A Research Roadmap

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Like professional historians, National History Day students must ask questions about their topic's significance in history, do background research using secondary sources to understand the context of their topic and they must creatively interpret primary sources in order to answer questions about their research topics.

As you participate in National History Day you will be defining, identifying, getting your hands on, and interpreting primary sources, as well as doing background research in secondary sources. As you do this, you are making history! We have created this roadmap to give you some ideas of the logistics involved and to help you start stretching your brain for the marathon ahead.

What's the difference between a primary source and a secondary source when you're doing historical research? Sometimes this can be a complicated question, but here are some general guidelines to help distinguish between the two. A secondary source is a book or article written by an author who is not an eyewitness or a participant in the historical event or period. For example, high school history textbooks and other history books about a particular topic are secondary sources. So are biographies and reference books, such as encyclopedias.

The most basic definition of a primary source is: material written or produced in the time period students are investigating. A letter written by President Lincoln in 1862 is a primary source for a student researching the Civil War era. The memories of a person who was part of Cesar Chavez's labor union movement also can serve as a primary source, even if you conduct an oral history interview with the person in 2001. He or she was an eyewitness to and a participant in this historical event at the time.

Now, to get started on your research. . . .

1. **Secondary sources give you background and lead you to the primary sources.**

It's important to start your research journey by looking at some secondary sources, they are the building blocks for your project research. Secondary sources will help you understand how to place your topic in the larger historical perspective and context. History books and other reference materials help you understand why your topic is
important and how it relates to economic, social and political developments of the period. A good National History Day project draws on several kinds of secondary sources, in addition to your own original interpretation of primary sources.

**What are Secondary Sources?**

Secondary sources may take a variety of forms. The authors of secondary sources develop their interpretations and narratives of events based on primary sources, that is, documents and other evidence created by participants or eyewitnesses. Frequently, they also take advantage of the work of other historians by using other secondary sources. For example, the author of the history textbook which you use in school probably did not use too many primary sources. Instead, textbook authors usually rely on secondary sources written by other historians. Given the wide range of topics covered by a typical textbook, textbook authors could not possibly find and use all the relevant primary sources themselves.

Look at monographs as well as general reference books to get background on your topic. You will discover that professional historians bring their own biases to the topics they research, and you should seek more than one perspective on the issues you are researching.

**REFERENCE BOOKS**

Look for general information in: encyclopedias, special historical dictionaries, and historical atlases. General encyclopedias such as *World Book* can provide you with basic information, while subject encyclopedias such as the *Encyclopedia of the North American Colonies* or the *Encyclopedia of American Economic History* provide a bit more detailed information. Encyclopedia articles often have bibliographies which can direct you to some of the major secondary sources for a topic.

Biographical dictionaries are compilations of biographies of people selected because of their fame, accomplishments, membership in a particular group, or some other distinguishing characteristic. Examples include the *Dictionary of American Biography*, *Notable American Women*, *Biographical Dictionary of Members of Congress*, etc. Each person's entry is a succinct summary of his or her life, often written by an expert. Atlases are compilations of maps. Maps created at the time of an event-such as battlefield maps created at the time of a battle are primary sources, but maps created later, such as those tracing the migrations of Indian tribes, are secondary sources. Examples of atlases which are secondary sources include Lester J. Cappon's *Atlas of Early American History*, James McPherson's *The Atlas of the Civil War*, and *Latin American History: A Teaching Atlas*. 
POPULAR PERIODICAL LITERATURE

Popular magazines, indexed in the Readers’ Guide to Periodical Literature, can give you ideas for and some general information about particular topics. National Geographic provides general information on provocative topics. Many other magazines and newspapers publish articles dealing with individuals or historical issues. For example, in the mid-1990s many U.S. newspapers and magazines wrote about Nelson Mandela, whose political activism helped revolutionize South African society by ending apartheid, and who became president of South Africa in 1994 after spending 28 years in prison for his politics. Starting a project on apartheid, you might begin here, and get ideas for interesting topics about the events that led to this revolution.

Popular historical magazines include American History Illustrated, Civil War Times, and American Heritage. These magazines normally do not have as rigorous a vetting process as scholarly journals do, and they often do not print citations. They usually are written in a more conversational style than scholarly articles and frequently are lavishly illustrated. Students may find them useful as a source for illustrations for documentaries or exhibits, but the research and conclusions should be used with caution due to the lack of documentation.

HISTORY TEXTBOOKS

Yes, really! Your textbook can be a great place to get ideas for topics and find out about the general context of your topic. If you're interested in the invention of the telescope as it revolutionized astronomy, first do some background reading on the scientific revolution
as a whole, perhaps in a general textbook on European history. This will help you understand how your topic fits in with the “big picture.”

GENERAL HISTORICAL WORKS AND MONOGRAPHS

Move from the general to the specific. A book on the history of astronomy will provide more detail than a general text on European history. Try a keyword search at a larger library and you’ll find dozens, if not hundreds, of books on the history of astronomy and related sciences. Another way to find secondary sources on your topic is to check the notes and bibliographies of books you’ve already found. And sometimes you might be able to find an entire book which is a bibliography on your topic; these books will be in the reference section, especially at university libraries. A good guide to the best books in just about any area of history is The American Historical Association’s Guide to Historical Literature, 3rd ed. (New York: Oxford University Press, 1995).

Monographs are full-length books dealing with a relatively narrow topic and typically are intended for people with some background in the subject. Examples include Edmund Morgan's American Slavery, American Freedom: The Ordeal of Colonial Virginia or a biography such as H.W. Brands' T. R.: The Last Romantic. While general publishers such as Alfred Knopf do publish some monographs, university presses publish the majority. Before accepting a manuscript for publication, university presses usually send it to experts in the field for their opinions, just as with articles in scholarly journals. Monographs typically rely on primary sources and are well-documented, with numerous citations.

Popular books include picture books or other books aimed at a general audience such as The Oxford Illustrated History of the British Monarchy, Popular Mechanic's Picture History of American Transportation, or Tom Brokaw's The Greatest Generation. The text usually is much shorter than a monograph and often there are no citations other than possibly a short bibliography. The lack of documentation makes it difficult to evaluate the quality of the research, so they are not usually appropriate as sources of information for National History Day projects. However, they often have many illustrations which could be useful for exhibits or documentaries.

JOURNAL ARTICLES

Historians don't always write books. Smaller essays on specific topics can be found in scholarly journals. These are periodicals similar to magazines, only they are specifically focused on history topics. There are general journals, like American Historical Review, Journal of American History, Journal of Southern History, William and Mary Quarterly, Journal of Economic History, Past and Present and more specific ones, like History of
Education. Academic journals can usually be found at college and university libraries, and there are often indexes to help you find an article on a specific topic. Or just peruse some of these journals to see what kinds of questions professional historians are asking about your topic.

Before accepting an article for publication, a scholarly journal typically sends it to 1-4 referees, who will scrutinize it and recommend rejection, acceptance, or acceptance with revision, in which case the author has to make some revisions (based on the referee's suggestions) before the article will be published. Scholarly journals print extensive footnotes or endnotes, allowing readers to gauge for themselves the quality of the research.

2. Getting acquainted with primary sources.

Bibliographies located in the back of general works and the notes and bibliographies found in monographs will lead you to all kinds of interesting primary sources. Here are some basic kinds of primary sources:

LETTERS, DIARIES, AND OTHER FIRST-PERSON NARRATIVES

Diaries, letters, or reminiscences of revolutionary soldiers, political activists, or government officials could provide fascinating first-hand accounts of people's experiences with revolutions. Many diaries and collections of letters have been published, and you can find them through library catalogues or reference books such as American Diaries. The microform collections of major university libraries often include a series called Early American Imprints, which reproduces every book, pamphlet, and broadside published in America before 1820. This is a great source for first-person accounts of the American and French Revolutions, backcountry rebellions, and similar topics. The same libraries may own microfilm series with titles such as Early English Books or The Eighteenth Century, which are catalogued in The English Short-Title Catalogue. These reproduce all English-language works published anywhere in the world or any books, regardless of language, published in England or the English empire from 1473 to 1800. You can find many works relating to world history, since many accounts originally written in foreign languages were translated into English and published. For example, you could find many primary sources relating to the Protestant Reformation and the conflicts between Protestants and Catholics in Europe. Travel narratives, written by English visitors to foreign lands, also can provide insight into world history topics.
MANUSCRIPT/PAPER COLLECTIONS OF NON-PROFIT ORGANIZATIONS, PROMINENT INDIVIDUALS, OR FAMILIES

These include letters, memos, reports, statements of purpose, plans for projects, deeds, wills, etc. Collections of papers of a particular organization, individual or family can be found in the holdings of state and local historical societies, churches and other organizations, or maybe in your attic. Collections of papers in historical societies are likely to be organized by subject or time period in boxes, and they often have finding aids, which are detailed guides to what’s in the collection. University libraries often have special collections units which have not only university records but manuscript holdings about alumni, donors, or local families or businesses. They also typically have microfilm collections of manuscripts owned by other institutions. While not comprehensive, the online National Union Catalogue of Manuscript Collections is a great place to start looking for manuscripts.

SONGS AND HYMNS

For example, the United States labor movement of the late nineteenth and early twentieth centuries left behind many songs which might be interpreted as promoting reform or revolution--you be the judge! You may find songbooks or recordings in your local public or university library. The American Memory Project of the Library of Congress also includes many songs.

PHOTOGRAPHS

There are wonderful photographs available for many revolutions from the mid-nineteenth century to the present, including photos of laborers during the industrial revolution, and photojournalism of national revolutions around the world. Photographers, such as those during the Progressive era, also took many photos which inspired reform movements. You may find pictures in books or magazines and typically historical societies and archives have photographic collections. Look at the Research Links section of the National History Day home page for links to some major online photographic collections.

TOOLS, MACHINES, FURNITURE, AND OTHER ARTIFACTS

After studying some of the machines, such as conveyer belt machines, that shaped the industrial revolution, you might build a model for your National History Day exhibit, and use it as part of your historical interpretation. You can find artifacts at museums, historical societies, or historic sites. You might even find something you can use at a local antique store or flea market or even in your grandparents’ attic.

COURT PROCEEDINGS

An interesting study of “reaction in history” could be developed from examination of the proceedings of the famous Scopes trial of 1925, which provides a fascinating glimpse at the reaction of many Americans to the teaching of evolution in the schools. (These
proceedings were broadcast nationwide on the radio at the time) Some court records have been printed in book form and others in newspapers. Records for local and state courts will probably be at your state archives or at the appropriate courthouse, while federal court records are available at the National Archives. Supreme Court opinions from 1893 to the present are available online at FindLaw.

GOVERNMENT RECORDS, INCLUDING CENSUS DATA

Have you thought about the revolution in the American family in the second half of the twentieth century? Census records, usually available in large libraries, can tell you about changes such as the growing participation of mothers in the labor force. County-level census data from 1790 to 1970 are also available online at [http://fisher.lib.virginia.edu/census](http://fisher.lib.virginia.edu/census)

Your state archives will have records for your state government, while the National Archives and its many branches house the records of the federal government. The National Archives and various presidential libraries have put some government records online; go to the National Archives and Records Administration's home page for more information and links. You could use these records to study not only revolution, reaction, and reform in the United States but also foreign revolutions and events through diplomatic and other government records. Colonial and state records through the early 19th century are available in a huge microfilm collection called The Records of the States of the United States.

NEWSPAPERS AND MAGAZINES

Newspaper or magazine articles from the time period you’re considering often provide wonderful eyewitness accounts. Many university libraries have microfilm copies of The New York Times, which started publishing in 1851 and which is indexed, so you can find articles on your subject relatively easily. Public and university libraries often have microfilm copies of local and state newspapers, too. Be sure you know about what date your event occurred to help you find some good articles.

For 20th-century magazines, use the Readers’ Guide to Periodical Literature to find articles. For 19th-century magazines, the equivalent is something called Poole’s Index to Periodical Literature, which is available primarily at university libraries. University and some public libraries will have microfilm of such popular magazines at Time, Newsweek, and Harper’s Weekly. Copies of thousands of issues of 19th-century magazines may be found online through the Making of America project. The library of the flagship university in your state may have a microfilm collection called American Periodical Series, which includes all existing issues of most American magazines published in the 18th and 19th centuries. Note: Newspapers or magazines published during the time
period you are researching are primary sources. A newspaper article published in 2001 commemorating the Russian Revolution of 1917 is not a primary source.

**ORAL HISTORY INTERVIEWS**

An oral history interview is a focused interview with someone about his/her past and role in history. (The person needs to have been a participant in the historical event or period you are investigating; an interview with an expert on the history of the American Revolution is not a primary source but may be a very good secondary source.) You can conduct an oral history interview yourself. You might also find collections of oral histories conducted by historians. These are usually located at historical societies and archives, and sometimes online. For example, the American Memory collection of the Library of Congress’ National Digital Library has a wide range of transcripts of oral histories. A good resource for students interested in using oral history is *Doing Oral History*, by Donald A. Ritchie (New York: Twayne Publishers, 1995).

**3. Finding the primary sources you need.**

Make phone calls, send e-mail, or write to living historical figures--famous and not famous. If you’ve chosen a topic that took place during the past 60 years, chances are you can find someone who participated in or experienced it first-hand. Don’t overlook people in your own community. There’s almost certainly someone in your hometown who participated in civil rights activities, protested government actions, worked for reforms, or fought for freedom at home or abroad.

Contact libraries, local, state, and national historical societies and organizations to find out about their collections. To plan your visit efficiently, take advantage of the catalogues or guides which many libraries, archives, and historical societies have made available online. You can find links to many of them from the National History Day home page. Your state or city may have a unified online catalogue of all or many libraries in your area, which makes finding books easier. You can usually find out about these at the web site of your official state library (we have links from the NHD web site) or sometimes from the web sites of local public libraries. The libraries of the public universities in a state often have a unified catalogue, too; visit one of the libraries in person or check out the web sites of the individual libraries to find more information.

Visit historic sites related to your topic. In addition to getting a feel for where your event took place and getting visual images if you’re doing an exhibit or documentary, take advantage of the resources at historic sites. You can usually find an expert at the site who has done a lot of research and may have or know of some great sources. And the site may have a research collection of books, manuscripts, and artifacts which you might be allowed to use. Call or write first to find out what’s available and make an appointment, if necessary.
4. Some examples of where primary and secondary sources can be found.

School Library
A great place to start: At your own school, you will probably find:

- Encyclopedias
- History textbooks
- General historical works and monographs
- Access to the Internet
- Public Library

You'll find a greater selection of resources here, and possibly access to excellent sources through interlibrary loan. Ask at the circulation or reference desks about interlibrary loan, which is a way to borrow books or even microfilm from libraries all over the country. At a public library, you can find:

- Additional reference books
- General historical works
- Access to the Internet
- Access to interlibrary loan
- Video documentaries
- Some historical monographs
- Historical novels (e.g., Theodore Dreiser's novel *Sister Carrie* could serve as a primary source in its descriptions of the industrial revolution.)
- Clipping files: newspaper and magazine accounts of local events
- Special collections of various resources
- Newspapers and magazines
- University Libraries

Here you'll find an even wider selection, including unique collections and greater access to primary sources. You often cannot check materials out if you are not a university student, so come prepared with change for copying and notebook paper for note-taking. You can find:

- History journal articles
- General historical works and monographs
- Historical atlases (e.g., a map showing major battles in the Chinese revolution)

Popular magazine collections (Here you can find interesting visual documentation of things like the revolution of fashion, such as the acceptability of women wearing pants, when only a few decades earlier they wore long skirts.)
Previous studies of your topic, which may include some primary sources: (e.g., a history of the Mexican revolution might contain translated songs from that period)

STATE AND LOCAL HISTORICAL SOCIETIES AND ARCHIVES

Ever wonder what's inside those buildings in your community or state capital? Go find out! It's a good idea to do some preliminary research in secondary sources first and maybe make a few phone calls or check out the institution's web site. The more specific you are about what you're looking for, the more helpful the staff of such institutions can be. Also take lots of paper for note-taking and some change for copying because the historical documents cannot be checked out. You can find:

- Manuscript Collections
- Letters and Diaries
- Papers of prominent local individuals and families
- Papers of state and local organizations such as state political parties, boards of education, and foundations
- State and local newspapers (some may be indexed by topic)
- Oral history collections
- Records of government agencies
- Records of births, marriages and deaths
- Collections of photographs
- Brochures and pamphlets
- Reports of state commissions on various subjects, such as education, commerce or crime
- Historical object collections
- Organizations

Some organizations donate their historical records to historical societies. A few, like the Y.M.C.A., even establish their own archival collections. Many smaller organizations keep at least some of their own documents. If you’re interested in the reform efforts of the Women’s Christian Temperance Union (to end the sale and consumption of alcohol in the U.S.), find out if there was a local or regional chapter in your area which left behind records. Partial records of many organizations and papers of prominent individuals are now available online, a useful alternative to local records if none are available near you. Keep in mind that you will only have available selected records in most cases. In addition to using the Internet, you can call organizations that interest you find out where their historical records are kept. You may try:

- Churches and synagogues
- Fraternal organizations
• Ethnic societies
• Political parties or other political organizations
• Corporations
• Veterans groups
• Settlement houses or other community centers
• Charities
• Your Local Video Store

No kidding! “Casablanca” is part of the history of the 1940s. Produced in 1943, the film is a dramatic look at wartime refugees in Morocco, and it is very revealing of Americans' perspectives on the role of the United States in the world during World War II. Popular films are one kind of "popular culture." Other examples are television and music. So you might want to look in your video store for:

• Popular films
• Documentaries (NOT docudramas of historical events)
• Art Museums
• Works of art can serve as primary sources and can add a great deal to the visual dimensions of your project. Check out collections with historical significance:
  • Paintings
  • Sculptures
  • Photographs
  • All Around Your Community

History is everywhere! Look around for:

• Personal records, such as diaries and letters
• Family and household records
• Photo albums
• Home movies and videos
• Historical artifacts such as tools or furniture
• Oral history interviews you can conduct yourself
• Places with historic significance (such as monuments to Revolutionary war heroes, or the homes or public buildings such as churches used by prominent reformers.)
• National Archives and Records Administration

A HUGE collection of materials related to all facets of the federal government in the United States. You can write to the National Archives to find out about materials that might be relevant to your topic. But be sure to narrow the topic first. The more specific the questions you ask, the better chance you have of receiving a helpful reply. You can also find a very helpful online service at the National Archives and Records Administration's web site. As part of their "Digital Classroom," which provides services to teachers, there is a new section just for students working on National History Day.
projects. Follow the user-friendly menu to home in quickly on materials that might be helpful for your specific topic.  
Guide to Federal Records in the National Archives  
NARA Archival Information Locator Database  
Mailing address: National Archives and Records Administration, Washington, DC 20408  

**THE INTERNET**

Getting better all the time. Get connected to people, major research library catalogs and online primary sources. It's cheaper than the phone and becoming more user friendly all the time. You can find whole collections of sources, including many world history primary sources in English. By hooking up with the National History Day home page, you can get connected to great online resources, including many online primary sources. Within the National History Day home page are links to:

- The National Archives and Records Administration  
- The Library of Congress  
- The Smithsonian Institution  
- History Education Resources  
- U.S. Holocaust Museum  
- Colonial Williamsburg  
- and others!

Great places to find primary sources online! But keep in mind that most institutions have only a tiny fraction (usually less than 2%) of their records online.

**5. A note on finding sources on international topics:**

Many of the "hot links" on the Internet contain collections of translated sources. Many famous texts have also been translated: sacred works like the Koran, the Baghavad-gita, autobiographies of famous individuals, constitutions and works of literature. Memoirs are sometimes published in English, such as the book *Born Red: A Chronicle of the Cultural Revolution* (in China in the 1960s), by Yuan Go. The ancient writings of Plato and Aristotle are also available in translation. Meetings of heads of state and other diplomatic officials have left us documents in English. Some countries publish English-language news material for the world; these periodicals can be found in major research libraries.

Also, you can look at the people whose language you don't speak through the observations of English-language speakers. For example, Christian missionaries to other countries and English-speaking soldiers, such as U.S. soldiers in Nicaragua, also left
records that provide useful commentary on revolution, reaction, or reform. Oral histories of people who grew up outside the United States can be helpful for more recent decades. The United Nations has many documents in English concerning conditions in particular countries as well as documentation of diplomatic events. You can also get some international perspective on an event by reading English-language newspapers or magazines. And don't forget, English is one of the primary languages in many corners of the world. You can find English-language sources from places like India (a former colony of Great Britain) and South Africa as well as Australia, Great Britain and Ireland. Of course, if you can read another language, you can cast your net even wider into world history!

6. Tackling research challenges: questions and answers.

Q: How do I find out about the experiences of people who didn't read and write, like most of the indentured servants, slaves, and 19th-century immigrants to the United States?

A: This is a very common problem, since throughout most of world history, the vast majority of people were illiterate. You can find out some things about the experiences of migrants who did not leave records, though. For example, for every group of migrants--whether those people were invited to move to a place or not--there is a historical or archaeological record of how people reacted to new people and new ideas. In recent centuries, there were sometimes people assigned to simply keep track of comings and goings. Ship's records or local records-keeping agencies might have records about migrants. From examining these documents, you might find out the sex or age of a group of indentured servants coming to the American colonies, or you might discover what kinds of objects immigrants brought with them.

There were also many government or private agencies, especially during the 19th and 20th centuries, that had contact with migrants, and left records. For example, the U.S. government set up the Freedmen's Bureau right after the Civil War to assist former slaves (in general, a very mobile population) in securing new contracts with employers as free people. In the late 19th century, urban reformers throughout the United States set up "settlement houses" in immigrant neighborhoods to advocate for immigrants and in many cases to "Americanize" them. Agencies that have offered lessons in English as a second language can provide more recent information on intercultural contact through immigration. Some of these organizations have left entire buildings full of historical records, including many observations of and reactions to new people and new ideas.

Other agencies that dealt with migrant populations include the Immigration and Naturalization Service; corporations, such as the canning industry in the Southwest, which employed many immigrants; and large unions that organized immigrant workers, like the Congress of Industrial Organizations (which joined with the American Federation of Labor to form the AFL-CIO).
Q: I would like to create a media presentation by doing an oral history of my grandmother, who immigrated from Mexico. Her story is interesting, but how do I make a video that shows more than just her talking about her life?

A: Interview her in her home. Have her show you (and your video camera) memorabilia from her past. Her neighborhood might make interesting video material, too. See what remnants of her past you find as you look around and talk to her. Note what she was interested in saving and what she did not care to save. If she makes reference in the interview to historic events, people, or places, complement the oral history with other kinds of sources, such as newspaper articles. You might also find slides of the places, events, or people she describes; these could complement your media presentation. Show how she is part of history.

Q: I'm interested in how the movement of people around the globe generated interest in new foods, like hot spices. Where do I start looking for sources?

A: Food has an interesting history, and there has been so much written on this subject lately that you might want to narrow your topic. You might try looking at some recently published cookbooks, some of which have extensive histories of certain kinds of food. Historical atlases may contain maps concerning the migration of spices around the globe. After all, those European explorers started out looking for spices, not gold. (If you lived on gruel and bread, you, too, might be ready to set sail around the globe in search of flavor)

Also try some key word searches like "spice and history" or "food and history" on a university library catalog. You will find histories of the Dutch trade in the "spice islands," and perhaps you will run across a book about the creation of white sauce as a way to Americanize the spicy cuisine of eastern and southern European immigrants (it's called Perfection Salad). By looking at issues of popular women's magazines such as Ladies Home Journal, you might be able to document the growing use of a particular spice in the food cooked by American women. Other primary sources you might check out are newspaper articles and old cookbooks.

Q: What about finding primary sources for international topics?

A: Many of the "hot links" on the Internet contain collections of translated sources. Many famous texts have also been translated: sacred works like the Koran, the Baghavad-gita, autobiographies of famous individuals, constitutions, and works of literature. The ancient writings of Plato and Aristotle are also available in translation. Meetings of heads of state and other diplomatic officials have left us documents in English. Some countries publish English-language news material for the world; these periodicals can be found in major research libraries. And once again, you can look at the people whose language you don't speak through the observations of English-language speakers. For example, Christian missionaries overseas left documents of their experiences as migrants as well as their observations of people in other countries. Oral histories of people who grew up outside the United States can be helpful for more recent decades. The United Nations has many
documents in English concerning conditions in particular countries as well as documentation of diplomatic events. You can also get some international perspective on an event by reading English-language newspapers. And don't forget, English is one of the primary languages in many corners of the world. You can find English-language sources from places like India (a former colony of Great Britain) and South Africa as well as Australia, Great Britain, and Ireland. Of course, if you can read another language, you can cast your net even wider into world history!

7. Interpreting those primary sources

Once you find your primary sources, you have the building blocks of your National History Day project. Your interpretation of the primary sources you've uncovered is your National History Day project. You will develop a thesis, a main point that summarizes what you think these sources from the past say to us in the present. As you puzzle out the meaning of these sources, here are some things to keep in mind:

Don't forget that the historical event or issue you're researching took place in a particular historical context. Be sure to review secondary material as you interpret the primary sources. This will help you think through the significance of your topic in history.

Don't assume that your sources contain the "truth" about an event. Historians need to be skeptical about every source they find, including Internet sources. Here are some questions to ask yourself in order to determine just how much a particular source really tells you about the past:

- Why are the sources you've chosen useful for answering the questions you want answered?
- What kind of information is not revealed by the sources you have (and may never be revealed because we can never know all the details of a historical event)?
- Who is the author/producer/storyteller?
- Why did they produce this document, paint this painting, or decide to tell you their story?
- Who was the intended audience?
- What was the purpose of the letter, diary, speech, etc.?
- In what kinds of situations were those songs sung, or those farm implements used?
- What are the key biases you see in this source?
- How much can we find out about the people whose voices do not appear in a particular document, from the perspective of the people who left written information?
- Who preserved this source of historical information and why?
- Do the various primary sources you've collected give you conflicting information? Why?
- How does what you learned from one photograph complement—or contradict—what you learned from a newspaper account?
• What do you know about the larger historical context (you know, the stuff you learned about in history class!) that can help you understand the particulars you find in your primary sources?
• How might the story you're uncovering as you research this topic relate to other episodes in history?

Happy Trails!
Fruitvale duo second at history nationals

The process began back in the fall of 1999. Bardet and Peters decided a junior division group exhibit entry based on World War II’s Battle of Midway had winning possibilities. The annual history day competition theme was “Turning Points in History.” During the Midway battle, American forces sank Japan’s four largest aircraft carriers, removing 258 planes along with a high percentage of highly trained pilots from the war thus ending its naval superiority in the northern Pacific.

Bardet and Peters had until March 25 to prepare for the regional Kern County History Day competition. According to Bryan’s father, John, “They had to gather artifacts and conduct interviews all over the United States. Bryan and Eric must have talked to 50 people and that included emailing Japan to get the other side’s perspective. They even made a trip to Vandenberg Air Force Base to interview Bill Surgi, a survivor of the USS Yorktown aircraft carrier that sank during the Battle of Midway.”

“That was awesome,” said Bryan Peters. “To get to hear a story that happened 50 years ago from a man who lived through it, that was...that was awesome.”

Bardet and Peters’ exhibit included 15 pictures, 26 pages of bibliography and some rather unusual artifacts.

“We were lucky enough to collect a bloody, bandana worn by a Japanese pilot during the attack on Pearl Harbor, an identification plate from a Japanese Zero fighter plane and even a metal fragment from a Zero that contained part of its rising sun logo,” Bryan said.

Peters and Bardet were finalists at Kern County History Day, earning the right to compete at History Day in California where they won again in May catapulting them into National History Day 2000. The two made the trip to Maryland with classmates John Frost (individual documentary); Andrew Hansen and Brandon Lansche (group documentary); Deedra Araujo, Paul Ricketts, Megan Heiss, Shelly Arner and Stephen Castello (group performance) and Centennial High’s Molly Jager (senior individual performance) who had all qualified at the state competition. Frost, Araujo, Ricketts, Heiss, Arner, Castello and Jager also made the finals.

Judges interviewed Peters and Bardet and looked at their display on June 12. Surgi, who lives in Maryland, dropped by to lend his support and even loaned them the helmet he wore on the Yorktown to add to their display. They would not find out until the awards ceremony, three days later, if they had made the finals, let alone won an award.

“Unlike the other categories, in group exhibit, there’s no more contact with you after the preliminary judging,” Bryan said. “If you make the finals, the display board has to stand alone to win it for you when
the judges come by to score it again.”

Their board had not let them down. They earned a $500 cash award for finishing second in a category that featured over 80 entries, prevailing in a competition that involves approximately 700,000 students nationwide.

“When we heard the announcer say, ‘the group exhibition second place award goes to two students from Bakersfield, California,’ we jumped 10 feet out of our chairs,” Bryan said. “Oh, we were very, very surprised.”

National History Day’s goal is “to promote the study of history by engaging students and teachers in the excitement of historical inquiry and creative presentation.”

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COMMENTS

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- AREAS FOR IMPROVEMENT

Superior = 6 pts
Excellent = 3 pts
Good = 0 pts

Superior = 5 pts
Excellent = 2.5 pts
Good = 0 pts

Superior = 2 pts
Excellent = 1 pts
Good = 0 pts

-1.2 This category you only loose points for not following directions
NHD Used as Model for Statewide Assessment in Washington

By Lauren Danner

NHD Newsletter, Fall 2005

National History Day projects will help Washington State teachers and students meet new social studies assessment requirements, thanks to an innovative partnership with the State Office of the Superintendent of Public Instruction (OSPI).

In 2004, the Washington legislature enacted new guidelines for statewide social studies assessments, with the goal of connecting them with teachers’ sense of purpose. Rather than focus on standardized tests, the new Classroom-Based Assessments, or CBAs, offer a richer, and more complex, assessment model.

Social studies CBAs are grouped by topic--history, civics, geography, and economics. Within each topic, different CBAs are available for different grade levels. For example, in the high school-level history CBA, students can complete projects on the following themes: “Technology Through the Ages,” “Cultural Interaction,” “Analyzing Artifacts & Sources,” and “Conflict.”

Each theme offers specific guidelines and completion requirements. Once the project has been completed, it is scored according to a rubric developed by the State Office of Public Instruction.

How does National History Day fit in?

At the 8th, 10th and 11th-grade levels, National History Day projects will be used to fulfill the “Analyzing Artifacts & Sources” CBA.

The state department of Education has developed a bridging document, which shows a step-by-step alignment between National History Day and the CBA.

For example, the Analyzing Sources CBA requires that students research primary and secondary sources relevant to a particular time period or event, organize their research, then analyze, interpret and present it.
Teachers can use the bridging document to ensure that students complete the CBA by doing a National History Day project.

As the CBAs are adopted statewide, the state office is working to highlight the utility of National History Day as a proven educational program.

Sessions on CBAs are being presented at all five of Washington’s National History Day fall teacher workshops, with the goal of stimulating educator interest in adopting National History Day as a way to complete the CBAs.

The legislation requires that school districts implement CBAs or another approved assessment model in the 2008-2009 school year, so informational sessions now are particularly timely.

“National History Day is an excellent way to meet the CBA requirement,” state Social Studies Curriculum Director Caleb Perkins said. “It’s a proven program that challenges students to think in complex ways about historical topics, research and analysis.”

For more information on the CBAs, and to see the National History Day bridging document, visit http://www.k12.wa.us/CurriculumInstruct/SocStudies/default.aspx.
Rosalind Franklin: Unsung Hero of the DNA Revolution

Sarah Rapoport
Ramaz Upper School, New York City
Junior Division Historical Paper, National History Day 2002 Competition

ON APRIL 25, 1953, three papers were published in Nature, the prestigious scientific journal, which exposed the "fundamentally beautiful" structure of DNA to the public, and sounded the starting gun of the DNA Revolution. The authors of these papers revealed the now-famous double-helix structure of DNA, thereby unlocking the secret code of the human gene. Knowledge and understanding of DNA's structure would revolutionize the way scientists attack diseases of the human body, allowing them to "see" and to "read" the body's coded information on heredity.

Before the 1950s, scientists suspected but possessed no actual knowledge of the structure of DNA, though they had elementary knowledge of heredity from such scientists as Gregor Mendel. The race to discover the structure of DNA was run by many scientists. The most notable were Linus Pauling, an American chemist working at Cal Tech, James Watson, an American biologist, Francis Crick, a British physicist, both working at Cambridge, and Maurice Wilkins and Rosalind Franklin, X-ray crystallographers working at King's College, London.

Few people outside of the scientific community know of Rosalind Franklin, an accomplished X-ray crystallographer, chemist, and molecular biologist. Fewer still are aware that it was Rosalind Franklin's clear X-ray photographs that established unequivocally the structure of DNA. It would be nearly impossible to name a scientific discovery in the last century, except for Einstein's theory of relativity, that had as much of an impact as that of the discovery of the structure of the DNA molecule. This paper describes Rosalind Franklin's discovery, and reveals Maurice Wilkins' treachery in secretly showing to her rival, James Watson, her famous X-ray photograph of the "B form" (also referred to as the "wet" form) of the DNA molecule, which unlocked the code that he was desperately seeking. The intense personal drama that surrounded the race to unlock DNA's structure highlights this discovery's scientific importance. It is sometimes forgotten that it is the inspired labor of hardworking, individual people that catapults a discovery to its next level, incidentally "making history." This paper describes such a revolutionary discovery.

After April 25, 1953, the date the Nature articles were published, historical credit for the great discovery of the structure of DNA was given to James Watson and Francis Crick. Had Watson, Crick, and Wilkins properly acknowledged Franklin's contribution, Rosalind Franklin would have shared the enormous public recognition that Watson and Crick received for discovering the helical structure of the DNA molecule. For it was Rosalind Franklin's revolutionary X-ray photograph of the DNA molecule which illuminated for James Watson the helical structure of DNA, leading to an "understanding of the genetic code and how it is used to make proteins...one of the biggest breakthroughs in modern biology."
Rosalind Franklin's Early Life

Born on July 25, 1920, one of five children in an established, fourth-generation British family, Rosalind Franklin started out simply as a girl who knew very early in life what she wanted to do as an adult. She dreamed of one day becoming a scientist, and her mother and her aunt encouraged her to pursue her dream. After graduating from St. Paul's Girls School in London in 1938, Franklin studied French in Paris and then returned to England to attend Newnham College at Cambridge University. There, she was encouraged by physicist Adrienne Weill to pursue her doctorate in chemistry, which she was awarded in 1945. While at Cambridge and then subsequently as a research chemist in Paris, Franklin learned X-ray crystallography and became proficient at it. Neither Rosalind Franklin nor her mentors had any idea that her work would one day revolutionize modern biology.

What is X-Ray Crystallography?

X-ray crystallography is the revolutionary way (in 1951) to view the 3-dimensional structure of molecules. This method requires the chemist to painstakingly remove the DNA from a cell, and then to convert it into a crystal form. The next step is to shine X-rays into the crystal. These X-rays are diffracted by the atoms in the crystal, in effect throwing the atoms' shadow onto photographic negatives. These X-rays can therefore produce an image of the actual 3-dimensional position of the atoms in the crystal of a molecule.

Rosalind Franklin at King's College

Known for her expertise in the emerging field of X-ray crystallography, in 1951, at the age of thirty-one, Franklin was offered a fellowship as a DNA researcher in the laboratory of John T. Randall at King's College in London. The other crystallographer already working at King's was Maurice Wilkins. Unfortunately, Randall interviewed and hired Rosalind Franklin on a day when Wilkins was absent, and thus, unbeknownst to Franklin, she began work at King's under a cloud of suspicion and resentment from Wilkins, who should have been her closest colleague. The hostility that Wilkins showed to Franklin, and which she eventually reciprocated, proved to be the tragic catalyst for Rosalind Franklin's betrayal at Wilkins' hand.

The picture that emerges of thirty-year-old Rosalind Franklin is of a five-foot-tall, slim and "deeply shy," single-minded, serious young scientist. She was in the unique and difficult position of being an unmarried female seriously pursuing excellence in the overwhelmingly male environment of elite, British university research laboratories. Aaron Klug, one of Franklin's colleagues at King's, describes her: "She wasn't blustering. She spoke her opinions firmly, and I think people were unaccustomed to dealing with that in a woman...She was very much a rationalist." Sylvia Jackson, a colleague of Franklin, recalled that, "She was absolutely dedicated, a tremendously hard worker. She strode along rather quickly; she was enormously friendly if you gave her half a chance."

Yet it is clear from reading James Watson's 1968 autobiographical work, The Double Helix, that he could not tolerate Rosalind Franklin's status as a female and as a scientist:

...[S]he did not emphasize her feminine qualities. Though her features were strong, she was not unattractive and might have been quite stunning had she taken even a mild interest in clothes. This she did not. There was never lipstick to contrast with her straight black hair, while at the age of thirty-one her dresses showed all the imagination of English blue-stockings...Unfortunately...there was no denying she had a good brain.

Social scientist Elizabeth Janeway is troubled by Watson's aggressively unsympathetic portrayal of Rosalind Franklin. The only person in his book that Watson describes so personally and so venomously is Franklin. Even the casual reader of Watson's autobiography comes away knowing that "Watson's idea of where women belong in science..."
[is] outside it." Watson wrote, "The real problem was Rosy. The thought could not be avoided that the best home for a feminist is in another person's lab." Only James Watson seemed to go out of his way to portray Rosalind Franklin in such a cruel fashion. Even Francis Crick, James Watson's collaborator, called Watson's characterization of Franklin in The Double Helix a "contemptible pack of damned nonsense." Crick also recalled, "I don't think Rosalind saw herself as a crusader or pioneer. I think she just wanted to be treated as a serious scientist." From Francis Crick's recollections of Franklin, and from those of her colleagues, it becomes obvious that Rosalind Franklin did not see herself as leading a revolution as she quietly made great strides with X-ray crystallography. Her revolutionary breakthrough doomed her because she presented too much competition to Watson and Wilkins. The reason for Watson's warped view of Franklin may also lie in his scientific rivalry with her, and in his drive to succeed, regardless of who stood in his way.

A Bitter Rivalry

Rosalind Franklin's and Maurice Wilkins' mission at Randall's laboratory at King's College was to uncover the structure of the DNA molecule using X-ray crystallography. In the early 1950s, the two laboratories in England that were working to uncover the crystal structures of biological materials were King's College in London, which was studying the structure of DNA, and the Cavendish Laboratory in Cambridge, which was studying the structure of proteins. These two areas of research were expected to remain separate. But James Watson grew bored with the study of proteins, and secretly turned his mind to DNA research, the area in which Wilkins and Franklin were working.

Rosalind Franklin's sophisticated X-ray crystallography photographs, together with her research findings proving that DNA has an ordered structure, helped put King's far ahead in the DNA race. In the spring of 1951, James Watson met Maurice Wilkins. They struck up an acquaintance, which Watson encouraged over the next year by sympathizing with Wilkins' complaints about having to work in the same lab with a woman scientist named "Rosy" Franklin. Francis Crick later recalled that Watson's harsh view of Franklin was influenced entirely by Wilkins, and was completely warped. "What Jim put down in his book [The Double Helix] is all ideas he had from Maurice [Wilkins]. Jim never really knew Rosalind...Maurice had very fixed ideas [about Rosalind] which Jim accepted. I told him they were wrong."

Several months later, in November of 1951, Rosalind Franklin presented a lecture on her startling and revolutionary (but correct) discovery that the DNA's backbone lies on the outside of the molecule, and that its basic structure is helical. Watson, only a train ride away and intensely interested in DNA, attended her talk, "but took no notes and...misremembered important parts of what Franklin said." Watson did not understand Franklin's lecture because his doctoral training was in ornithology, not in chemistry, and furthermore, he resisted being lectured in the subject by a woman. As a result, when Watson returned to his lab in Cambridge, he and Crick built a model of the DNA molecule with its backbone on the inside. When he proudly showed this incorrect model to Wilkins and Franklin, the meeting turned into an embarrassment for Watson and Crick. When news of Watson and Crick's failure reached Sir Lawrence Bragg, the head of Cavendish Laboratory, he ordered them to leave the study of the structure of DNA to the researchers at King's, and to concentrate on proteins.

Meanwhile, Wilkins and Rosalind Franklin, researching DNA at King's, did not function as a team; far from it. Franklin had been hired as a full-fledged, independent research scientist, but Maurice Wilkins refused to recognize her as such, and repeatedly tried to use her as his assistant. Franklin resisted this treatment, and refused to share her X-ray crystallography research with Wilkins unless he agreed to treat her as an equal. Franklin was laboring in a laboratory whose rules did not permit her, as a female scientist, even to dine in the same lunch room with the male scientists.

Wilkins, possibly feeling insecure in the shadow of Franklin's superior ability with X-ray crystallography, and
because of her other recent research successes, became impossible for Franklin to work with day-to-day. If Franklin expressed her disagreement on professional matters, Wilkins became silent and would not speak to her. Their relationship turned into outright animosity toward each other, leaving Franklin to work alone to perfect her X-ray photographs in her quest for the solution of the structure of the DNA molecule.

**Franklin's Revolutionary X-ray Photograph**

In May of 1952, working alone, Franklin photographed DNA in two forms: a "dry" form and a "wet" form (also known as the "B form"). Her clear X-ray photograph of the wet form of DNA was revolutionary. "No one had photographed the wet form before," Franklin's X-ray was astonishing because she took the photograph looking **down** the long DNA molecule. She demonstrated that the structure of the DNA molecule was a helix, or twisted ladder, because her photographic view down the core of the molecule showed an **X**. Forty-six years after James Watson viewed Franklin's startling photograph, he still recalled it vividly: "I was shown Rosalind Franklin's X-ray photograph, and whoa! It was a helix! And a month later, we had the structure."

Franklin stored her X-ray photograph of the wet form of the DNA molecule in her drawer in her laboratory. Unbeknownst to Franklin, Maurice Wilkins, preoccupied with preventing Franklin from getting ahead of him in her research, began to secretly copy her work when she was absent from the lab, and he concealed these copies of her private work in his drawer, without her knowledge.

**A Hidden Alliance**

In January, 1953, having kept in touch with Wilkins after the disastrous meeting that revealed their incorrect model, Watson came to King's to visit him. At the time, Watson and Crick were feverishly trying to find the structure of DNA before their most famous rival, Linus Pauling. James Watson describes the now-famous betrayal scene:

Walking down the passage...[Wilkins] revealed that...he had quietly been duplicating some of Rosy's and Gosling's [Rosalind's assistant] X-ray work...Then the even more important cat was let out of the bag: Since the middle of the summer Rosy had had evidence for a new three-dimensional form of DNA...When I asked what the pattern was like, Maurice [Wilkins] went into an adjacent room to pick up a print of the new form they called the "B" structure. The instant I saw the picture my mouth fell open and my pulse began to race. The pattern was unbelievably simpler than those obtained previously...and Maurice told me he was now quite convinced she [Rosalind Franklin] was correct.

Little did Rosalind Franklin know that her laboratory colleague, Maurice Wilkins, was in the next room revealing months of her work to her competitor! Compounding Wilkins' betrayal of his King's colleague was that Watson not only took in all the information that Wilkins was feeding him, but he also returned with the ill-gotten data to Cambridge, with the full knowledge that it was Rosalind Franklin's work. James Watson absolutely knew that it belonged to her and not to Wilkins, and that Wilkins had obtained it without Franklin's permission.

**Violation of the Scientists' Code of Honor**

It is necessary for scientists to share information with one another, for if they did not, science and knowledge would not develop and grow. However, the tacit agreement among scientists who use or borrow one another's findings is that proper credit must be given to the author or originator of the work. Watson, after viewing Rosalind Franklin's X-ray photograph of the now-famous "B form" of DNA with its clear "X" in its center, recognizing her intellectual leap forward, rushed back to Cambridge to tell Crick. Watson and Crick had not performed any experiments or collected data on their own. They used Franklin's data to formulate...
a theory of DNA's structure. Within days they built a correct model of the structure of DNA based on Rosalind Franklin's work, and then hastened to publish this model in *Nature*. The authors did not give appropriate credit to Franklin, in effect robbing her of the opportunity to be properly recognized for her role in the revolutionary discovery of the structure of DNA.

It is beyond dispute that without Franklin's photograph, Watson and Crick would have been left with their incorrect model of the DNA molecule. In the fall of 1952, Wilkins had induced Rosalind Franklin to accompany him on the train ride up to Cambridge to view Watson and Crick's model of the DNA molecule. In Watson's own words, "I really had to do model building because I wasn't qualified to solve the structure [of DNA] by crystallography." Within a few moments of viewing their model Franklin knew it to be defective, turned on her heel, and walked out to catch the next train back to London. Left on his own, Watson would not have made the revolutionary breakthrough and built the correct model of the DNA molecule when he did. He did not have the scientific training or specialized skill to do so.

But Rosalind Franklin did. Franklin's famous X-ray photograph clearly showed, for the first time ever, an "X" shape at the center of the molecule. Watson recalled standing in the lab at King's, looking at Rosalind's X-ray. "It had this cross...And so that was it! When I saw it, [there wasn't] any doubt that it was a helix." It followed, then, that Wilkins—who stole Franklin's photograph from her drawer at King's to show to Watson—along with Watson and Crick, who used Franklin's work, at the very least were ethically bound to properly credit her. This is because Franklin's X-ray allowed them to properly model the structure of DNA (as a helix with the phosphates on the outside) months before they would have deduced the proper structure on their own.

**Rosalind Franklin's Untimely Death**

Franklin died of ovarian cancer on April 16, 1958, when she was just thirty-seven years old. The New York Times praised her as being one of "a select band of pioneers." She died four years before James Watson, Francis Crick, and Maurice Wilkins received the Nobel Prize for Medicine for their discovery of the structure of DNA. In an ironic twist of fate, several years before her death Franklin became friendly with Francis Crick and his wife. During her illness, Franklin even stayed as a guest in Crick's home. After her death, when Crick was "asked whether, then, he believed that no one at King's would ever have solved the problem [of the structure of DNA], Crick said, 'Oh, don't be silly. Of course Rosalind would have solved it...With Rosalind it was only a matter of time.'"

Although during their years in Randall's laboratory at King's College Rosalind Franklin and Maurice Wilkins often behaved like enemies, twelve years after Franklin's death Wilkins in effect apologized for passing on her photographs and data to Watson without her permission:

> It [the DNA research] was all here [at King's]. They [Watson and Crick] were working at Cambridge along certain lines, and we were working along certain lines [at King's]. It was a question of time. They could not have gone on to their model, their correct model, without the data [Rosalind] developed here. They had that—I blame myself, I was naïve—and they moved ahead.

Unfortunately for Franklin, she never lived to hear his words of regret. But Wilkins' words support the objective argument that he was wrong to secretly take Rosalind Franklin's work, that James Watson was wrong to encourage and benefit from the unauthorized taking, and that at the very least Watson and Wilkins should have properly credited Franklin's part in the discovery of the structure of the DNA molecule.

**Conclusion**

Because the Nobel Prize is only given to living persons, and it has never gone to more than three people for one...
award, Rosalind Franklin posed no threat to Watson, Crick and Wilkins when they shared the award for Medicine in 1962. For Rosalind Franklin had died in 1958. But it would have been gracious and eminently just for them to have credited her "famous X-ray photograph" \(^80\) of the DNA molecule with helping to unlock the secret of the human gene. In Watson's own words recorded in 1999, "Rosalind's X-ray work...was the proof that it was right." \(^81\) It is not too late to set the record straight. It is important from a historical standpoint to recognize Rosalind Franklin's enormous contribution to the revolutionary discovery of DNA, not only because of its objective truth, but also as an example for all present and future female students and scientists. "To rearrange a universe is creativity enough for anyone short of God, and this is very close to what they did." \(^82\) If Rosalind Franklin had been given the proper recognition for her part in the discovery of the structure of DNA, \(^83\) science classes today would properly refer to Watson, Crick, Wilkins and Franklin, who, together, deserve recognition for the revolutionary discovery of the molecule's structure. \(^84\)

**Notes**

1. Ogilvie and Harvey, p.466. See also Appendix pp.1–5, containing the texts of the three *Nature* articles. They are included to illustrate that James Watson, Francis Crick, and Maurice Wilkins, authors of the first two articles, failed to credit Rosalind Franklin for her unprecedented X-ray photograph of the helical DNA molecule. The third article, authored by Franklin, contains her now-famous X-ray photograph of the DNA molecule with the X clearly visible, upon which Watson and Crick relied.

2. White, p.250.

3. The discovery of the structure of DNA has been called "the revolution in biology" by Bruce Alberts, President of the National Academy of Sciences. See his book-jacket review of James Watson's book, *A Passion for DNA: Genes, Genomes, and Society*, New York: Cold Spring Harbor Press, 2000. The discovery has also been said to have "sparked a world-wide revolution." Ibid.


5. In his book, *The Path to the Double Helix*, science historian Robert Olby states, "I cannot recall the word DNA ever being mentioned when I was a student at London University in the early fifties. How times have changed!" p.ix.


8. See Appendix p.6, September 1953 group photograph of 47 of the world's molecular biologists gathered at the Pasadena Conference on the Structure of Proteins. Olby, frontispiece.


11. *Encyclopedia of World Biography*, p.67. The entry explains that Rosalind's X-ray photographs of DNA established the basis for the structure of DNA.

12. In James Watson's September 30, 1999 lecture inaugurating Harvard University's Center for Genomics Research, (hereafter referred to as "Watson lecture") he refers to "Rosalind's X-ray photograph, the famous one."


15. Sayre, p.156.

16. *Biological Science*, p.221. See also Appendix p.7, a reproduction of page 39 from this high school biology textbook, which contains four photographs under the chapter heading entitled "The Double Helix." They are of James Watson, Francis Crick, Rosalind Franklin and Maurice Wilkins. The caption reads: "In 1953, James D. Watson and Francis H.C. Crick proposed a model for the DNA molecule based partly on the X-ray diffraction studies of
Rosalind Franklin and M.H.F. Wilkins. Watson, Crick and Wilkins shared the Nobel prize in 1962."

17. Sayre, p.32.


25. Rosalind Franklin was not only an expert X-ray crystallographer. She was also known for her excellent and diligent work on carbons and for her discovery of a certain type of valuable carbon polymer. Franklin became so well-known for these carbon polymers that in 1950, Bell Telephone Laboratories became interested in her pioneering work, "The Interpretation of Diffuse X-ray Diagrams of Carbon." Nature article by Rosalind E. Franklin, Appendix pp.4–5. Also see letter of J.D. Bernal to the London Times, April 19, 1958, two days after Franklin's death. Sayre, p.206.


32. Interview with Klug quoted in White, p.261.

33. Interview with Jackson quoted in White, p.262.


38. Interview with Crick quoted in White, pp.261–262.

39. Wilkins' X-ray diffractions of DNA molecules were inferior to Franklin's; his were "grainy and ill-defined." Ibid, p.252.


41. White, p.252.


43. Interview with Crick, reproduced in Sayre, pp.213–214.

45. Parshall, pp.72–74.

46. Sayre, p.127.

47. James Watson by his own admission was "a birdwatcher" with no training in chemistry. Watson lecture.


49. Hellman, pp.149–150.

50. Parshall, pp.72–74.

51. Hellman, p.145.

52. Watson, The Double Helix, p.16.


54. See Appendix p.8, Franklin's famous X-ray crystallography photograph of the DNA molecule.

55. Watson lecture.

56. Ibid.

57. "Since the spring [of 1952] he [Wilkins] had been surreptitiously duplicating Franklin's analytic work on DNA." White, pp.277–278.

58. Parshall, pp.72–74.

59. Pauling discovered the principles that determine the shape and structure of molecules, Ibid, and went on to receive the Nobel Prize in Chemistry in 1954.


61. In his 1999 lecture at Harvard, Watson recalled, "I was shown Rosalind Franklin's X-ray photograph... Wilkins should have never shown me the thing. I didn't go into the drawer and steal it, it was shown to me." Watson lecture.

62. "In science...what must be understood is the extent to which anything divulged, or developed, or discovered in the course of the communication will be appropriately credited. Such agreement...is more than a nicety; it is, indeed, the moral equivalent of copyright or patent." Sayre, pp.110–112.


64. "Franklin told no one of her results. Only Gosling [her assistant] knew of these pictures." White, p.277.


66. Nature article by J.D. Watson and F.H.C. Crick. Appendix p.1. In the second-to-last sentence of the paper the authors refer only in general terms to the "unpublished experimental results and ideas" of Wilkins and Franklin. The enormous significance of her X-ray photograph of the DNA molecule is ignored. Also see Watson's, Crick's and Wilkins' Nobel 1962 lectures, where they omitted any mention of credit to Rosalind Franklin.

67. Watson recently said, "Francis [Crick] and I built the model [incorrectly] with the bases on the inside! In our defense, we weren't chemists...We were incompetent...We should have had the structure in [1951], and instead we built this awful molecule. Rosalind came up [to Cambridge] and said 'the phosphates are on the outside!'" Watson lecture.

68. Watson lecture.

69. White, p.275.

Watson lecture.

Sayre, pp.112–114.


Aaron Klug, a colleague of Franklin's, described how close Rosalind Franklin was to discovering the structure of DNA when Watson and Crick published their model using her X-ray photograph of the molecule. Aaron Klug, "Rosalind Franklin and the Discovery of the Structure of DNA," *Nature* 219 August 24, 1968: 808. Sayre pp. 164, 212.


Watson lecture.

Ibid.

Sayre, p.157.


The omission of Rosalind Franklin's name from most formal references to the discovery of the structure of DNA has been called a "slow and gentle robbery." Sayre, p.189. Thankfully, one important omission has been rectified: After numerous complaints and a letter from a prominent scientist to the secretary of the British Museum, the museum amended its listing of those who had contributed to discovering the structure of DNA to include the name of Rosalind Franklin. Ibid, pp.189, 220.

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Comrade Khrushchev and Farmer Garst:
East-West Encounters Foster Agricultural Exchange

Stephen J. Frese
Marshalltown High School, Marshalltown, Iowa
Senior Division Historical Paper, National History Day 2004 Competition

THE PARAGE OF FOREIGN POLICY usually skipped rural Iowa, but on September 23, 1959, the eyes of the nation focused on Coon Rapids. Invited guests, curious onlookers, anxious reporters and photographers surrounded Roswell and Elizabeth Garst's white, wooden farmhouse. More than 700 National Guardsmen lined the highway between Des Moines and Garst's farm awaiting the official motorcade. Soviet Premier Nikita Sergeyevich Khrushchev was touring the heart of the Midwest cornbelt to see for himself why "agriculture, America's biggest success, [was] communism's biggest failure." 1

Khrushchev explored capitalist agricultural practices hoping to adapt them to Russian kolkhozes. 2 His encounters with Iowa farmer Roswell Garst opened dialog between the world's superpowers. Khrushchev believed that "an exchange of opinions would help the U.S.S.R. and the U.S.A. come to understand each other better and show greater pliancy in settling controversial matters." 3 Roswell Garst agreed. "You know," Garst told Khrushchev, "we two farmers could settle the problems of the world faster than diplomats." 4

Khrushchev’s Rise to Power

Westerners knew little about Khrushchev when he emerged as the undisputed leader of the Soviet Union in 1955. 3 Would he offer hope for peace? Or would Khrushchev trigger World War III and nuclear annihilation?
Born in 1894, Khrushchev's parents were peasants. As a boy, Nikita worked tending sheep. "We children were lucky if we had a decent pair of shoes," he recalled. "We wiped our noses with our sleeves and kept our trousers up with a piece of string." 4 Khrushchev learned the blacksmith and locksmith trades, joined the Bolsheviks in 1918, served two years in the Red Army, and then climbed the Communist Party ladder one rung at a time until he reached Josef Stalin's inner circle. When Stalin died in 1953, Khrushchev's comrades underestimated him because he lacked formal education. Loyal to Stalin for almost thirty years, the man political experts forgot to notice turned out to be the dark horse in Stalin's stable. Ten days after Stalin's death, Khrushchev became first secretary of the Central Committee of the Communist Party, "the springboard from which Stalin leaped to absolute power and which Stalin held until the day of his death." 5 Khrushchev's first priority was to shift from Stalin's emphasis on industrialization and military expansion to the condition of Soviet farms.

Under Stalin, the Soviets produced little milk, meat, or eggs and suffered mass starvation. "My father thought that the Soviet political system could give people a better life," explained Sergei Khrushchev, Nikita's son. War breeds destruction; increased agricultural production, Sergei's father insisted, promised Russia a prosperous future. "Persons are much more important than missiles," Sergei continued. "If you are producing missiles, you are wasting your resources. If you increase food production, you make life better for your people." 6

The U.S. and U.S.S.R., temporary allies during World War II, engaged in an intense ideological rivalry after the war. The resulting competitionthe Cold Warwas conducted through means short of direct military conflict. However, the threat of nuclear war remained. "The Americans thought that the Soviets wanted to build Communism on American soil," Sergei Khrushchev said, "and we were scared that Americans would start war to forcefully implement their way of thinking on us." 7
Roots of East-West Agricultural Exchange

In a February 1955 speech before the Communist Central Committee, Khrushchev demanded an eightfold increase in corn production by 1960. Offering a rare and well-publicized expression of praise for the United States, Khrushchev called for an Iowa-style corn belt in Russia, advocating the development of feed-livestock agriculture to boost food production.

"That's just what the Russian economy needs more and better livestock so the Russian people can eat better," stated Lauren Soth, an editorial writer for the Des Moines Register. Soth continued:

We have no diplomatic authority but we hereby extend an invitation to any delegation Khrushchev wants to select to come to Iowa to get the lowdown on raising high quality cattle, hogs, sheep and chickens. We promise to hide none of our "secrets." Let the Russians see how we do it.

Soth also suggested sending a delegation of Iowa farmers, agronomists, and livestock specialists to the Soviet Union. At a time of increased polarization between Eastern Europe and the West, Soth's editorial expressed a minority opinion in the U.S. He never thought the Soviets would see his proposal, much less accept it. "Soviet spies read the Des Moines Register, translated this editorial, and put it on Khrushchev's desk within a few days of publication," Liz Garst explained. It was a surprise to everyone including the U.S. State Department when Khrushchev accepted Soth's bold invitation. That summer, twelve Americans traveled to the U.S.S.R and Khrushchev sent a delegation to Iowa.

Roswell Garst recognized both superpowers' problems in agriculture: for the U.S. it was surpluses; for the Soviets, it was scarcity. He believed U.S. surpluses could be a "weapon for peace." Garst intercepted the Soviet delegation and persuaded its leader, Vladimir Matskevitch, Deputy Minister of Agriculture, to visit his hybrid seed corn operation. Matskevitch spent a day with Garst, taking detailed notes he later delivered to Khrushchev.

Farmer Garst: Corn Ambassador to the U.S.S.R

Roswell Garst began sowing the seeds of his agricultural empire in 1916. He explored cutting edge technologies: hybrid seed corn, intensive use of nitrogen fertilizers, and cellulose-enriched cattle feed. Garst and Thomas Seed Corn Company became the largest operation of its kind in the United States. When Matskevitch visited Garst in Coon Rapids, Roswell managed more than 5000 acres. Impressed with Garst's operation and how his technology could be adapted for Soviet collective farms, Matskevitch invited Garst to come to the U.S.S.R. later that year. Garst believed a visit could ease Cold War tensions and hoped to sell with the permission of a reluctant U.S. State Department hybrid seed to the Soviets. State Department officials remained suspicious after the initial agricultural exchange, but Garst argued that he should be free to discuss all he knew about agriculture and to sell equipment and seed if they wanted to buy. "It would be ridiculous to tell them about how rapidly we could plant corn and then say 'we won't sell you a corn planter.'"

After much deliberation, the State Department granted Garst an export license and permission to travel to Moscow although U.S. officials were sure Garst could not sell the Soviets anything.

The State Department learned not to underestimate Roswell Garst, a master salesman with evangelical enthusiasm for hybrid corn. "If it's sound, it will sell," Garst often said. Garst ventured to Moscow in September 1955. Interrupting a speech about how American technology could improve Soviet agriculture, Khrushchev summoned Garst to a private meeting. Khrushchev and Garst talked about corn production, livestock, and possibilities of East-West trade. After the meeting Garst asked Khrushchev how the U.S.S.R. could know so little about American agriculture when they had easy access to U.S. farm journals, yet they had been able to steal the atomic bomb in three weeks. Khrushchev laughed and raised two fingers: "It only took us two weeks. You locked up the atomic bomb, so we had to steal it. When you offered us information about agriculture for nothing, we thought that might be what it..."
was worth." The next day the Soviets ordered 5000 tons of hybrid seed. Accounts of Roswell's meeting with Khrushchev appeared in Moscow's newspapers, and C.B.S. telephoned Garst for news of the exchange.

Upon his return, Garst expressed excitement to Secretary of Agriculture Ezra Benson: "We thought of ourselves as Marco Polos when we were in Russia; they think of themselves as descendants of Columboldiscovering the United States for the second time."  

Garst often hosted agricultural delegations from the Soviet Union, Rumania, and Hungary. "There were always Russians at the farm," Liz Garst remembers. Eastern Europeans were impressed that Roswell, Elizabeth, and their children all worked on their farms. "The image of the absentee capitalist landlord, living in luxury on the proceeds of his wage slaves, was a preconception they all freely admitted having brought with them. They were completely unprepared for the Midwestern lifestyle."  

Roswell's FBI dossier grew with his successes as a citizen diplomat. Sometimes he cooperated with the FBI; other times he was confrontational. Reviewing Garst's file in 1959, the bureau saw "no indication of any subversive activities, membership in communist front groups or the Communist Party. [I]t is quite apparent that his main interest in Russia and the satellites is in the sale of his product." 

In 1956, Garst returned to Eastern Europe accompanied by his wife, Elizabeth. Earlier that year at the Twentieth Party Congress, Khrushchev had condemned Stalin's crimes in a "secret speech" which triggered an uprising in Hungary. The Garsts were in Budapest when Soviet tanks rolled into the city, stranding them for ten days while Khrushchev's army obliterated the rebels. Roswell and Elizabeth escaped up the Danube River to Czechoslovakia on a Polish coal ship. Disgusted with military actions that contradicted Khrushchev's commitment to peaceful agricultural exchange, Garst called a personal moratorium on East-West relations: "I am afraid to sell even as innocent a product as seed corn to the Russians for fear the material would not be loaded on ships without bad publicity."

Khrushchev in America

Garst's determination to end relations with the Soviet government faded in 1957. Monitoring progress in the Soviet Union, Garst became angry because they had not complied with his recommendations for fertilizing and planting corn. Predicting a colossal failure if the technology was incorrectly applied, Garst wanted to see Khrushchev again to set things straight. He also wanted to discuss "getting this armaments race stopped," something he considered "the most important single thing" facing the world at that time. Garst's message to Khrushchev was blunt: improving relations between the United States and U.S.S.R. was necessary so that the world could quit wasting its industrial capacity "preparing for a war that nobody wants nobody expects a war no one could survive." Roswell and Elizabeth visited Nikita and Nina early in 1959. The men discussed agriculture and prospects for world peace during conversations salted with anecdotes, proverbs, and humor. Their exchanges were sometimes aggressive and argumentative, but they both wanted comprehensive change most of all. Their relationship became international news when, on August 6, 1959, Roswell was informed that Khrushchev had asked to visit Coon Rapids. Iowa Governor Herschel Loveless initially opposed Khrushchev's planned visit, fearing the encounter would fuel Soviet propaganda. The hostility of Eastern European immigrants toward Khrushchev, Loveless declared, might make the visit a "precarious venture."

On September 23, 1959, the Khrushchev family stopped at the Garst Farm during their 12-day trip to the U.S., which also included stops in New York, Los Angeles, Washington D.C., and Camp David for discussions with President Dwight D. Eisenhower. According to the Chicago Tribune, Garst was the only individual except for President Eisenhower that Khrushchev specifically asked to see while in the U.S.
Iowa farmer Roswell Garst escorted Soviet Premier Nikita Khrushchev around the farm buildings using a walkie-talkie attached to a bull horn in an attempt to be heard by reporters. Source: Joe Munroe, Ohio Historical Society

Hundreds of reporters greeted Khrushchev's entourage. Photographers roosted in trees, barn lofts, and upstairs windows. Garst showed the visitors his large-scale planting, harvesting, and livestock feeding operations. Over lunch they discussed trade, armaments inspection, and the ability of their countries to shift to peacetime economies.

"Father often reminisced about the American farmer," Sergei Khrushchev wrote. "Garst and his sons produced more than any of our collective farms." 

Garst's pursuit of peace through agriculture paved the way to Khrushchev's negotiations with President Eisenhower. "It was Roswell Garst, pioneering seed corn genius of Coon Rapids, who grubbed most of the underbrush out of the tangled pathway leading to Camp David," wrote journalist Fagan D. Adler. In a television interview conducted in Garst's backyard, Khrushchev stated, "Every conversation I have had with Mr. Garst since 1955 has been important in the build-up for the meeting at Camp David."
Critics denounced Garst as a communist sympathizer. To the contrary, Garst was a capitalist eager to open new markets and make a profit. 38 Roswell also insisted that "Hungry people are dangerous people.[T]he peace of the world is dependent upon solving the world's food problems." 39

The U.S. House of Representatives Committee on Un-American Activities disagreed, warning that the "great expectations aroused by the exchange [of visits between U.S. and Soviet representatives] reveal the tragic failure of Western statesmen to recognize the character and the magnitude of the Communist challenge." 40 Citing the Soviet response to the Hungarian uprising and Khrushchev's unprovoked threat on Berlin, Henry Kissinger stated that ending the Cold War depended on political issues not the Soviet's ability to produce enough food. "The exchange of visits will assist the cause of peace only if it reverses the course which has repeatedly brought the world to the brink of war." 41

Khrushchev changed the view of himself and his country for the better among U.S. citizens. "While fearful that this changeable man might someday 'push the button,' many agreed that there is a practical element of sincerity in his attempt to ease tensions," observed Richard Wilson, the Des Moines Register's Washington correspondent. 42 Although many of Khrushchev's explorations into American agriculture translated into successful Soviet reforms, ultimately these exchanges contributed to his political downfall. Khrushchev's 1957 pledge to overtake America in agricultural production turned into an embarrassing disaster when he tried to push through too many reforms with too few resources and inadequate infrastructure. Despite his awkward efforts to ease Cold War tensions, Khrushchev's foreign policy blunders triggered the period's most dangerous international crises when he ordered construction of the Berlin Wall in 1961 and placed missiles in Cuba in 1962 (see Timeline, Appendix I).
"I am old and tired," Khrushchev said following the 1964 Presidium meeting that ousted him from power.

Could anyone have dreamed of telling Stalin that he didn't suit us anymore and suggesting he retire? Not even a wet spot would have remained where we had been standing. Now everything is different. The fear is gone, and we can talk as equals. That is my contribution.  

Condemned for his failures as a leader and his earlier complicity in Stalin's brutal crimes, Khrushchev became a "non-person" in the U.S.S.R. His name was suppressed by his Kremlin successors, ignored by Soviet citizens, and erased from the country's history books. "After I die," Khrushchev said, "they will place my actions on a scale on one side evil, on the other side good. I hope the good will outweigh the bad." Khrushchev's attempts to reform communism prepared the ground for its eventual collapse, planting seeds of _perestroika_ and _glasnost_ that would germinate under Mikhail Gorbachev and Boris Yeltsin in decades to come. In the late 1980s, Washington realized (or finally admitted) that the "evil empire" had been rotting from within something Roswell Garst, an unorthodox diplomat, knew all along. Comrade Khrushchev and Farmer Garst recognized that agricultural exchanges provided a legitimate path toward international peace.

**Appendix I: Timeline**
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1898—Roswell is born in Coon Rapids, Iowa.
1894—Khrushchev is born in Kalinovka, Russia.

1890—
1895—

1900

1905—
1910—

1890s—After a century of friendship, Americans and Russians become rivals over development of Manchuria. Russia closes off and colonizes parts of East Asia in spite of American opposition.

1922—Khrushchev meets Nina Petroyna; they later marry.
1914—World War I begins.

1915—
1920—

1930—
1935—

1930s—Stalin forces collectivization of Soviet farms; hundreds of thousands of peasants die. Stalin also forces opponents to confess to horrendous crimes and then executes them during the great purge.

October 1917—Bolsheviks, the workers party, take control of tsarist Russia after rebelling against the government.

1918—World War I ends.

1922—Roswell Garst marries Elizabeth Henak.

1918—

1932—Garst founds Garst & Thomas Hybrid Seed plant.
1930s—Garst begins experimenting with hybrid seed corn.
**Annotated Bibliography**

**Primary Sources**

"25,000 Greet Khrushchev: He Challenges U.S. to Contest in Corn and Meat." *The Des Moines Register*, 23 September 1959: 1, 8, 10, 16.
The front page of the register heralded Khrushchev's arrival in Iowa, and described his first encounter with an American hot dog, which cautious security agents had checked with a Geiger counter before the Soviet Premier ate it. News coverage portrayed Khrushchev's sense of humor and described Iowa's friendly if not enthusiastic welcome. An estimated 25,000 curious spectators crowded around Khrushchev's Des Moines hotel. I was able to use this to find out how vulnerable Khrushchev was in America and how difficult it was to maintain security. This problem was compounded when he visited rural Coon Rapids.


Adler stated that Garst "grubbed most of the underbrush out of the tangled pathway leading to Camp David where President Eisenhower and Nikita Khrushchev met last week to brighten the chain of peace." I liked Adler's metaphor because it mirrors agricultural experience. In Taubman's biography of Khrushchev, one reason given for agricultural failure in the Soviet Union was that farmers would plant corn, then not have the machinery required to cultivate the soil or the herbicides to destroy weeds. Adler's comment illustrates how political weeds impeded the process of cultivating peace and credited Garst with clearing the way.


Few events in American history have been as well covered as the visit of Nikita Khrushchev to the farm of Roswell Garst, claimed this editorial. I classified this as a primary source because the writer witnessed what he described as the "carnival mob scene," and the "comic opera" it became. Despite the more than 1,500 highway patrolmen, national guardsmen, reporters, caterers, and television technicians at the farm, "the original simple purpose of the visit did shine through." I also learned from this article that Soviets wanted to see Garst's farm because it was closer to the scale of Soviet farms that could be 70,000 acres in size.


Atwood's letter to the editor illustrates opposition to Garst's opinions. Many who disagreed with Garst, as this letter showed me, thought it was wrong to lend aid to tyrannical Russian regime.


Writing from San Francisco, columnist Marquis Childs described this East-West encounter as a dialogue of the deaf, because neither side wanted to hear what the other side was saying. "It is a deafness conditioned by decades of fear, suspicion, and naked hostility." For me this editorial emphasized the importance of Garst's contributions as a citizen diplomat because he looked ahead to a peaceful future and had plans for how to achieve it instead of being held back by fears.


The upcoming visit with "Farmer Garst" would demonstrate farming methods including the use of heavy doses of chemicals to boost yields and grain dryers to permit picking corn before it dries in the field. Clabby pointed out how far Russia lagged behind American agriculture, but admitted that Garst, a leading corn grower, was probably "many years ahead of most of his contemporaries in the science of corn productions."


Cooley's editorial compares the efficiency of U.S. farms to communist farms in their abilities to feed their respective populations. This helped me understand the reason for the disparity: in Russia half the population worked on farms to feed their people a subsistence diet; in America 10% of the population provides more than enough food for the entire country, freeing up the other 90% for other work. Food costs were lower in the United States than anywhere else in the world.

Crankshaw disputed Khrushchev's stated motive for his excursion to the United States. The Soviet Premier did not come to ease Cold War tensions or learn about American agriculture, Crankshaw claimed. "The most important aspect of this remarkable excursion is that he is making it," wrote Crankshaw, who specialized in Soviet Affairs for the London Observer. This showed me how complicated and tangled opinions about Khrushchev's visit to America were around the world.


Newspapers kept people of Iowa and the nation updated on details of Khrushchev's itinerary for his planned visit to the United States. Roswell Garst was the only individual besides President Eisenhower that Khrushchev specifically asked to see while in this country. This helped me understand the significance of the relationship between Garst and Khrushchev.


After my day touring and conducting research at the Garst farm I stopped at the Coon Rapids Public Library to read the local newspaper's coverage of Khrushchev's visit. The librarian set me up with the September/October 1959 roll of microfilm, and then, after asking questions about the nature of my research, returned with a crumbling scrapbook stuffed with photographs and clippings that chronicled Roswell Garst's work as a citizen diplomat. The librarian did not know who had compiled and titled the scrapbook she only knew that it had been in a library cupboard for years. The scrapbook was an extremely valuable source of information about Roswell Garst.


Faltermayer's article helped me understand the difficulties faced by Russian agriculture. Improving techniques and equipment, largely through the help of Roswell Garst, had helped increase harvests. However, the Soviet Union lacked the storage capacity needed to preserve harvests and the roads necessary to transport agricultural goods. The article also provided me with information to compare agriculture in the U.S. and in the Soviet Union. In the U.S. at the time, 8.1 million farmers grew enough food to feed 175 million people. By contrast, 45 million Russian farmers worked to feed a total population of 209 million. U.S. farmers grew about twice as much as their Russian counterparts, and U.S. per capita meat consumption in 1959 was nearly double the 85-pound Russian average.

Film Memories: Roswell Garst. Videotape. Garst Farm, Coon Rapids, Iowa.

Following my tour of the Garst farmhouse and interview with Liz Garst, she allowed me to watch a videotape compiled of newsreel footage from Khrushchev's visit. Newscasts showed the crowd of reporters, photographers, and curious onlookers as they crushed in around Garst and Khrushchev throughout their inspection of Garst's farming operations. I had read so many accounts of the crowded scene, but as Khrushchev often said in quoting a Russian proverb: "It is a hundred times better to see than to hear." I enjoyed watching the chaotic scene for myself while sitting in the farmhouse at the center of the event. Looking out the dining room windows, I could almost imagine the excitement of the day. A sense of place helps bring history to life.


Frankel's article illustrates the exchange of information about Khrushchev's visit between the U.S. and the U.S.S.R. in newspapers. Soviet Papers told of instances where Khrushchev was heckled but did not describe exchanges where U.S. representatives disagreed or presented counter arguments to Khrushchev's statements. Russian reports described Khrushchev as being in control of discussions while American participants were silent or unresponsive. This article showed me how the public was given the wrong impression about the other country, and also how misconceptions of each other were allowed to grow.


Mr. Gallup's poll illustrated the preconceptions held by normal, every-day people before the Soviet Premier came to Iowa. Ironically, many people described the world's top communist as a "shrewd businessman and wonderful
salesman"terms more often used to describe Khrushchev's capitalist opponents, or his friend, Iowa farmer Roswell Garst. Some expressed kind thoughts toward Khrushchev; others described him as "ruthless, cruel, domineering and deceitful," opposing his trip to America. This poll helped me understand just how polarized the views of the citizens of the United States were about our Soviet rivals.


While at the farm of Roswell and Elizabeth Garst I interviewed their granddaughter, Elizabeth "Liz" Garst. While interviewing her I was able to learn things that were not disclosed in published accounts such as: none of the 700 national Guardsmen activated to protect Premier Khrushchev in Iowa were given bullets for their guns because our State Department was afraid of an assassination attempt from the inside. Liz was eight years old when the visit took place and the memories she shared with me of her childhood encounters with the Soviets (during the 1959 visit and others before and after) added another dimension to my research. While many American children were conditioned to believe that the Soviets would start a nuclear war, Liz followed Russians around her grandfather's farm, collecting medals from the Soviet visitors and spying on Khrushchev's food-tasters hoping to find out what would happen if "one them dropped dead."


After studying Roswell Garst's papers at Iowa State University, this tour made the history of my project come to life before my eyes. Being in the place where this historic East-West encounter occurred even though it was quiet and there were no reporters nesting in the trees gave me a sense of its significance. The farmhouse has been restored, maintaining its early 1900s flavor, and is filled with photographs of Khrushchev's visit and the Garst family; memorabilia from the Garst and Thomas Seed Corn Company; gifts from Russian visitors; and hundreds of stories of the Garst family and their guests. With Liz Garst as my tour guide, it was as if the walls could talk.


Roswell Garst's papers were an invaluable source for my research. Garst wrote countless letters explaining his opinions about the importance of developing agriculture around the world in order to secure lasting peace. I accessed boxes 34, 81-89, and 90. These boxes contained extensive correspondence, newspaper clippings from all over the country, Russian newspapers Garst gathered on his many trips (he often made news in the Soviet Union), and transcribed interviews that Roswell granted following Khrushchev's visit. These files also contained a 1959 publication of the U.S. House of Representatives' Committee on Un-American Activities that detailed the crimes of Khrushchev and warned that the "great expectations aroused by the exchange [of visits between U.S. and Soviet representatives] reveal the tragic failure of Western statesmen to recognize the character and the magnitude of the Communist challenge." This diplomatic opinion illustrates the contrast between the Government and Roswell Garst, who believed political systems could be set aside and peace could be achieved by standing on the common ground of agriculture.


Newsweek published this article prior to Khrushchev's arrival to the United States. It described political hot spots around the world where "the Red and free worlds touch" and where every crackle of gunfire heightened cold war tensions and precipitated "anguished cries" for a summit to negotiate possibilities for peace. This helped me understand the enormity of the issues facing diplomats. Could Garst's simple policy of feeding people really generate lasting peace?


Throughout this three-part installment there was an in-depth analysis of Khrushchev's encounters and exchanges in the United States. The series highlighted the recent Soviet triumphs in science and industry including the successful
unmanned trip to the moon. Khrushchev was very proud of this exploration. Leading the U.S. in the space race allowed him to "save face" when coming here for agricultural assistance. This helped me find out why Khrushchev's desire was to compete peacefully with the United States and avoid World War III.

Hahn, Grover H. "Garst and His Farm Techniques." Letter to the Editor. The Des Moines Register, 10 September 1959: 10.

This letter to the editor referred to an article previously appearing in the Register that described Garst's "revolution" in farming. Written by an Iowa State University county extension director, this letter argues that Garst's techniques such as application of fertilizer and the use of chemical pesticides and herbicides were not new. What set Garst apart, thought Hahn, was Garst's wealth; his ability to afford resources that the average farmer could not. This letter illustrated the rift between Garst and his Iowa State University counterparts. Like Khrushchev, Garst did not always get along with the "intelligentsia," and perhaps he was not the "ordinary American farmer" he portrayed himself to be.


Harnack describes how controversial Iowa farmer Roswell Garst sold his revolutionary farming ideas at home and a new agricultural era abroad. With gospel fervor, Garst's most spectacular sale was to the Soviet and Rumanian Communist leaders. For me, this article underscored Garst's belief that aiding agriculture in any country is "an aid to peace."

"Iowa Governor Opposes Visit by Khrushchev." Minneapolis Tribune, 23 August 1959.

When it was formally announced that Khrushchev would visit Iowa during his 12-day trip to the U.S., Iowa Governor Herschel C. Loveless announced that he opposed the Soviet premier's visit. Loveless' opinion helped me understand how polarized opinions were in this country about Khrushchev's visit. Loveless feared the tour would be used for propaganda purposes. He also feared that the hostility of Eastern European immigrants might make the visit a "precarious venture." Understanding this helped me put into perspective the impact of events such as Khrushchev's suppression of the Hungarian uprising on opinions held in the United States.

"Jovial Nikita Leaves Iowa: Let's Be Good Neighbors, He Says at Garst Farm." The Des Moines Register, 24 September 1959: 1, 3, 5, 7, 9, 13.

Khrushchev spent two days in Iowa during his 12-day trip to the U.S. From Roswell Garst's living room in Coon Rapids, Khrushchev told reporters, "I have seen the way the slaves of capitalism live and I see they live pretty well. But the slaves of communism live pretty well, too. So let each one of us remain with his own way of life and be friends, living as good neighbors in the world." As I look back on my research of these exchanges, I see the wisdom behind Khrushchev's comment. One government trying to destroy the other would lead to war, but history revealed that communism would collapse on its own.


Garst's relations with the Russians cooled after Khrushchev's fall from power in 1964. In 1971, Vladimir Matskevitch, the first important Soviet to visit Garst's farm in 1955, was back in power as minister of agriculture and re-established contact with Garst, giving the Iowa corn farmer a voice in foreign policy once again. Garst hoped the United States would "get away from the arms race and get down to business."


In his introduction to this volume of speeches, Khrushchev stated that "Mankind has approached a time when the peoples are faced with a choice either peaceful coexistence of states with different social systems, or a disastrous nuclear war." Khrushchev published these speeches in English so that Americans could learn "what we Soviet people were preoccupied
withand how we evaluated the most important international events." His remarks emphasized for me how committed Khrushchev was to the peaceful exchange of information related to agriculture, science, and culture.


All of the speeches Khrushchev delivered during his tour of the United States were compiled and published in the Soviet Union as *Live in Peace and Friendship!* The English translation of that volume, *Khrushchev in America*, provided me with the Soviet point of view on various aspects of the Khrushchev trip, including his stop in Iowa.

Khrushchev, Sergei N. Interview by author, 4 December 2003. Digital recording of telephone conversation.

While searching the web for Khrushchev information I came across a CNN interview with Sergei Khrushchev, son of Soviet Premier Nikita Khrushchev. I learned from this interview that Sergei had moved to the United States and became professor at Brown University. On the Brown University web site I located Sergei's address and phone number, and then wrote him a letter telling him about my project and requesting an interview. We corresponded by e-mail several times before setting a date for an interview. Sergei Khrushchev accompanied his father to Iowa and it was interesting to discuss his memories of the visit. He corrected one rumor that has persisted in Iowa since 1959: legend has it that Khrushchev thought all of the farm silos were missile silos. "My father knew that there were no missile silos in the United States at that time the U.S. started building missile silos in 1962," Sergei said. "He knew that Mr. Garst's silos stored food for pigs and cows. My father was interested in pigs more than missiles."


In one of my earliest correspondences with Sergei Khrushchev, he told me I should read this, his book, before interviewing him. The book records Sergei's conversations with his father and documents events he witnessed throughout his father's time as Premier of the Soviet Union. The part describing the visit to the Garst farm helped me see just how important the exchange was from Nikita Khrushchev's perspective. Sergei accompanied his family to the United States.


This article appeared under the banner headline, "MORE SOVIET SHAKEUPS SEEN." People in the United States knew little about Nikita Khrushchev when he took over the job of first secretary of the Communist Party, the platform from which Stalin vaulted into complete control. The article helped me understand just how turbulent the relationship was between the U.S. and the U.S.S.R. at the time and how complicated the leadership transition was after Stalin's death.


The text of Nikita Khrushchev's speech in Des Moines and news analysis of his remarks helped me understand the local reaction to Khrushchev's visit. Pages of photographs in this edition of the *Register* allowed me to see the crowds around Khrushchev's hotel. Some members of the crowd, described as former political prisoners from Hungary, held up signs of protest.


This article describes efforts of various anti-communist groups to protest during Khrushchev's visit to the United States. A group of senators and representatives called for national mourning "for the victims of Communist terror" throughout Khrushchev's stay. Kihsa, a *New York Times* writer, reported that *National Review*, a conservative weekly, claimed to have sold 30,000 "Khrushchev Not Welcome Here" bumper stickers and planned to print 10,000 more.

Kissinger did not agree with Garst's position that Soviets with full stomachs would pose less of a threat. Kissinger's insistence that political avenues were the only road toward peace helped me present both sides of the argument in my paper.


A bold headline topped the page: "Nikita's Peaceful Exchange." This article illustrated for me how the Hungarians felt after Khrushchev squashed their attempt to remove themselves from the Eastern Bloc in the 1956 uprising. Members of an exiled Hungarian political organization visited places ahead of Khrushchev to caution against disorderly demonstrations. "We do not want to cause any trouble," a Hungarian representative said. The Russians, he continued, could learn much about American agriculture that would contribute to a lasting peace.


Acclaimed New York Herald Tribune columnist Walter Lippmann offered his analysis of U.S. and Soviet positions concerning the armaments race prior to the Camp David summit that followed Khrushchev's visit to Iowa and exploration of the Garst Farm. Khrushchev had said that his friendship with Garst paved the way to a profitable summit. Lippmann did not think there would be enough time to thoroughly negotiate any of the "great issues," but that any agreement would represent a significant gain. Lippmann's analysis helped me understand how the arms race hurt both sides.


In a cloud above the Soviet Premier's head, Miller drew Khrushchev's preconception of the American people, depicting the average American as one weighed down by the shackles of capitalism. Under Miller's cartoon read the caption, "A good handshake might get rid of some handcuffs." The drawing depicted a portly Nikita Khrushchev extending his hand to shake the hand of an "average" American. As their hands come together, the image in Nikita's mind begins to disintegrate. This cartoon, I think, illustrates the kind of diplomacy Garst practiced: personal encounters and exchange of mutually helpful information instead of political debate.


Simply stated, said Mills, "Today is a big day in Iowa History." Never before had this agricultural state hosted so powerful an individual from a foreign land. Mills predicted that Iowans would be generous with their farming knowledge, even though Khrushchev and Communism were not popular in this state. The State Department warned Iowans not to make "needling" remarks. I found this slightly amusing since Khrushchev and Garst often addressed needling remarks to one another, underscoring for me Garst's ability to speak bluntly to Khrushchev in ways the diplomats and politicians could not.


Two weeks before Khrushchev's visit, Garst granted an interview to the Register, explaining that he admired the communist administration but he wasn't a communist. Garst also reported that even though Khrushchev had a difficult and dark history, his family would still welcome them and teach them what they knew about agriculture. This article showed me that the encounters and exchanges between these two men were not politically motivated, but were in the interest of helping the Soviet agricultural crisis.

Mills' article demonstrated the significance of Khrushchev's visit. Garst had arranged for Adlai Stevenson to be one of the dignitaries at the farm during the visit. Stevenson's 1958 trip to the Soviet Union left him pessimistic as to the chances of real peace, but he looked forward to another encounter with Khrushchev.


Mitchell described Garst's earlier visits to the Soviet Union and Mrs. Khrushchev's interest in gardening. The interesting part of this article to me was that it confirmed that Khrushchev's son, Sergei, and two daughters would also travel to the United States. I knew then that I would want to interview Sergei about his experiences in Iowa.


Roswell Garst was flooded with mail after the announcement that Khrushchev would visit his farm. In every delivery, Garst was informed "that he is a savior of humanity and also that he is a rat, with countless variations on each theme." This supported what Liz Garst told me in my interview with her: "[Roswell] got lots of hate mail, but nobody knows what they said because he put those letters in the trash can."


In this editorial the author straightened out the crooked beliefs that Khrushchev was an ill-mannered, tough man who had no respect for others. It also explained that the group visiting Iowa was a kind group that wanted to learn as much as they could about agriculture in the short time they had in the United States. Reading this editorial prompted me to ask Sergei Khrushchev what kinds of preconceptions they encountered in the United States, and what kinds of preconceptions they brought with them.


The peasant face of Nikita Khrushchev appeared on the cover of the 28 September *Time* Magazine. The author called Khrushchev's visit to the United states "one of the grand confrontations of the cold war and of all time," quoting President Eisenhower's tribute to the freedom he said is instinctive in all men. "We do not have a system," Eisenhower told Khrushchev. "We have a way of life. We think that the systematized order observed in Russia is a step backward, not forward." For me, this illustrated the differences between Eisenhower and Khrushchev and explained why Eisenhower distanced himself from Khrushchev during most of the 12 days the Soviet premier was in the country. Instead, Eisenhower selected U.S. Ambassador to the United Nations Henry Cabot Lodge Jr. to be Khrushchev's official host.


What caught my eye in with this article was the 3-column photograph that accompanied it. The close-up picture showed Nikita Khrushchev bending over to kiss one of Roswell and Elizabeth Garst's granddaughters goodbye. The girl in the photo was Elizabeth "Liz" Garst, who I was scheduled to interview the next day. The article described the chaos at Garst's farm during Khrushchev's visit and how difficult it was to move among hundreds of reporters and photographers. This information helped me set the scene in my opening paragraph and provided Garst's quote about farmers being able to settle problems faster than diplomats.


Khrushchev was a good communist; he believed whole heartedly that the communist government and economy would win out in the end. In this transcript of his speech, Nikita said that he was glad about these dealings and hoped for more of the same type of talks later on. I learned from this article that even though our countries' governments were different
both hoped to coexist on Earth together.


Orr's feature in the Chicago Tribune introduced readers to Coon Rapids, Iowa, Bob Garst and his wife, Elizabeth, and the farm Nikita Khrushchev would visit during his trip to the United States. This article provided me with the information that Garst was the only individual except for President Eisenhower that Khrushchev specifically asked to see while in the U.S. The novelty of a foreign dignitary's visit to rural Iowa caused stories like this to appear in newspapers throughout the United States.


Perkes describes Garst's promise to show Khrushchev "a thorough demonstration of how Americans overthrew agricultural tradition and multiplied nature's blessingsa type of revolution he willingly would share with the Soviet Union." The article reinforced similarities between Khrushchev and Garst that I have noticed in other sources: both were candid and blunt, not inhibited by conventional diplomatic restraints.

"Questioning Stirs Soviet Boss to Fury." The Des Moines Register, 21 September 1959: 1, 5.

This article demonstrates Khrushchev's conviction that communism would be the social system that triumphed over capitalism. He was meeting with American union leaders who expressed their contempt for communism. The union leaders' questioning caused Khrushchev to become quite agitated. I compared this confrontation to similar confrontations between Garst and Khrushchev. Garst, a true capitalist, often disagreed with Khrushchev, sometimes in loud arguments, but their friendship compensated for this kind of an exchange.

Raskin, A.H. "Nikita Worse Than Stalin, Say Unions." The Des Moines Register, 22 September 1959: 1, 11.

Agriculturalists, it seemed, got along better with Khrushchev than did labor leaders attending an A.F.L.-C.I.O. convention. Raskin reported that labor leaders' differences with Khrushchev were "irreconcilable." I thought this was ironic because Khrushchev envisioned communism as a worker's paradise. This was one of the first articles I encountered that deemed Khrushchev to be worse than Stalin.


Reston describes President Eisenhower's plans to postpone talks about sensitive issues including arms control and Berlin until after Khrushchev has completed his American tour. This article demonstrated how delicately diplomats must proceed, in contrast to Roswell Garst's blunt statements to Khrushchev. For Garst, no issue was "too sensitive" to discuss.


Printed after Roswell Garst's death in 1977, this newsletter of the Garst and Thomas Hybrid Corn Company paid tribute to Garst's agricultural accomplishments and contained a transcript of his obituary. I learned that Garst considered his greatest accomplishment to be his role in "talk and trade" with communist governments, actions which helped ease world tensions.


Salisbury, a New York Times reporter who served as Soviet correspondent from 1949 to 1954, wrote a series of eight articles describing changes that had taken place in the U.S.S.R. since the death of Stalin. This series, especially the
articles noted above, was a valuable resource I encountered early in my research. His synopsis of the pre-Stalinist and Stalinist periods compared with changes emerging during the Khrushchev era gave me a good foundation in Russian history from which I could understand the context of the agricultural exchanges.


Khrushchev refuted a long-standing position of Soviet propaganda by announcing that he drew no line of distinction between the American people and the American government. Soviet propaganda had claimed that there was a vast difference between the views of ordinary Americans and the views of the American government. Khrushchev's desire for friendship with the American people, I believe, was an outgrowth of his friendship with Roswell Garst whose brand of citizen diplomacy blurred the lines between public representative and private citizen.

Soth, Lauren K. "If the Russians Want More Meat" The Des Moines Register, 10 February 1955.

Soth's Pulitzer Prize winning editorial is often quoted in published material dealing with the beginnings of East-West agricultural exchange. I located this editorial as it originally appeared in the Des Moines Register while looking through the Iowa State University Library's microfilm files. Soth wrote in a very casual voice, as if the Russians were sitting across the kitchen table from him while talking about farming. This helped me understand the roots of the agricultural exchange involving Roswell Garst.


"A new chapter in East-West diplomacy is opening," stated Stanford, who described the informal talks planned between Eisenhower and Khrushchev. This article underscored for me how important the encounters between Garst and Khrushchev had been in setting the stage for Khrushchev's historic visit to the United States and meetings with President Eisenhower.


This unsigned editorial pointed out the different opinions regarding Khrushchev's visit to Iowa. The writer quoted Ambassador Lodge as saying, "I never knew it would be like this. I'm learning an awful lot about this country myself on this tour." Government officials, I believe, often represent people they do not know. I share the editorial's opinion that "one of the best things that could happen to some of our state department officials would be for them to share Ambassador Lodge's discoveries by touring our country on their own sometime."

Comrade Khrushchev and Farmer Garst: East-West Encounters

State Historical Society of Iowa Special Collections, Iowa City, Iowa. 25 March 2004.

When I visited the State Historical Society Special Collections I viewed pictures taken while the first delegation of Soviets was visiting Iowa in response to Lauren Soth's editorial in the Des Moines Register. The photographs helped me see the importance that Khrushchev placed on agriculture: he sent Soviets to study American farming techniques, admitting American superiority in this area, and he allowed an exchange so that Iowa farmers could visit the Soviet Union.


Strohm describes Garst as the "one man who told Khrushchev the truth about what's wrong with Soviet agriculture." This article made me wonder if the Soviets would have been so far behind in agriculture if their leaders had been able to tell the truth to the Soviet Premier. Telling Stalin unpopular news signed one's death warrant. Taubman's biography of
Khrushchev described him as being surrounded by sycophants who were conditioned to tell the top Soviet exactly what he wanted to heareven if it did not represent reality. This led Khrushchev to make unwise decisions and implement ineffective reforms based on incorrect information. Khrushchev's agricultural failures contributed to his ouster.

"War and 'Peace'As We Stand." Newsweek. 14 September 1959: 31-37.

In this article the author discusses Nikita's visit to the U.N and the effects of the Laos situation on the world at the time. It also described the opposition to Khrushchev and how that affected his power during this crisis. This article helped me to understand the immense pressure Khrushchev was under at the time of his visit.


Khrushchev's visit made Garst's farm the most famous establishment of its kind in the world, Wilson stated. "It was the place where Soviet Premier Nikita S. Khrushchev preached peace in the barnyard and living room and enjoyed himself immensely." Henry Cabot Lodge Jr., Khrushchev's official host in America, told Roswell Garst that the day spent at his farm had been the highlight of the whole trip. Lodge, the U.S. Ambassador to the United Nations, admitted that he learned almost as much about Midwestern life as did Khrushchev. This gave credence to the Garst quote I used on the first page of my paper: "we two farmers could settle the problems of the world faster than politicians."


Wilson's article was a big help for me to see the misunderstandings and assumptions that our government had about Khrushchev. The U.S. thought that Nikita would not cooperate while he was in the United States, but those thoughts were totally wrong. Escorts of the Khrushchev party found out in a hurry that the delegation from the Soviet Union was here to work with us to learn about agriculture.


President Eisenhower called upon the American people to receive Khrushchev "with traditional American courtesy and dignity." This article illustrates the complexity of working between two countries for peace. Eisenhower had to go over many details with Khrushchev before peace talks could even be arranged. Having studied the reasons Garst and Khrushchev's relationship worked so well, I could contrast the stiff, formal, "official" talks that would later take place.


News of Khrushchev's arrival in the United States dominated the front page. His first stop would be in Washington, D.C. for the first direct two-way discussion ever held between the President of the United States and the Premier of the Soviet Union. After the talks, Khrushchev would tour the United States before returning to Camp David for continued talks with Eisenhower. This helped me appreciate the significance of Khrushchev's historic trip.


Wilson Stated that Nikita S. Khrushchev's emergence as the "strong man of Russia" caused great concern here over the future of Soviet-American relations. This article helped me understand Khrushchev's mercurial ways; on one hand he was ominous and threatening, on the other he was peaceful and offered words of reassurance. Americans, who were already drilling their children for nuclear attacks, were all the more alarmed at the news of Khrushchev's rise to power.


Two days before coming to Iowa, Soviet Premier Nikita S. Khrushchev was offended by his frosty reception in Los Angeles. Khrushchev threatened to break off his visit and return immediately to Moscow because he didn't feel welcome.
in the hostile, anti-communist Los Angeles atmosphere. Khrushchev declared, "if the U.S. wants war, Russia is ready to meet the challenge." This article helped me understand the volatile nature of the diplomatic relations between the U.S.S.R. and the United States, illustrating just how quickly Khrushchev vacillated between positions of war and peace. It also helped me appreciate his friendship with Roswell Garstthey could argue and discuss matters in ways that diplomats could not.


Under the banner headline, "RUSSIA HINTS POLICY SHIFTS," Wilson described Khrushchev's statements about disarmament and the Berlin issue that might indicate a shift in his position. To President Eisenhower Khrushchev said, "The ice of the Cold War has not only shown a crack but has begun to crumble." This article helped me comprehend why Khrushchev came to the United States and what he hoped to gain from the venture.


Wilson covered Khrushchev's entire 12 day visit to the United States. This article offers his analysis of Khrushchev's impact on the American public. Before he came, Americans saw Khrushchev as oafish and rude. Wilson described the "shocking impact" of the visit on American preconceptions of the Soviet leader. The encounter allowed Americans to see Khrushchev's intellectual sophistication in international politics, the quickness of his mind, and the ruthlessness of his wit. Wilson's viewpoint helped me develop my own analysis for this paper.


A month before Khrushchev's trip to the U.S., nearly 300 cities, towns, organizations, clubs and individuals had submitted invitations requesting the Soviet Premier to visit. Invitations arrived at the U.S. State Department and Soviet Embassy every day. Wolfe credited America's unofficial Corn Belt Ambassador to Moscow, Roswell Garst, with starting it all when he invited Khrushchev to see his Coon Rapids farm. This, for me, emphasized the significance of Garst's encounters with Khrushchev.

Secondary Sources


This *New Yorker* book review first introduced me to William Taubman's book, *Khrushchev: The Man and His Era*. Conquest offers a synopsis of the book and describes Taubman's work as the first comprehensive and scholarly biography of Stalin's successor, pointing out that such a book would not have been possible until recently since the research relies in part on countless pages of archival material that has emerged since the collapse of the Soviet Union.


The Garst farm that opened doors to Soviet-U.S. relations rolled out its welcome mat to tourists in the Summer of 1997. This article brought the Garst farm to my attention as an historical site that I must visit in order to complete my research.


Graham's assessment of science in the Soviet Union contained a section on agriculture that explained why the Soviets lagged behind the United States in agriculture, supporting the statement I make in the opening of my paper. The Soviets collectivized agriculture based on the principle of socialist ownership and on the conviction that "the full potential of modern agricultural machinery could not be fulfilled as long as the land was divided into small private plots." They sought a technological fix for an economic and social problem.

The text of this book was very helpful to me when I was putting the events of the 1950s and 1960s in context. It helped me find out how Khrushchev's foreign policy blunders contributed to his eventual demise. This book also helped me prepare my timeline.


I saw this documentary on the History channel and then purchased the DVD set because it included never-before released source material including Kennedy's White House audiotapes and Soviet footage from his sole superpower summit with Premier Nikita Khrushchev. It helped me understand Khrushchev's preferred negotiation style: long unhurried conversations, as he had demonstrated with Garst. This documentary illustrated how Khrushchev was irritated by Kennedy's brusque and efficient manner.


Lee described Roswell Garst as an independent, strong-willed, free-spirited original thinker who had a major impact on East-West cooperation in agriculture. This first comprehensive biography of Garst demonstrated his unique roll on the international stage. This book first introduced me to Roswell Garst and Lee's notes led me to Garst's papers at Iowa State University in Ames, Iowa.


*The Gazette* featured the Garst farm in a series profiling Iowa's agriculture entrepreneurs who developed non-traditional ways to increase their incomes. Proprietor Liz Garst makes sure that guests staying in her grandparents' farmhouse know that it is more than a typical bed and breakfast; it is a piece of international history. This article provided me with the farm's phone number, website, and email address.


Malcolm recalled that Khrushchev's visit to the Garst Farm was "12 summers, 13 falls, 13 winters, and 13 springs ago." The article described the impact of the Soviet Premier's 1959 visit, the one time Coon Rapids was plucked from obscurity. It demonstrated for me how Garst, as a self-appointed agricultural missionary to the Soviet Union and Eastern Europe, also had a major impact on his hometown.


The chapter describing Roswell Garst provided a brief, but very helpful, overview of his life and achievements. It helped me understand how Garst's role on the international stage was unique for his time. His selection for this volume underlines how important he was to Iowa agricultural history.


Pins described Garst as a blunt-talking, globe-trotting, seed corn merchant who was an exasperating pain in the neck for the U.S. State Department and the FBI during the Cold War. Garst berated agents that shadowed him, and accused the FBI of intercepting cables sent by his Eastern Bloc friends. This article led me to Garst's FBI file, released to the *Des Moines Register* under the Freedom of Information Act. The redacted file yielded more black ink than information.

This volume included Lauren Soth's editorial, "If the Russians Want More Meat" which won the 1956 Pulitzer Prize. The editorial itself is a primary source, but I used this book for the commentary that it offered about the editorial. It also described the selection criteria for Pulitzer Prize editorials and explained how rare it is for an editorial to have a direct effect on a major public event, as Soth's did.


This Khrushchev biography, written by Amherst College political science professor William Taubman, describes the contradiction of Khrushchev's legacy. Taubman's book is a page turner that really got me caught up in the drama of Soviet history. The author's analysis helped me understand how Khrushchev, who worked closely with Stalin and approved many arrests and executions, eventually introduced reforms that led to the downfall of Soviet communism.


Contributors to this volume of essays included Russian, Ukrainian, American, and British scholars; a former foreign policy aide to Khrushchev; the executive secretary of a Russian commission investigating Soviet-era repressions, and Khrushchev's own son Sergei. The collection describes how the spotlight once again fell on Khrushchev in the late 1980s when Gorbachev finally lifted the taboo on Khrushchev's name. Comparing analysis in these essays helped balance older sources about Khrushchev written before Soviet-era archives were opened for study. Especially helpful was Anatolii Strelianyi's essay describing Khrushchev's role in agricultural reform and why many of these reforms failed.


Thomas wrote this article a week before the Russian government was to release documents related to the deliberations of the Politburo from 1954 to 1964. These documents were expected to show Prime Minister Nikita Khrushchev and his comrades worrying about "planes that won't fly and bread lines that won't go away," while at the same time taking risks that brought the world to the brink of a nuclear war they were not strong enough to fight. Until the Soviet Union collapsed in the late 1980s, Washington did not realize that the "evil empire" had long been rotting from within. Roswell Garst did, and I believe his efforts to strengthen their nation by helping the Soviets develop better agriculture was truly a superior path to peace.


This clipping led me to the book, *Pulitzer Prize Editorials: America's Best Writing, 1917-2003*. Featured in this is Lauren Soth's editorial, "If the Russians Want More Meat." The article also reproduced a Des Moines Register file photo of Khrushchev inspecting corn that I used in my paper.


I classified this as a secondary source because, in addition to notification of Khrushchev's death, the article offered a detailed history of the former Soviet Premier's rise to power and causes for his downfall. The obituary was extremely helpful in putting events in Khrushchev's life in context and in developing my timeline (Appendix I).

**Notes**

2. Kolhozes, or collective farms, in theory were agricultural cooperatives—a voluntary union of free peasants. In reality, collective farms were regimented, state-controlled operations into which peasants were forcibly herded and from which they were forbidden to leave.


7. Sergei Khrushchev, interview by author, 4 December 2003. Sergei accompanied his father to the United States in 1959. Sergei explained that Leonid Brezhnev, Khrushchev's successor, halted his father's agricultural reforms and that agricultural science in Russia today is declining. "In Russia today they import most of the food that they consume. They are selling oil and buying food."


9. Part of the reason the Soviet economy lagged behind the United States was the communist system's reliance on a command economy where the government told farmers and other workers how much to produce without regards to production capacity or how much was really needed.

10. Lauren Soth, "If the Russians Want More Meat" The Des Moines Register, 10 February 1955.

11. Ibid. Soth won the 1956 Pulitzer Prize for this editorial because of the impact it had on a major public event—encouraging exchanges between the U.S. and U.S.S.R. that helped thaw the chill that had developed between the two nations. After a Soviet delegation visited Iowa farms, Soth toured the Soviet Union with an American delegation.


13. After extensive negotiations, the U.S. State Department required that only scientists and agronomists—no politicians—be included in the Soviet delegation. Their plane flew directly to Des Moines, never going near Washington, D.C. The U.S. Federal Government wanted nothing to do with the initial agricultural exchange.


15. According to Liz Garst, the Iowa Farm Bureau selected only small family farms with no hired labor for the Soviets to tour in an effort to prove to them that 80-160 acre family farms were superior to Soviet collective farms. "The smallest farms in the Soviet Union were at least 20,000 acres," she explained. Garst Farms, totaling about 5,000 acres, were omitted from the tour even though they employed the latest technology in grain and livestock production exactly what the Soviets had come to see. Roswell Garst arranged to meet Matskevitch at a reception and described his techniques to the Soviet official. Determined to see Garst's farm, Matskevitch refused to accompany his delegation to the next day's scheduled stop. Instead, Matskevitch accepted the ride Garst provided to Coon Rapids.


17. Ibid, 186.


19. Garst provided western correspondents the first news of Khrushchev's family. Up until this point people in the West knew very little about Nikita or his family. Early newspaper coverage of Khrushchev's rise to power said the new leader was known to have been married, but it was not known if his wife was still living. Khrushchev's first wife died of hunger and exhaustion during the famine following the Russian civil war. He divorced his second wife, and Nina, his third wife, would later host agricultural delegations from the U.S. and accompany her husband to Coon Rapids. This represented a shift from Stalin's era when leaders' wives and children were kept away from official events. Family, under Stalin, was a sign of weakness.


22. The Garsts owned their home farm and managed many others.


24. Copies of Garst's FBI file are archived in the Garst Papers, Iowa State University Parks Library, Special Collections. Of the 205 pages in the file, 180 have been released under the Freedom of Information Act. Information on virtually all of those pages has been redacted. Few words remain visible between thick lines of black ink.

25. The speech was a devastating attack on Stalin and the former ruler's abuse of power. Moscow ordered Soviet satellite governments to read Khrushchev's secret speech at their own party assemblies. A transcript of the speech was leaked to the West in 1956, but not published in the U.S.S.R. until 1989. In light of Stalin's crimes, many Hungarians wanted to overthrow their government which in 1956 was still ruled by a Stalinist hard-liner.


27. Roswell Garst letter to Nikita Khrushchev, 8 February 1959, Garst Papers, Iowa State University.

28. Liz Garst described both men as "quite gregarious and quite cantankerous. They were both showmen, and they were both very much peasants, neither of them were refined men. To tell you the truth, they were both kind of crude." Angry outbursts over their personal opinions of the arms race often interrupted agricultural discussions. Garst could speak bluntly to Khrushchev in a way that official diplomats could not.

29. Khrushchev's request to visit Garst was the product of Garst's wife, Elizabeth's, invitation. She invited Nikita and Nina Khrushchev to visit their home to reciprocate the Khrushchev's hospitality.


32. Khrushchev in America, 161.

33. Liz Garst recalled that they anticipated that 300 reporters might show up for the Khrushchev visit, but estimates ranged from 1,500 to 3,000 were actually on site. "As my grandmother said, 'The reporters were really much worse than the flies,'" Liz described. Reporters asked all the wrong questions, Roswell Garst had complained. "They were more interested in what Mrs. Garst was going to serve for lunch than what the exchange could do for world peace." See "Notes on the Khrushchev Visit" file. Garst Papers, Iowa State University.

34. Photographs of the luncheon displayed at the Garst Farm show that Khrushchev shared a table with Garst, Henry Cabot Lodge (U.S. Ambassador to the United Nations who served as Khrushchev's official host in the United States), and Adlai Stevenson (Illinois governor, U.S. senator, and 1952 democratic presidential nominee).


37. Morgan Beatty interview with Nikita Khrushchev. 23 September 1959. Garst Papers, ISU.

38. Liz Garst reported that any profit Roswell's company made on selling seed to the Soviet Union was offset by cancellation of orders by U.S. farmers who refused to do business with a "commie sympathizer."

39. Roswell Garst responded this way to everyone who wrote to him prior to the Khrushchev visit to his farm. Eighty percent of the mail he received, Garst estimated, expressed hope and confidence that tensions between the USA and U.S.S.R. would decrease as a result of this exchange. The rest contained bitter condemnations. Garst Papers, Iowa State University.


41. Henry A. Kissinger, "The Khrushchev VisitDangers and Hopes," The New York Times Magazine, 6 September 1959: 5. Kissinger, who later became Secretary of State in the Nixon administration, was associate director of the Center for International Studies at Harvard University when he wrote this article.


44. Taubman, introduction xx.

45. Economic restructuring.

46. Openness.