests that this percentage is pretty high. Some people print out a "hard copy" of the bill to facilitate giving it a thorough review, including checking items off, before paying it. Others print out their receipt after paying it.

Printing out a "hard copy" is not a practice limited to bill payment. For example, I have consulted in groups which analyze website traffic metrics (unique visitors, hits, etc.) and in top-notch research groups which publish world-class research, and in both environments printing out a "hard copy" of documents was the norm, rather than the exception.

"Hard copies" sent in the mail can be better for the environment than those printed at home.

Having a printed copy of statements facilitates understanding and verifying them, and a "hard copy" sent through the mail may be better for the environment than one printed at home. Here are three examples: two from banking and one from a utility.

- My bank checking statement: Each month I verify and check off each item on this statement as part of balancing my account. To do this, I use the printed statement which comes in the mail and is printed on both sides of recycled paper. If I were to print a "hard copy" of an online statement at home for doing this, it would be on one-side only of standard office paper. So it may be better for the environment to receive the checking statement in the mail than to print a “hard copy” of an online statement at home.

- My bank MasterCard statement: I keep receipts or hand-written notes of each item I charge on my MasterCard during the month. When I have my monthly statement, I verify and check off each charge, credit, and my previous payment. To do this, I use the printed statement which comes in the mail and is printed on both sides of recycled paper. If I were to print a "hard copy" of an online statement at home for doing this, it would be on one-side only of standard office paper. So it may be better for the environment to receive the MasterCard statement in the mail than to print a “hard copy” of the online statement at home.

- My PG&E statement: To verify the total charges for electricity and gas on the first page of the statement, I have to add up charges for electricity and gas from two periods which appear on other pages. To do this, I use a printed copy of the bill for doing hand calculations to verify the totals and also to make sure I understand the bill. The printed bill also facilitates the review of other charges. A “hard copy” of your PG&E bill is also useful if you work in a home office and claim a portion of total house expenses as a tax deduction for your home-based business.

  The PG&E bill comes in the mail on reduced-size (6 and 1/2 by 11 inches) recycled paper (30% post consumer waste.) If I were to print a "hard copy" of an online statement at home for checking my PG&E bill, it would be on one-side only of standard office paper (8 and 1/2 by 11 inches). So it may be better for the environment to receive the PG&E statement in the mail than to print a “hard copy” of an online bill at home.

Profits and customer retention may be the real drivers for online banking.

As has been shown, trees are a renewable, sustainable resource not in danger of depletion, and lots of online banking customers may be printing "hard copies" of statements at home. So if the “save a tree” argument for online bill payment is dubious, what is really driving the push for online banking? Profits and customer retention may be the real drivers for online banking as shown by this excerpt from an article entitled "How to Break Up With Your Bank" by Jean Chatzky (October 30, 2011) in *Newsweek* magazine.

"Banks sold the idea of banking online as a convenience for consumers. But make no mistake, the real point of this exercise was to improve the banks’ profit margins. The more business they could move out of the branches, the bigger the boost to the bottom line. It worked. Consumers who bank online save banks $167 per person per year, according to Javelin Strategy & Research.

"But banks also understood that, done right, online banking could be a very sticky application—one that could make consumers incredibly reluctant to switch banks. Typical consumers have 40 to 50 payees entered for their accounts, says Javelin’s Mark Schwanhausser. However, even a very dedicated online-banking customer uses only eight to 10 a month. But the perception that you’d have to sit there for hours reentering all that information makes consumers reluctant to switch. Even worse, you have to contact all those billers who swipe money out of your account automatically. 'The worst thing you have to do as a consumer is call customer service,' says Schwanhausser."

Originally completed November 26, 2011; Revised December 30, 2012

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