The Research Paper: A New Approach to Teaching

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Honors 499
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May 5, 1993
Precis

This paper will explore new methods of teaching the research paper in a high school English classroom. It is based on steps taken from Warriner's *English Grammar: The Complete Course*, and a research paper I wrote, attempting to follow Warriner's guidelines. I describe his text in detail, offering criticism and suggestions for improvement along the way. The research paper is contained in the Appendix at the back of this document.
Every high school senior has the same English requirement: write a research paper. So every teacher of twelfth-grade English needs to know the intricacies of research for herself. A popular text teachers often use to instruct writing, including the research paper, is Warriner's English Grammar and Composition, written by John E. Warriner. This text is a fine starting point in the teaching of a research unit. It does, however, lack some important information essential to the success of the students. I will review Warriner's seven steps to writing a research paper, as listed in chapter twenty-six of the Complete Course. I will note the positive points he makes, list points I feel were left out, and offer suggestions or examples for improvement. My criticism is based on my own experience writing a research paper, which is included in the appendix, using Warriner's text as a guide. The seven steps that I followed are:

1. Selecting and limiting the subject
2. Preparing a working bibliography
3. Preparing a preliminary outline
4. Reading and taking notes
5. Assembling notes and writing the final outline
6. Writing the first draft
7. Writing the revised final draft with a bibliography

This paper is not written to discredit a popular textbook used in millions of schools across the United States. It is merely to suggest to teachers that no one source is complete, and that they must supplement it with their own knowledge and experience on the subject. It is also to point out some important steps that should be offered as alternatives, or at least as an addition to Warriner's instruction. No teacher should hand the students a textbook, tell them to read some directions, and expect them to have a
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successful experience. Following are some practical suggestions to add to the text during the long process of teaching the research paper.

Step 1. Selecting and Limiting the Subject

The first step Warriner suggests the writer take is choosing a subject. He states, "Select a subject which is interesting to you and suitable for research in the libraries at your disposal." He goes on to explain that the writer will be working on this project for quite some time, and therefore it is imperative that the topic be of interest to him.

He then warns about the availability (or lack thereof) of source material. Students are made aware that some subjects are un-researchable. Some are too broad, and some are too narrow. For instance, a paper about a famous person would be too narrow because one could find all one needs on the subject in a single book. The students are told to choose subjects that can be researched in several different sources (458).

The last thing Warriner offers in this section is a list of very broad subjects to choose from, placed under the even broader categories of Literary History, Science, Art, and the like. The author does warn that the subjects are broad, and adds the example that if one were to choose Education, for example, one would have to narrow it down to, say, "Federal Aid to Nonpublic Schools", or even "Should Federal Aid be Given to Nonpublic Schools?" (460).

Despite all of these instructions, the first-time researcher will encounter problems with this first section. It states so simply that one should select an interesting, researchable topic and then limit it. But this is a very time-consuming and difficult thing to do. High school seniors are going to have a tough time coming up with limited topics; many times one does not know what is too broad or too narrow until one goes to research it.

I chose recycling as a broad topic to research, but I did not know what about recycling was going to make a good thesis for my paper. I was not familiar enough with
recycling yet -- which is one of the reasons I wanted to research it. I had no idea how to narrow it at first: what was I going to find out about recycling in my research? I skipped a few of Warriner’s steps at this point and went right to the library with my broad, unresearchable topic.

I used OPAC (Online Public Access Catalog) instead of the card catalog to look up my subject. I did a search under “S= Recycling” and came up with 1237 articles under the subtitles Economics, Management, Marketing, and Politics. These were not what I expected as subtitles. I thought that I would possibly have had the choice of looking up Glass, Paper, Plastics, and do on.

So I continued to skim the titles and subtitles listed until I found some articles that sounded interesting to me. This long process took two or three hours in a university library. It was not as simple as looking at a selection from a general list like Environment and narrowing that to “The government and big businesses in America need to change their attitudes toward recycling programs”. The students should be able to offer a broad topic at first, and then narrow it once they have read a little about it. We as teachers should not expect them to sit in class one day and come up with a narrowed topic, and we need to make some alternatives available to them.

Next, my argument against coming up with a "researcable" topic is much the same. In the classroom, teachers can help students recognize topics that are not researchable for obvious reasons, such as their lack of available sources, as in the example Warriner gave about researching a famous person. We can also help them know if a topic is too recent a discovery to research, since not much will have been written on it yet outside of a few periodical articles. But many topics are only unresearchable because these students only have two libraries to work from: their school and a public library, and some topics are just not to be found in smaller collections. The only way to know this, again, is to go to the library and start skimming the topics in OPAC, the card catalog, or the Reader’s Guide to Periodical Literature.
The next problem I found was that Warriner failed to mention that the topic one comes up with must be arguable and fresh for a research paper. A thesis about how cigarette smoking is bad for one's health would probably not draw many opposing comments, and it is a topic that is overused. Every student and teacher in the school has probably already read or heard that message several times in his or her lifetime. Similarly, a paper on AIDS might even be dull reading, unless the student could find some interesting new twist to the topic, simply because people are already so bombarded with that subject every day in newspapers, on television, and even in school. One has to be able to argue a point in a research paper, such as "Recycling should be mandatory for all major businesses". I could not have written a very exciting paper on how recycling newsprint helps save trees. Most people have heard that before, and few could argue the fact that it does indeed conserve trees. So for the first step, selecting and limiting the subject, teachers need to give ample time and assistance for the students to arrive at good, narrowed topics they will be interested in.

Step 2. Preparing a Working Bibliography

The next step Warriner lists is the research. "Use library tools to look up available sources of information. Prepare a working bibliography on cards" (460). Warriner goes on to tell the student that he must find the sources in the library via card catalogue or Reader's Guide, and make a list of them, individually, on cards. He tells how important it is to write every piece of information down on the cards, and he also mentions that when one finds a book on the library shelf, there are often other books around it about the same subject. This is a helpful hint telling students another way to find the books they need.

What I do not understand is how Warriner can make one of the most time-consuming
and frustrating steps sound so simple. Go find books! He tells nothing of the dead ends one often runs into, and he makes no suggestions about how one uses the card catalog or the Reader's Guide.

The teacher leading the kids in this quest for knowledge must make sure her class is well-informed about all the intricacies of the school or local library. No one should take it for granted that a twelfth grader knows how to look up topics in the card catalog, or that he can find his book once he does locate the subject on a card. The Reader's Guide might also be a difficult tool to use. The teacher must also familiarize her students with any shortcuts the library might offer in the way of research procedures.

First, the card catalog needs to be explained. Ideally, the subject should have been touched upon weeks before the research paper unit begins. The students could have had lessons including fill-in worksheets with examples of cards on them, or relay races finding information on card catalog cards. The students must then know each library's system for shelving books. Does his library use the Dewey Decimal system? Where in the building are the nonfiction books? Fiction? Periodicals? What do the letters on the cards mean in correlation to the actual bookshelves and books? In the Bracken Library at Ball State University, the call numbers are written on large signs hung on the wall showing on which floor different lettered books are located. In the library in my hometown, with only one floor, a researcher must know that Q = oversized books, which are next to the nonfiction section; YA = the young adult collection, which are in another room; and Y = children's books, which are in yet another room. R = reference, in the middle of the building, and M = mystery, which are shelved separately from the rest of the science-fiction books (labeled SF).

So each library is different, and students need to know where things are before they undertake this monumental project. A class tour of the local libraries might be arranged a week or so ahead of time to orient students with the facilities.
Next, the Reader's Guide can pose several problems. First of all, the students must be familiar enough with it that they know how to locate their topics. Then they must be able to use the see also listings to look up their topics under different subtitles, because often the word or words they look up will not produce any articles. Next, when a student sees an article he would like to read, he must understand that the Reader's Guide is universal and does not only pertain to magazines in his library. So he must check in some sort of local listings to see if the library even carries the periodical in which his article was found. Then the student must make sure that the library has the correct issues of those periodicals that he needs.

I only found eight periodicals available with articles I wanted in my hometown library, a typical sized building available to high school seniors for their research. Out of those eight articles, two were unavailable to me because the dates were too old or too new. The USA Today was too old to still be in stock, and the Newsweek was too old for the current issues, but not yet on microfiche. Four of those eight were lost. There were other issues on the shelves, with the months or weeks of issues right around the one I needed, but not the one I needed. Two I found. One article was a page long and one was three pages. All of that work took me about one hour. So one hour's work produced for me four pages of sources that I might or I might not use in my paper. This is one of those frustrating incidents that kids need to be warned about before teachers set them loose in a library on their own. They might look up a few articles in the Reader's Guide, find that their library does not have the periodicals that they want, get frustrated and go home. Teachers need to tell students that this might happen and not to get frustrated, but to just continue with their search.

Lastly, a teacher can show the kids that she empathizes with the desire to take short cuts in their research, and give them some legitimate ones, while warning them of cutting corners in other places. It is important that the kids feel that their teacher knows what she is doing, and will be available for help when they need it.
One good shortcut a teacher can share is the use of a computer program in place of the Reader's Guide. A program personalized to one specific library will eliminate some frustration; it will only list articles located in that library, or it will at least highlight the ones located in other places.

Another shortcut I found at home is the Pathfinder. This is a wonderful notebook with a section on several current topics, one of which is recycling. Under recycling it lists a definition and discussion of recycling, encyclopedia-style. Then it includes eight pertinent subject headings, four popular texts on recycling, and six relevant call number locations. In the next section the Pathfinder lists relevant bibliographies, indexes, journal titles, and audio-visual or computer sources. The previous listings all are coded with locations, to show whether they can be found at that library or at another location, like Indiana University at South Bend, a nearby campus. Lastly, the Pathfinder lists four addresses of organizations a student could write for more information on recycling, including the Indiana Recycling Coalition, and the Environmental Defense Fund. This tool could save so much time in research for the students, and is something they probably would not encounter on their own.

The last shortcut many smaller libraries have is a vertical file. The one at my hometown library had a huge folder full of pamphlets, newspaper clippings, and government publications on recycling. These are all important additions to the instruction of how to make a working bibliography for students working on a research paper.

Step 3. Preparing a Preliminary Outline

The third step in Warriner's is the outline. He says, "Prepare a preliminary outline to guide you in notetaking" (463). He tells students that before they can take notes in an organized way, they need to know what subtopics they will need information about.
I find this a little far-fetched. I would not discourage a student who already knows the details of his topic, but in the same respect, I do not think it is detrimental if a student does not know which parts of his topic he wants to discuss. That is the whole point of this assignment being a research paper. A person learns all about his topic by going to the library and reading all about it.

Warriner suggests only that a student read an encyclopedia passage to get ideas for his subtopics. I knew that only reading a paragraph or two from a reference book would not have allowed me to write an outline that would have been helpful to me at this point. I wanted to find a controversy involving recycling, and before I started reading, I would not have known what that controversy would be. My preliminary outline, had I really written one to take notes from, could have only included very general subtopics, which I learned later were not usually the classifications of different articles. I found a little of each subtopic in each article or book. My outline at this point would have been:

I. Recycling
   A. Pros
      1. glass
      2. paper
      3. plastic
   B. Cons
      1. glass
      2. paper
      3. plastic

Pros and cons about recycling were what I was looking for. But I knew my paper was not just going to be for recycling or against it. There had to be something deeper. The only details I already knew about recycling before my research were that one could
recycle glass, paper, and plastic, among other things. But as it turned out, I never found specific information on any of these separate materials.

I am not trying to say that a preliminary outline is not wise. I just find it a premature step. In my research, I went on to read and take informal notes to myself once I had my sources, just to get an idea of the intricacies of my topic before I laid out my paper.

Warriner also does not mention pre-writing or freewriting. My next step after reading through several of my sources was to write and write without stopping to discover what I had learned about my topic so far. From this sample, I was able to pick out subtopics suitable for an outline. This is the freewrite I did after reading and taking some notes, but before I began my outline or my writing:

October 1, 1992

I've just read over everything I have so far. It took about two hours. Reading it all at once really helps me (as opposed to reading it one at a time, as I get it). Anyway, I'm seeing a pattern develop -- and I finally have one source that really wraps it up for me -- that red flyer with for and against recycling.

It has taken an economic/legislative approach -- and really, that's what almost ALL of the articles included -- even if the main point was somewhat different. They all said either recycling is worth it -- let's make laws, or recycling costs too much: it should NOT be legislated.

I think that it should be legislated. Companies should have to recycle, and more importantly -- they should have to buy back recycled material to use in their products and in packaging. The economics of it do not pay off right away -- but there seems to be some evidence that it will pay off in the future. And don't we all agree that our Earth is WORTH IT??

After writing these thoughts down for three minutes or so without stopping, I was able to go back through my thoughts and pick out enough ideas on which to base my
paper. After reading through this and evaluating what I had written, I decided that I could not just take a pro-recycling view. It would be too broad and too boring. What I was really trying to say was that there is a way to solve the recycling problem that we are faced with in America: legislate it. My professor elaborated, telling me I was developing a free enterprise versus government interference argument. Now that could be exciting! So the main point of my paper became that recycling poses a problem, and the way to solve that problem is not to do away with recycling, but to make it work through government legislation.

As a teacher, I would have the students do this one day in the library or at home and turn them in. Then I could go over their thoughts and help them pick out the main points of their paper. This could also be a check-up procedure to make sure they are staying on task. One cannot freewrite about something one has not read anything about. I could at least be sure they had started reading, if nothing else.

My process of pre-reading and -writing adds some extra steps to the process of writing a research paper, but I believe these steps would help students be more guided in their research. If they are ready to make an outline without my extra steps, then that is excellent progress on their part. But for those students researching a topic they are interested in but know little about, these steps will help them focus their research before they write an outline and go on to Warriner’s fourth step, taking notes.

Step 4. Reading and Taking Notes

Warriner says, "Read and take notes on cards," referring to 4 x 6-inch index cards. He goes on to discuss how one needs to put the source number on cards, use slugs that will fit into one’s outline, and jot only one note or idea per card. He also suggests that students take notes in their own words.
I do not have a problem with this step, but as before, I just think it premature. Reading and taking general notes to oneself helps one get an idea of what issues are going to come up surrounding one's topic. As a teacher, I would not discourage hurried jottings and unorganized notes at first, as long as they lead to the organized notes later. Some students will write better if they have thought about their topic a great deal first.

The note cards should also be one alternative of many. I have never been able to use note cards with much success. They are hard to keep track of, and their size makes them easily lost. I would rather keep my notes in a notebook of some sort. If students have a legitimate preference on how to take notes, I say let them. They will do a better job with a procedure they are comfortable with.

Another suggestion I have is for Warriner to devote a whole section to plagiarism, not just touch upon it, as he did in this section. He warns, "Don't copy unless you intend to quote exactly. The use of the words of others as though they were your own is called plagiarism, and it is a serious offense" (465). If this is all that is going to be written on the subject, teachers need to take this prompt and use it to review the seriousness and the consequences of copying in great detail. Again, some sort of worksheet or exercise on how to take notes from a source and incorporate it into a sentence of one's own could help the students practice this method they might not have ever used before. And teachers should mention how many alternatives there are to plagiarism: there are several ways to incorporate quotes into one's paper.

Paraphrasing is one way to use somebody else's ideas without plagiarizing. A Guide to MLA Documentation by Joseph F. Trimmer gives two examples of how to do this:

Award winning novelist Toni Morrison argues that although slaves wrote many powerful narratives, the context of their enslavement prevented them from telling the whole truth about their lives (109). (21).
The second example is this:

Slave narratives sometimes imitated the popular fiction of their era (Morrison 109). (21).

There are also several examples of how to actually quote a source in one's paper. A student writer can introduce the author in a sentence, and then quote him, adding the correct page numbers, or she could give the quote, and then add the author and page number. In the following excerpts, A Guide to MLA Documentation gives the Original Version, Version A which is plagiarism, and Versions B and C, two legitimate ways to quote the original version:

**Original Version**

Transportation did not stop crime in England or even slow it down. The "criminal class" was not eliminated by transportation, and could not be, because transportation did not deal with the causes of crime.

**Version A**

Transportation did not stop crime in England or even slow it down. Criminals were not eliminated by transportation because transportation did not deal with the causes of crime.

**Version B**

Robert Hughes points out that transportation did not stop crime in England or even slow it down. The criminal class was not eliminated by transportation, and could not be, because transportation did not deal with the causes of crime (168).
Version C

Hughes argues that transporting criminals from England to Australia "did not stop crime... The 'criminal class' was not eliminated by transportation, and could not be, because transportation did not deal with the causes of crime" (168). (22-3)

Supplementary materials such as this one can be presented to students to help them understand exactly what is meant by such a complicated term as plagiarism.

Organized notes are important to the structure of a first-time researcher's paper, as long as he is not rushed into this step. Teachers might want to offer options prior to notetaking on cards for the more disorganized students.

Step 5. Assembling Notes and Writing the Final Outline

Step five is revising one's outline. Warriner writes, "Assemble your notes and write the final outline" (466). He suggests that students use slugs they have written on their cards and put similar cards in piles. Then they must decide which piles represent subtopics, and which do not belong at all. He suggests no more than six major divisions in one's paper.

My first criticism here is that Warriner implies that two outlines are necessary, and no more. Teachers should remind students that revisions can be made right up until the due date. So if a writer is writing the paper and comes up with a new point under a certain topic, he should add it. Just because it is not in one's "final" outline does not mean it should necessarily be rejected. Students should not be discouraged from
making improvements right up until the end of their project. 

To be honest, I only had topics I knew I wanted to cover in my paper written down on scrap pieces of paper. My notes were on photocopies of the actual books and articles I read, in the form of highlighted parts and scribbles in the margins. My final outline, the one printed in the appendix accompanying my paper, was written after the paper was finished. Each point was still uncertain until I started writing my paper, and moving things around until I had them where I wanted them. An outline cannot tell a writer how his paragraphs are going to sound together. I need to read my paper with its paragraphs and transitions placed in it first, then I decide if that paragraph sounds good there. If it does not, I move it! So my outline would be scrambled so many times in the process of writing my paper that I find it pointless to write out ahead of time. Again, I would allow for different students' preferences in organizing their papers.

**Step 6. Writing the First Draft**

Warriner's sixth step is writing out the paper for the first time. The author simply states, "Write the first draft" (467). He adds to this by saying that right now is not the time to worry about the details of style and mechanics. Students are also told that they do not necessarily have to start with an introduction, as long as they start writing and get their ideas down on paper. He also mentions that the student "may" revise extensively. Lastly, he tells the reader, "Write rapidly".

That is it. That is all that is said about a first draft. The real surprise, however, is that the next and last step is writing a final draft. I had to check and see if a page was missing. I could not believe that the half-sentence about how one may rewrite was all that was said about revisions to this paper.
Several drafts should be required on any paper, especially one of this magnitude. I cannot even count the revisions I made in my paper over the length of time I wrote it: at least ten. These students should have to write at least three drafts before their final copy. Warriner, or the teacher on her own, needs to tell students what revising means. It does not just mean going through and correcting spelling. It means to "see again". Students must look at their paper again and again to make sure that they are getting precisely the point across that they intend to make. Some suggestions teachers could give are: ask questions, peer edit, and check the outline and any notes for additional ideas.

When students read their papers, they should go through and mark any place where a question could be asked and there is no answer. If a student can ask "why?" or "how?" after an opinion or an explanation in the text of his paper, then he needs to put an asterisk there and go back later to fill in the answers.

Next, students should be encouraged to have others read their papers, whether it be a classmate or a parent or a relative. Often, someone else can catch things that the writer has left out, but puts in mentally when he reads his own paper. The proofreader can also use the question technique mentioned above.

And lastly, students should go back and make sure that they have followed their outlines, if they made one, covering every topic and subtopic. If not, they will need to go back and add to their papers. Or they might need to correct their outlines if, while writing, they added other subtopics or omitted some from the list.

So students not only need to be required to do several rewrites before the final draft, they also must be told what is involved with the revision of a paper. Suggestions like these should be provided by the teacher if she is using a text like Warriner's, which seems to suggest only a rough draft and a final copy of the paper.
Step 7. Writing the Final Draft

The last step Warriner has in his sequence is writing the finished copy. He tells us, "Write the revised final draft with footnotes and a bibliography" (468). His revisions include checking for style, -- he suggests looking back at his previous chapters -- mechanics, punctuation, and spelling. He also notes that the appearance should be neat, and he specifies margins and spacing. Next he encourages students to use smooth transitions from one subtopic to the next.

In this section Warriner also tells students how to include footnotes, or endnotes, and the bibliography. He includes exercises for both footnotes and bibliographical entries. I think these should have been studied prior to the actual writing of the paper, along with the tour of the library and its materials, and plagiarism, as are grammar, style, and punctuation. Again, his suggestions for revisions are weak and quite sketchy. Proofreading, not revising, is the skill he describes in his section on the final draft, which could be appropriate if only he would call it that, and include a prior step on revisions as I discussed above.

Lastly the author gives us a checklist of what to include in the final draft: cover, title page, final outline, the paper itself, and the bibliography. This is a helpful ending to the chapter.

In conclusion, Warriner's text book gives a good overview of how to write a research paper. But this should not be enough for the conscientious teacher. She should want to offer alternatives, for each child learns and succeeds differently. She should also add to this skeletal description of the steps to composing a term paper, using supplementary materials, and her own experience and insight.
An Appendix

My Research Paper:

Recycling: Problems, Solutions, and Suggestions
Solving the Recycling Problem

Thesis: America must establish solutions to the recycling problem in order to make recycling work to save the environment.

I. Recycling Introduction
   A. Problems
   B. Solutions

II. Problems
   A. cost
   B. glut

III. Solutions
   A. Do not recycle
      1. landfill
      2. incinerate
   B. Make recycling work
      1. economics
      2. packaging
      3. research
      4. legislation
IV. My Argument

A. We must make it work
   1. landfill argument
   2. incinerator argument
   3. free enterprise argument
   4. cost argument
Recycling products such as glass, plastic, and paper seems like a good way to protect the environment, save space in landfills around the country, and reduce wastefulness in general. But, according to several studies, recycling may not be such a good idea. It does not seem to be working as well as some environmentalists might have hoped. The problem with recycling is twofold: it is expensive to recycle materials, and the materials Americans are recycling are not always being reused. The solutions are even more complicated.

First, recycling is so expensive because of the technology that goes into the machinery. Machines that sort, de-ink, and break down plastic, paper and aluminum products are very costly. For example, the Champion Recycling Corporation in Houston, Texas, recently built an $85 million de-inking plant that removes residues and colorings from old newsprint (VanVoorst, 53). Similarly, Forbes magazine quotes American de-inking facilities at $50 million each (Berss, 41). So, companies that deal in waste removal are often reluctant to spend the initial money it takes to start a recycling plant.

Once a plant is established, the collection process can also often be expensive. The huge trucks that are sent out to collect sorted materials at the curbside require more energy and human resources than regular garbage collecting trucks alone. Lynn Scarlett, a landfill advocate writing for Consumer's Research magazine, makes this point by writing that what may save landfill space (collecting recyclables at the curbside) may end up using more fuel in the form of additional vehicles on the road (17).

Second, there is a glut of recycled raw materials now in the economy. Several recycling plants that already exist are having trouble reselling the glass, for example, that they have collected back into the market. Corporations are reluctant to buy some recycled materials because they report that recycled materials are either too
expensive or not of high enough quality compared to virgin materials. Green glass is in such abundance that its resale price went down from ten cents a ton to almost nothing during 1991 (Charles, 12). Newspaper recycling plants were having such trouble reselling their paper that some states including California and Colorado have mandated that “newspapers published in their jurisdictions be partly printed on recycled paper” (Yang, 100H). So this overabundance of recycled material is a big problem. Recycling plants cannot resell materials, while the general public is recycling with more and more fervor every day. The question is, what should America do, if anything, to make the recycling business work? Is it worth it at all?

Some say no. Those against recycling think that it is too costly to set up and maintain a recycling plant. The solution would be abandoning the recycling effort all together. According to these people, the landfills Americans are currently using are doing just fine, many of which have up to twenty-five more years of usefulness. And there are other places to dig landfills if those get full. Says Randall Johnson, a county commissioner in Minnesota, “We’re not running out of landfill space, we’re running out of politicians willing to site suitable landfills” (Berss, 41).

Incineration is also an option to getting rid of waste. Most of the people advocating the use of incinerators instead of recycling are those representing big corporations and businesses. They are not completely against recycling, they just do not want any part of it. And they are especially against legislation that might force them to recycle or use recycled materials in their products.

Those who want to make recycling work, however, have different ideas: and they include government legislation. There are four areas in which environmentalists would like to see change in this country, according to an article in Time magazine by Bruce Van Voorst:
First, economically, experts say that recycled materials should have the same tax and subsidy treatment that virgin materials do. They state that “investors in recycling equipment and research should be encouraged with tax incentives” (VanVoorst, 54). In addition, it should not cost more to ship recycled materials than it does to ship virgin materials. Railroads in this country charge more by the ton to ship recycled paper than virgin paper, according to Mrs. Pamela Popovich, editor of the Muncie YWCA booklet, Recycling Centers (and other important GREEN stuff).

Packaging should also be mandated. Some good ideas that companies have already implemented include Downy concentrated fabric softener, and the refill products that several other companies manufacture. The concentrated Downy comes in a smaller bottle than the original, and uses less per laundry load. The refill products in smaller packages are used by consumers to fill up large laundry containers, for instance, instead of going out to purchase the large containers and throwing the originals away. Other companies, such as McDonald’s, have changed their packaging to make it biodegradable or recyclable. All businesses should have to change their packaging for the better.

Next, there needs to be more government subsidizing of research and development of new and better ways to recycle. Better processes to remove contaminants, technology that would make recycling plants more efficient, and the creation of materials that are easier to recycle are all things that need to be worked on.

Lastly, legislation should be passed that would require companies to recycle materials, and to use recycled materials in their products. There need to be laws that
restrict recyclable materials from being put in a landfill.

The two sides present very different arguments for and against recycling. The problem with the first argument is that the advocates do not seem to see past their wallets. The issues are so black and white to them. The option of recycling costs more than landfills or incineration, so it is not even considered. But the landfills advocates claim are so plentiful are truly diminishing. Some are even quoted to have up to twenty-five years of usefulness left, but what are we to do after that? Open more? In less than a century, our whole country could be sitting on a pile of garbage if the attitudes of some landfill advocates were adopted by all.

They say the problem is that legislators will not grant new landfill sites. How many new sites do we need before we realize that space is limited? It will not go on forever, even if it will go on for another one hundred years. America cannot wait until there is no space left before an alternative is found. We must act now while we have a chance to save the environment. Additionally, landfills can be environmentally unsafe. Toxins from decomposing waste pollute our soil and water tables. So there is another problem with landfilling all waste. It may be more expensive to implement a recycling program, but our natural resources are worth it.

The other alternative these people offer is to build more incinerators, and continue using the ones we already have. The problem with the incinerators is that they are costly and contribute to air pollution through the smoke they give off. Elizabeth Holtzman, New York City comptroller, writes in a letter to the editor of the New York Times, "Lead and mercury are emitted from garbage incinerators in large quantities, and can cause brain damage in children" (A28). Some of the smoke by-products are also said to be cancer-causing. According to Rubbish! The Archaeology of Garbage, by William Rathje and Cullen Murphy, even "...well-run incinerators can release into the atmosphere small amounts of more than twenty-five metals ... which
have been implicated in birth defects and several kinds of cancer" (180). In addition, incinerators merely produce ash that needs to be rid of anyway, by landfilling or some other means. So that is not much of a solution, either.

Another point that those against mandatory recycling programs bring up is that they would take away companies' free enterprise rights. In other words, businesses should have the right to buy and use whatever materials they choose in their products. Otherwise, the government is infringing on their freedom of choice. Pamela Popovich has the best rebuttal to this argument. She explains that some people confuse the terms "freedom" and "license". Freedom includes responsibility and being one part of a huge system. A popular example of this: The freedom of speech does not include yelling "Fire!" in a crowded theater.

License means that one has the choice to do whatever one wants, regardless of how it affects others in a system. This license is what the free enterprise activists are fighting for, according to Popovich. They are missing the point that their so-called "freedom" to choose using materials that are hazardous to the environment infringes on other species' (as well as other humans') freedom to live in a non-polluted world.

The last point people make against recycling is that it is too costly. But recycling is less expensive than many might think. One reason people believe recycling is so expensive is that recycled materials suffer in the marketplace because of government subsidies. People must pay more through transportation and logging, for instance, to move recycled materials than to move virgin materials. "If these costs are taken into consideration, recycling looks economically a lot more competitive," says Allen Hershkowitz, senior scientist at the National Resources Defense Council (Van Voorst, 53).

Several companies have shown that recycling can in fact be cost-effective. "Contrary to popular belief, recycled paper is as high-quality as the conventional
stuff and competitively priced, too" (McAllister, 118). There is a company named Central Paper, in Trenton, New Jersey, whose premium recycled paper costs as little as $7.60 for 1,000 sheets compared to $8.16 up to $10.00 for virgin paper. Another company, Hewlitt-Packard in Palo Alto, California, has adopted recycling within their company. It has been financially beneficial to them, because instead of paying $40,000 a month for trash removal, they are now receiving $2,000 for the recyclable paper they collect (118).

Waste Management, headquartered in Oak Brook, Illinois, is another example of a company whose recycling program is paying off. It is called Recycle America, and it has been a “breakeven business” since its 1986 debut. Several Wall Street analysts estimate that Recycle America’s earnings should grow by 20 per cent to 25 per cent a year by 1995 (Bremner, 48). One last example of a profitable recycling operation is the one at the U.S. Naval Base in Norfolk, Virginia. Their solid-waste disposal program used to have a $1 million price tag on it until J. J. Hoyt took over. This year Hoyt’s recycling program is earning close to $800,000. He says, “The key is knowing the market” (Van Voorst, 53). So there are recycling programs out there that work, and are cost-efficient.

Even when the initial cost of starting a recycling program is phenomenal, companies need to see the long-term good recycling will do. Recycling will be cost-effective in the future: businesses just need to look past this week’s balance sheet. As one consultant, Arthur Veverka, said in the New York Times, “... it will pay off. But it won’t pay off tomorrow, and it won’t pay off next year. We should be able to see further than that” (Specter, B6). The main motive for recycling should be concern for the environment, not the pocketbook! The money invested in a recycling program is worth it because it could create jobs, fill fewer landfills, and save our earth’s natural resources. Those are things that one cannot put a price on.
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