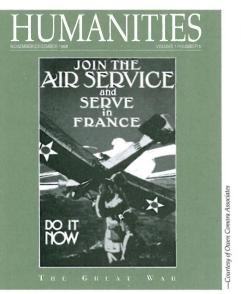
HUMANITIES

NOVEMBER/DECEMBER 1996

VOLUME 17/NUMBER 5



THE GREAT WAR



World War I recruiting poster.

Humanities

A bimonthly review published by the National Endowment for the Humanities. Chairman: Sheldon Hackney Director of Communications Policy: Gary L. Krull

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Second-class postage paid at Washington, D.C., and additional mailing offices. **Postmaster:**Send address changes to United States
Government Printing Office, Superintendent of Documents, Washington, D.C. 20402. **New subscriptions and renewals:** U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Annual subscription rate: \$16.00 domestic, \$20.00 foreign. Two years: \$32.00, \$40.00. For subscription questions or problems, telephone: 202/512-2303; fax: 202/512-2233.

EDITOR'S NOTE

THE FIRST WORLD WAR

Historian Barbara Tuchman begins *The Guns of August* with the breathtaking spectacle of a May morning in 1910 as nine kings and seven queens and forty-five of the world's princes rode through the streets of London to pay their final respects to Edward VII. "In scarlet and blue and green and purple, three by three the sovereigns rode through the palace gates, with plumed helmets, gold braid, crimson sashes, and jeweled orders flashing in the sun." The funeral was to be the last great assemblage of its kind, Tuchman writes. "On history's clock it was sunset, and the sun of the old world was setting in a dying blaze of splendor never to be seen again."

Riding at the side of the new British sovereign, George V, was his German cousin, William II, with whom he would ultimately find himself at war. A few yards back, alongside Albert of the Belgians, rode the heir to the Austro-Hungarian empire, Archduke Franz Ferdinand, whose assassination would be the trigger.

When armed conflict came in 1914, it was expected to be quick and decisive, over by Christmas. Instead, the war stretched over four years with 65 million combatants and a cost of 8.5 million lives. A generation of young men was lost; in Britain alone 942,000 died, among them the promising young poets Wilfred Owen, Rupert Brooke, and Isaac Rosenberg. Ideals of "gentlemanly" conflict died as well. The war brought the twentieth century's first genocide—the slaughter of the Armenians; it brought the first aerial bombing of civilians—the killing of 2,300 Londoners in zeppelin attacks; and it brought the first use of chemical weapons—poison gas drifting over the trenches. It was to be "the war to end all wars," yet it led to another just two decades later, larger and even more bloodthirsty.

How the events of 1914-1918 transformed our society is the subject of a new eight-hour documentary, *The Great War and the Shaping of the Twentieth Century*, premiering this November on public television. The Great War, Paul Fussell writes, "took place in what was, compared with ours, a static world, where the values appeared stable and where the meanings of abstractions seemed permanent and reliable. Everyone knew what Glory was, and what Honor meant." Fussell, author of the prize-winning *Great War and Modern Memory*, talks with Endowment Chairman Sheldon Hackney about the disillusion that became the legacy in subsequent wars, notably Vietnam.

One of the men who exemplified the modern technology of war, Alfred Nobel, died one hundred years ago this December. He used his munitions fortune to endow prizes in chemistry, medicine, physics, literature, and peace. In this issue we look at two of these Nobel laureates—and an almost-laureate—who played larger and lesser roles in the First World War and whose work has had ramifications to the present day. We also see a gentler side of the Nobel, visiting a preservation project under way to preserve the archives of the publishing house of Farrar, Straus and Giroux, home to twenty Nobel Prize-winning writers.

—Mary Lou Beatty

HUMANITIES

The Magazine of the National Endowment for the Humanities

November/December 1996

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Memory, Paul Fussell, talks with Endowment Chairman Sheldon Hackney about changing concepts of heroism and glory.

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An eight-hour documentary details how the clash of Europe's ruling families destroyed a generation of young men. By Blaine Baggett, Jay M. Winter, and Joseph Angier

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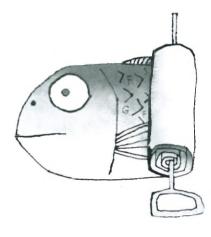
The publisher of more Nobel laureates than any other literary firm is celebrating its fiftieth anniversary. *By Ellen Marsh*

- The Dispute over Nuclear Fission
 The achievements of physicist Lise Meitner
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ndowment Chairman Sheldon Hackney talked recently with Paul Fussell about the impact of World War I on the twentieth century. Fussell, a retired University of Pennsylania professor, is editor of THE NORTON **BOOK OF MODERN WAR and the** author of many books, among them THANK GOD FOR THE ATOM **BOMB AND OTHER ESSAYS and** the award-winning THE GREAT WAR AND MODERN MEMORY.

A Conversation with **Paul Fussell**

heldon Hackney: I understand that you've got a new autobiography out.

Paul Fussell: Yes. It's called Doing Battle, and it is about the way the war I fought in-the Second World War, where I fought as an infantry officerhas pursued me all my life and has helped determine my attitudes and my behavior. The point is, wars are not easily forgotten. Whether they're the First War or the Second War or the Vietnam War and so on, they tend to linger socially and psychologically.

Hackney: Especially for the participants. Fussell: Absolutely.

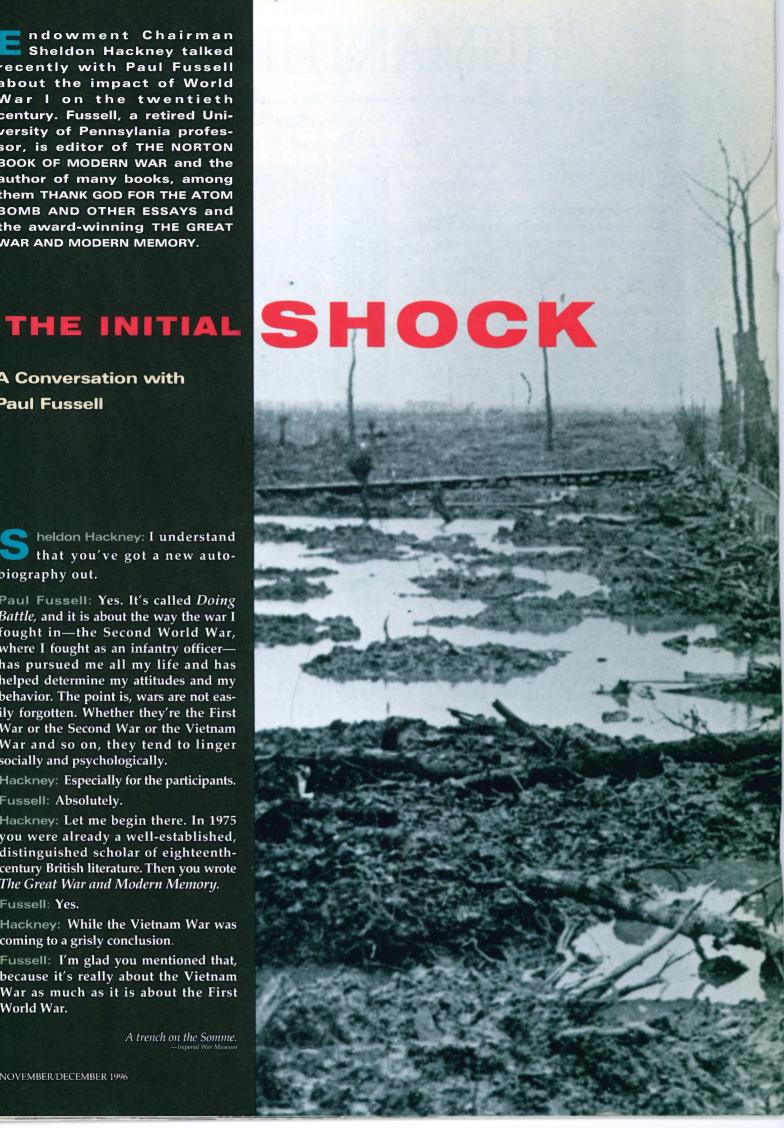
Hackney: Let me begin there. In 1975 you were already a well-established, distinguished scholar of eighteenthcentury British literature. Then you wrote The Great War and Modern Memory.

Fussell: Yes.

Hackney: While the Vietnam War was coming to a grisly conclusion.

Fussell: I'm glad you mentioned that, because it's really about the Vietnam War as much as it is about the First World War.

A trench on the Somme.





Fussell: As a former soldier, what struck me is the absolutely heartless way that war was being pursued by the Americans, partly I think because of the race problem. The Vietnamese to us were not merely communists, they were nasty little yellow people without souls. It didn't matter how we blew them up or how we bombed them or how we burned their villages and so on. I was very struck by that. And one thing I was trying to do in The Great War and Modern Memory was to awaken a sort of civilian sympathy for the people who suffer on the ground in wartime, and that's really an act that I've been performing, oh, ever since 1945, I suppose.

Hackney: Why did you choose to write about World War I when your experience was World War II?

Fussell: I wasn't ready yet to write about World War II—which I have done subsequently. It takes ten to twenty years for these things to gel properly.

Also, I was very interested in the Great War, as it was called then, because it was the initial twentieth-century shock to European culture. By the time we got to the Second World War, everybody was more or less used to Europe being badly treated and people being killed in multitudes. The Great War introduced those themes to Western culture, and therefore it was an immense intellectual and cultural and social shock.

Robert Sherwood, who used to write speeches for Franklin D. Roosevelt, once noted that the cynicism about the Second War began before the firing of the first shot. By that time, we didn't need to be told by people like Remarque and Siegfried Sassoon how nasty war was. We knew that already, and we just had to pursue it in a sort of controlled despair. It didn't have the ironic shock value of the Great War.

And I chose to write about Britain because America was in that war a very, very little time compared to the British—just a few months, actually. The British were in it for four years, and it virtually destroyed British society. I thought that to look at the British version would be intellectually the most profitable.

Hackney: You would argue, then, that the way Americans experienced and thought about and viewed World War II was really shaped by the literature of World War I.

Fussell: Very much. It made it impossible for us to pursue the Second World War with any grand ideas of heroism and glory, because we had already read the debunking literature produced by the First World War.

Hackney: That's why the emblems of the Second World War are Bill Malden's cartoons of Willie and Joe.

Fussell: Exactly. Willie and Joe and similar beaten-down figures.



Sheldon Hackney

Hackney: That book, The Great War and Modern Memory, really changed your career.

Fussell: It did. It showed me that I could write about anything I was interested in. By that time I'd had my say about the British eighteenth century and Augustan culture. I thought, I'm going to shift my vision and write about something different. This started to occur as a sort of half-educated, untrained military historian and cultural historian, which I have tried to be since.

When I go to lecture at universities now, I'm always supported by the history department, never by the English department.

Hackney: That's quite interesting.

Fussell: Yes, because the English department seems to be far gone in little local debates about French literary theory, in which I have no interest whatever. I realized that from the very beginning, I have been a sort of cultural or social historian—I just didn't know it until it emerged in *The Great War and Modern Memory*.

Hackney: Your various reviewers have used such words to describe you as brash, iconoclastic, certainly ironic, even sarcastic, caustic, skeptic.

Fussell: All correct.

Hackney: So those are badges of honor?

Fussell: For me, absolutely. To acquiesce in the mass murders of the modern world and not to become ironic, indeed sarcastic, about them would be close to traitorous, in my view.

Hackney: But you're not a pacifist.

Fussell: By no means.

Hackney: So this is a different stance with regard to war.

Fussell: Well, I'm a pacifist about certain things. I'm a pacifist in the way I define national interest. I use this example frequently: If the Mexicans decided to cross the Texas border with firearms, I would be down there in a moment with a rifle and a whistle to direct the troops

to repel them. If the United States is attacked, I will defend it.

My problem is the United States' defending the interests of the Union Oil Company or the United Fruit Company. Those are not American interests. They're private-money interests, and that bothers me a great deal.

Hackney: But you certainly also see war as a—necessary evil would be one term—

Fussell: I suppose, or maybe even an unnecessary evil.

One of my favorite quotes is from Hemingway, who said, "Never persuade yourself that war, no matter how necessary, is not a crime."

Hackney: Yes.



Fussell: It is a crime. Sometimes it's necessary, but it's always awful, and that's my point.

Hackney: In one of your essays, you quote someone as saying that war is a crime and also the punishment of a crime at the same time.

Fussell: That comes from Frederic Manning's book,

The Middle Parts of Fortune, which is an excellent account of the British First World War.

Hackney: Why would you say that war is ironic rather than heroic?

Fussell: It's ironic because everybody believes that life is pleasurable, and they should. They have a right to believe that, especially if they're brought up under a Con-

grandeur, and ideas of a possibility of the state making everybody happy, and things like that. That modernism is really a form of skepticism or minimalism. You cut out everything that has deceived you and throw it away, and that leaves you with things like the Eames chair and Picasso and numerous other outcrops of modernism.

have used such words to
describe you as brash, iconoclastic,
certainly ironic, even sarcastic,
caustic, skeptic.

Fussell: All correct.

Hackney: You think that it is impossible to live that way? You find modernism in that sense — the stripped-down, convenient version of life—wrong or missing? Fussell: It's a jettisoning of high expectations — I'd put it that way—the kind of expectations that propelled late-Victorian and Edwardian



British soldiers watch the bombardment of enemy lines near Zuydschoote during the Battle of Langemarck, August 16, 1917.

stitution that talks about the pursuit of happiness. To have public life shot through with that kind of optimism and complacency is the grounds for horrible, instructive irony when those generalities prove not true. War tends to prove them not true. War is about survival and it's about mass killing and it's about killing or being killed—that is, in the infantry—and it is extremely unpleasant. One realizes that a terrible mistake has been made somewhere, either by the optimistic eighteenth century or by the mechanistic twentieth century. The two don't fit together somehow, and that creates, obviously, irony.

Hackney: Is it also true that you find language so inadequate to describe war, disproportionate?

Fussell: Right. And after every war, there's an immense overhaul of language, which in the Western world has created really the cultural and artistic phenomenon of what we call modernism; that is, a paring down of everything to minimal size, including language and ideas of

literature and late-nineteenth-century culture in this country.

Hackney: Historians tend to see World War I as the great cultural divide for the West.

Fussell: I would certainly agree. One of the functions of *The Great War and Modern Memory* as a book was to emphasize that point, to emphasize that after the Great War, everything had to start again in Germany and in Britain and in America, even though we hadn't been in the war very long. People like Hemingway, F. Scott Fitzgerald, John Dos Passos—I'm just talking about writers now—helped to start it again.

Hackney: Can we be more specific about the attitude toward life as becoming more ironic after World War I?

Fussell: Irony in the Victorian age is a pretty rare commodity. You do have Mark Twain, thank God, and you have Ambrose Bierce and a few other naysayers of

that kind. But it doesn't determine the course of a whole literature as it does after the Great War.

Hackney: You begin *The Great War* with some mention of Hardy, and you end there. Hardy, you think, was out of sync with his time or ahead of his time?

Fussell: Well, he was ironic, but his irony was of a certain noble kind. His assumed that society would always go on in the same shape he found it in, whereas after the Great War, everybody knew—as Pound said when he insisted that the artist must make it new—that a new order of things was necessary, or at least desirable. The new order didn't really take place, and the old order per-

sisted. But it was certainly hacked and ridiculed and satirized and objected to much more than it ever had been before.

Hackney: You refer, in one of your essays about World War II, to

away from emotion. I learned that by my long immersion in eighteenth-century literature, where the urge is constantly outward from oneself; that is, not to try to undertake deep voyages into the self, but, rather, to escape the self, look out at society, see what's going on, and then comment on it. Irony is a great help there, to protect oneself from self-regarding emotion, which has always been an enemy of mine from the start.

I was brought up on H. L. Mencken, and almost all my work, when it's socially critical, is simply an echo of what Mencken is getting at constantly.

Hackney: But to get to the reality of war, you have to grapple somehow with the horror, do you not?

Fussell: Indeed. And one thing one can't help noticing is the efficacy of religion before the nineteenth century at dealing with these problems and answering some of these unanswerable questions. By the time of the Great War, religion is practically dead. By the time of the Second World War, it's no help at all.

The chaplains that were attached to the infantry that I

was in practically never did spiritual work because they knew they'd be ridiculed. What they did was to apply bandages and surgical scissors, assisting the medics and calming people down psychologically. But everybody recognized that religion was no help whatever.

Hackney: Right. In the realm of language, it seems to me also that if you try to deal with the reality of the experience of battle, you get to sentimentality pretty quickly, or to pathos or bathos or some other sentiment.

path

purpose, after all.

Is it true that irony helps cushion that?

Fussell: Very much. Irony is a great help in helping to penetrate fraudulent language. In the Second War especially, the language became virtually identical with the language of advertising. It was seen through by the troops, who knew what the truth was. It helped to sustain civilian support for the war, which was its

Hackney: You refer to that somewhere as the problem of euphemism.

Fussell: And euphemism has remained, of course. It's a large part of the tone of public discourse.

Hackney: It is, isn't it? Did we learn that from the war?

By the time of the Great War, religion is practically dead.

By the time of the Second

World War, it's no help at all.

Fussell



Fussell as a young soldier in World War II.

the war. Who are you trying to protect there? The reader or yourself?

Fussell: Myself. It protects one from emotional openness which might destroy or just weaken one, and it

turns the experience

toward intellect and

what you call the pro-

tective screen of irony

through which you

pass your bleak view of

Fussell: It's hard to say. It's now practiced on so wide and so official a scale that it's grown out of all proportion to what it was in the war.

Hackney: You write in one of your essays—your essay "My War" in The Boy Scout Handbook and Other Observations, which is a wonderful collection—you say toward the end of that essay, "Those who fought know a secret about themselves, and it is not very nice."

Fussell: They have experienced secretly and privately their natural human impulse toward sadism and brutality. As I say in this new book of mine, not merely did I learn to kill with a noose of piano wire put around somebody's neck from behind, but I learned to enjoy the prospect of killing that way. It's those things that you learn about yourself that you never forget. You learn that you have much wider dimensions than you had imagined before you had to fight a war. That's salutary. It's well to know exactly who you are so you can conduct the rest of your life properly.

Hackney: Even though one might mistake you for a cynic, you are really not. You believe in a lot of these virtues.

Fussell: Absolutely. If I were to run for office, I would talk about those things in public all the time.

Hackney: You have also written about American class, which

is not something Americans are very much aware of.

Fussell: I'll tell you why I did that. Most Americans, in their sweet innocence, think that class has to do with money. But a glance at Donald Trump and Leona Helmsley will

"Break of Day in the Trenches"

The darkness crumbles away.

It is the same old druid Time as ever,

Only a live thing leaps my hand,

A queer sardonic rat,

As I pull the parapet's poppy

To stick behind my ear.

Droll rat, they would shoot you if they knew

Your cosmopolitan sympathies.

Now you have touched this English hand

You will do the same to a German

Soon, no doubt, if it be your pleasure

To cross the sleeping green between.

It seems you inwardly grin as you pass

Strong eyes, fine limbs, haughty athletes,

Less chanced than you for life,

Bonds to the whims of murder,

Sprawled in the bowels of the earth,

The torn fields of France.

What do you see in our eyes

At the shrieking iron and flame

Hurled through still heavens?

What quaver—what heart aghast?

Poppies whose roots are in man's veins

Drop, and are ever dropping;

But mine in my ear is safe-

Just a little white with the dust.

Isaac Rosenberg (1890-1918)

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American soldier in the trenches of World War I, 1918.

indicate that it has very little to do with money. It has to do with taste and style, and it has to do with the development of those features by acts of character. That was one of my points: to try to separate class from mercantilism or commercialism.

Hackney: Turning back to war, one of the ironies—an irony that historians play upon—is that Woodrow Wilson's war to make the world safe for democracy did just the opposite: It paved the way for fascism in Italy and nazism in Germany.

Fussell: Exactly. How could he have known? That's the biggest irony of all, that one never knows the future. One pretends to and one hopes to, but one never does. It always astonishes one, I think.

I'm glad you mentioned Wilson, because Wilson is a good president to remember when the right wing starts picking on Clinton because he was never in a war. Nor was Woodrow Wilson. Everybody's forgotten also that Woodrow Wilson was a—excuse the expression—university president.

Hackney: Perhaps a disabling experience.

Fussell: No, no.

Hackney: But the unintended consequences of war are greater than the general unintended consequences of most other actions.

Fussell: Absolutely, and much greater than most people realize.

Hackney: Well, Paul, thank you very much for this. I've enjoyed talking with you. \Box

THE GREAT WAR

and the Shaping of the Twentieth Century



10 NOVEMBER/DECEMBER 1996

The Cruel Knock

n the eleventh day of the eleventh month of 1918, the guns of the Great War fell silent. In their place the bells of armistice rang out in towns and villages all across Western Europe.

On that day, in the English town of Shrewsbury, Tom and Susan Owen received a knock on their door. A message had arrived that they had hoped for two years never to hear, certainly not this near to the end of the war. The telegram brought cruel news that just one week earlier, as the

peace was being negotiated, their son Wilfred had been killed in action. He had died of machine-gun fire on the banks of a muddy canal in France.

Owen was one of England's most promising young poets. When war broke out, his verse reflected a romantic view of battle that was common among the young men of 1914.



Wilfred Owen

—Courtesy of Wilfred Owen

Four years later, Owen's poetry reflected a quite different reality.

So, soon they topped the hill, and raced together Over an open stretch of herb and heather Exposed. And instantly the whole sky burned With fury against them; earth set sudden cups In thousands for their blood; and the green slope Chasmed and steepened sheer to infinite space.

Waiting for news of loved ones was an agonizing and unavoidable preoccupation of millions of families. Premonitions of disaster were commonplace. One who recorded his experience was Wilfred's brother, Harold. He was serving as a naval officer off the coast of West Africa. At sea and unreachable, he nonetheless knew his brother was dead.

BY BLAINE BAGGETT,

JAY M. WINTER, AND JOSEPH ANGIER





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We were lying off Victoria. I had gone down to my cabin thinking to write some letters. I drew aside the door curtain and stepped inside and to my amazement I saw Wilfred sitting in my chair. I felt shock run through me with appalling force and with it I could feel the blood draining away from my face. I did not rush towards him but walked jerkily into the cabin—all my limbs stiff and slow to respond. I did not sit down but looking at him I spoke quietly: "Wilfred, how did you get here?"

He did not rise and I saw that he was involuntarily immobile, but his eyes which had never left mine were alive with the familiar look of trying to make me understand; when I spoke his whole face broke into his sweetest and most endearing dark smile. I felt not fear—I had none when I first drew my door curtain and saw him there—only exquisite mental pleasure at thus beholding him. He was in uniform and I remember thinking how out of place the khaki looked amongst the cabin furnishings. With this thought I must have turned my eyes away from him; when I looked back my cabin chair was empty . . .

I wondered if I had been dreaming but looking down I saw that I was still standing. Suddenly I felt terribly tired and moving to my bunk I lay down; instantly I went into a deep oblivious sleep. When I woke up I knew with absolute certainty that Wilfred was dead.

—Harold Owen

Wilfred Owen was among the last of the war's official victims. By then the war had already claimed an unimaginable number of casualties. Two million German dead. Almost two million Russians. Well over one million French. One out

The commander of France's Eighth Army, General Castelnau, lost three sons. Each time he saw a sad military face entering his office or home, he asked the simple question: "Which one?"

of eight of those who served died. Like Wilfred Owen, each of those nine million left behind loved ones: wives, parents, and children whose own lives would be forever shattered.

Their stories will be told in *The Great War and the Shaping of the Twentieth Century,* an eighthour NEH-supported documentary airing November 10-13 on public television.

For some, loss was added to loss. The commander of France's Eighth Army, General Castelnau, lost three sons. Each time he saw a sad military face entering his office or home, he asked the simple question: "Which one?"

The German commander General Erich Ludendorff lost two stepsons, both pilots. He personally had to identify the remains of the second, shot down in April 1918. "The war," he said, "has spared me nothing."



Vera Brittain

—Courtesy of McMaster
University Library

Vera Brittain was a volunteer nurse in a London hospital. She had already lost her fiancé Roland in late 1915 and harbored hopes that at least her younger brother Edward would be spared. When she read of heavy fighting in June 1918 on the Italian front where her brother was serving, she had a premonition that he was gone, too.

I had just announced to my father, as we sat over tea in the dining-room, that I really must do up Edward's papers and take them to the post office before it closed for the weekend, when there came the sudden loud clattering at the front-door knocker that always meant a telegram.

For a moment, I thought that my legs would not carry me, but they behaved quite normally as I got up and went to the door. I knew what was in the telegram—I had known for a week—but because the persistent hopefulness of the human heart refuses to allow intuitive certainty to persuade the reason of that which it knows, I opened and read it in a tearing anguish of suspense.

"Regret to inform you Captain E. H. Brittain M.C. killed in action Italy June 15th."

—Vera Brittain

The knock on the door was democratic. The prominent and the rich knew it as did the ordinary citizen. Margot Asquith, the wife of the prime minister of England, H. H. Asquith, heard the bad news on a weekend in 1916.

While we were playing tennis in the afternoon Clouder, our servant, came in to say I was wanted. The moment I took up the telephone I said to myself, "Raymond is killed." With receiver in hand, I asked what it was, and if the

news was bad. Our secretary, Davies, answered, "Terrible, terrible news."

—Margot Asquith

"Whatever pride I had in the past," Asquith wrote three days after hearing of his son's death, "and whatever hope I had for the far future, the largest part of both was invested in him. Now all that is gone."

The Great War was a great tragedy. The dimension of human suffering alone confirms this. But there is more tragedy to this sad story, for the sacrifices did not deliver a resolution. Like Owen's family, the world soon realized that it was not safe with the news that war had ended, for in the war were sown the seeds of an even greater conflict.

mong the numerous figures who played a role, large and small, none is more fascinating than Wilhelm II of Germany. No one was more easily caricatured during and after. While it would be inaccurate to point an accusing finger at him as the villain who

point an accusing finger at him as the villain who caused the war, Wilhelm found himself at the epicenter of the continent's stresses and strains.

The new century had barely begun when one of the great monarchical reigns came to a natural end. "The last moments were like a great three-decker ship sinking," said one friend who was present at Queen Victoria's death at eighty-one. Around her bedside on January 22, 1901, were three men. Two were her sons, the Prince of Wales and Prince Arthur. The other was a grandson who had rushed across the Channel to be with her. "How I love my Grandmother, I cannot describe for you," he once told an acquaintance, "She is the sum total of all that is noble, good, and intelligent." The grandson was Wilhelm II, the ruler of Germany.

In Victoria's day, royal bloodlines reached far beyond national borders. The Queen's blood flowed through the veins of kings, queens, princes and princesses throughout Europe. Victoria was a royal icon, a symbol of an important age, for in her time Britain became a pervasive and influential global presence, the largest empire the world had ever seen, ruling one quarter of the world's population and land. Behind Britain came other competing European powers, each with imperial ambitions. Germany arrived late to the colonial table, but by 1884, to the shock of the British, Germany had acquired territory in Africa and the Pacific that amounted to five times the size of Germany itself. However meager in terms of resources and raw materials, the possessions were another sign of Germany's rising preeminence. Another was the German navy.

Wilhelm II had long had a fascination with the sea. "It sprang," he wrote, "of no small extent from my English blood." As a child, his first and most pleasant childhood memories had been those of playing at his grandmother's seaside

resort on the Isle of Wight. "There awoke in me the wish to build ships of my own like these someday, and when I was grown up to possess as fine a navy as the English."

The man who would lead Germany into World War I was born to the first daughter of Queen Victoria on January 27, 1859. It was a difficult birth. The breech delivery required the use of forceps. In the procedure the arm was wrenched out of its socket, causing severe muscle and nerve damage that shriveled the limb, making it essentially useless. As a result, the left side of his body was underdeveloped, affecting even his ability to hold up his head. A special metal brace was created to stretch his neck muscles.

How well I recollect how nervous, weak and sad I felt on Willie's christening day and how it went to my heart to see him half covered up to hide his arm which dangled without use or power by his side. I cannot tell you what I suffered when I saw him in that machine. To see one's child treated like one deformed—it is very hard.

—Victoria

Nothing worked. "The only result," Wilhelm remembered, "was that I was made to suffer great torture."

Despite his English mother's worries, she was determined that Willy overcome his handicap. She took responsibility for his general education, hoping to instill in him "our British feeling of independence, together with our broad English common sense—so rare on this side of the water." She proved a hard taskmaster. He learned to speak German and English simultaneously and with equal ease. Physical accomplishments, however, came slowly. "My greatest troubles," Wilhelm wrote in his memoirs, "were with riding. The thought that I, as Heir to the Throne, should not be able to ride, was to her intolerable."

When the prince was eightand-a-half years old, a lackey
still had to lead his pony by the
rein, because his balance was so
bad that his unsteadiness caused
intolerable anxiety to himself and
others. So long as this lasted, he
could not learn to ride: it had to be
overcome, no matter what the cost.
Therefore the tutor, using a moral authority
over his pupil that by now had become
absolute, set the weeping prince on his horse,
Continued on page 51

ries, she was
is handigeneral
"our
ce,

Wilhelm found

himself at the

the continent's

epicenter of

stresses and

strains.

Kaiser Wilhelm II

—Courtesy Library of Congress

HUMANITIES 13

A GATHERING OF NOBELS: FARRAR, STRAUS ANI

BY ELLEN MARSH

Cabell, Farrar, and Straus.



THE OFFICES OF FS&G AT 19 Union Square West IN NEW YORK CITY.



Inc.) went on to develop a reputation for publishing books of high literary quality; today it can proudly claim that it has published more Nobel prize winners (twenty of them to date, from Hermann Hesse to Derek Walcott) than any other publishing house in the world. Moreover, there is an impressive list of Farrar, Straus and Giroux authors who have been recipients of Pulitzer prizes (among them, John Berryman, Bernard Malamud, Jean Stafford, Robert Lowell), National Book Awards (Elizabeth Bishop, Isaac Bashevis Singer, Flannery O'Connor, Tom Wolfe, and others), National Book Critics Circle awards, and Newbery and Caldecott prizes.

FIFTY YEARS AGO THE YOUNG LITERARY FIRM of Farrar, Straus published its first book, There Were Two Pirates, by James Branch Cabell, to decidedly mixed reviews. As Roger Straus good-naturedly recalls, one in the Chicago Sun-Times said tartly that the \$2.95 book should have been titled There Were Three Pirates—

Farrar, Straus (eventually Farrar, Straus and Giroux,

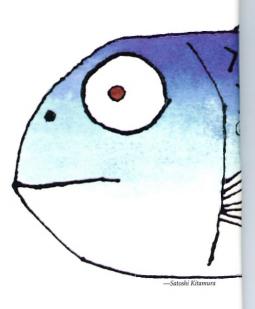
Several years ago the publishing house gave the New York Public Library its archives from 1946 through 1980—two hundred boxes in all. A new NEH preservation grant is helping make it possible for the library to catalog the material and make it available to the public.

Lisa Browar, chief librarian for rare books and manuscripts at the library, describes its importance this way: "New York is the center of the publishing universe and Farrar, Straus and Giroux is one of the—if not the—preeminent literary publishing houses in New York." She notes that the library also holds archives from the Century Company, Crowell-Collier, Macmillan, Alfred A. Knopf, and the New Yorker, among others. "We have a proven ability to care for manuscript material and make it



JOHN FARRAR

TO MARK THE FIFTIETH anniversary of Farrar, Straus and Giroux, Inc., fifty of the nation's leading illustrators and graphic designers offered their interpretations of the company's fish logo. There is a story behind the fish. When Roger W. Straus founded the company in 1946, he had little money and neither a printer nor a logo. The printer he eventually found had leftover printing plates and the logo of a client who had gone bankrupt; the printer was eager to put the materials to good use. The logo just happened to be three fish



GIROUX AT



ROGER STRAUS

available to a wide audience." Among the two hundred boxes is correspondence between T. S. Eliot and his wife and Robert Giroux, Eliot's editor. We learn of Eliot's attempts to disguise his failing health when in 1963 the press reported that Eliot was hospitalized with a mild reaction to "London smog." Actually, a letter from Mrs. Eliot to Giroux discloses that he was seriously ill with heart and lung ailments.

Another letter writer, Clifford Odets, is less than overwhelmed by the 1956 gift of a copy of Mary McCarthy's *Sights and Spectacles*: "Gentlemen—Thank you for the complimentary copy of the new Mary McCarthy book on the theatre. I shall learn from this book how to become a better citizen, human being and playwright."

The Farrar, Straus and Giroux story begins at the end of World War II when young Roger W. Straus, Jr., newly retired from the U.S. Naval Reserve, and



ROBERT GIROUX

A SHORT (AND
PROBABLY
INCOMPLETE)
LIST OF HONORS
AND PRIZES
BESTOWED UPON
FARRAR, STRAUS
AND GIROUX
AUTHORS

NOBEL PRIZES

SELMA LAGERLOF (1909)

Knut Hamsun (1920)

HERMANN HESSE (1946)

T. S. ELIOT (1948)

François Mauriac (1952)

Juan Ramon Jiménez

(1956)
SALVATORE QUASIMODO

NELLY SACHS (1966)

(1959)

Aleksandr Solzhenitsyn (1970)

PABLO NERUDA (1971) ISAAC BASHEVIS SINGER (1978)

Czeslaw Milosz (1980)

ELIAS CANETTI (1981) WILLIAM GOLDING (1983)

Wole Soyinka (1986)

JOSEPH BRODSKY (1987)

CAMILO JOSÉ CELA (1989)

Nadine Gordimer (1991)

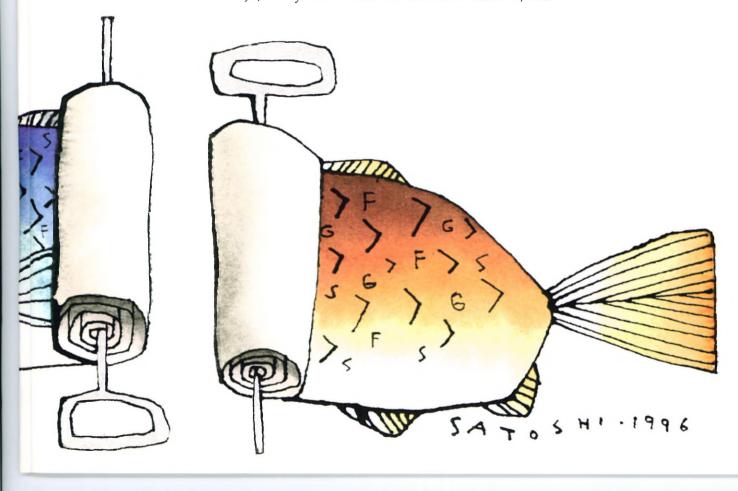
DEREK WALCOTT (1992)

SEAMUS HEANEY (1995)

PULITZER PRIZES

77 DREAM SONGS BY JOHN BERRYMAN (1965)





THE FIXER BY
BERNARD MALAMUD
(1967)

COLLECTED STORIES BY JEAN STAFFORD (1970)

THE DOLPHIN BY
ROBERT LOWELL (1974)

LAMY OF SANTA FE BY PAUL HORGAN (1976)

THE MORNING OF THE POEM BY JAMES SCHUYLER (1981)

THE MAMBO KINGS PLAY SONGS OF LOVE BY OSCAR HIJUELOS (1990)

NATIONAL BOOK AWARDS

THE MAGIC BARREL BY BERNARD MALAMUD (1959)

LIFE STUDIES BY
ROBERT LOWELL (1960)

THE FIXER BY BERNARD
MALAMUD (1967)

HIS TOY, HIS DREAM, HIS REST BY JOHN BERRYMAN (1969)

THE COMPLETE
POEMS BY ELIZABETH
BISHOP (1970)

A DAY OF PLEASURE STORIES OF A BOY GROWING UP IN WARSAW BY ISAAC BASHEVIS

SINGER (1970)

THE SLIGHTLY

IRREGULAR FIRE ENGINE

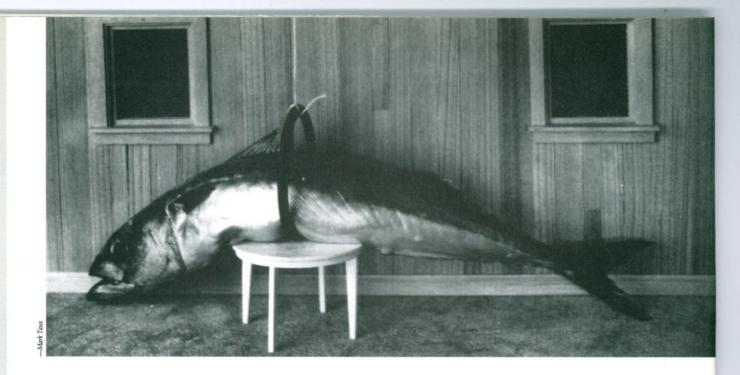
OR THE HITHERING

THITHERING DJINN

BY DONALD

BARTHELME (1972)

THE COMPLETE
STORIES OF FLANNERY
O'CONNOR BY
FLANNERY O'CONNOR
(1972)



John Farrar, fresh from a stint with the Office of War Information and separated from Farrar and Rinehart, a publishing house he had helped found in 1929, met at lunch at the Murray Hill Hotel in New York City to discuss starting their own house. The first catalog of nineteen books, for the summer and fall of 1946, was a mixed bag. In addition to James Branch Cabell's *Pirates* novel, the list included *Francis* by David Stern (about a talking mule), a popular handbook on the United Nations, a posthumous collection of poems and short stories by Stephen Vincent Benét, and *The Psychological Problems of Religion* by Theodor Reik.

Within a few years, quality books published by Farrar, Straus established the firm's reputation. *Christ Stopped at Eboli* by Carlo Levi is still in print forty-nine years later. Shirley Jackson's *The Lottery*, published in 1949, gave the firm financial stability. And one of the most popular children's books of all time, *A Wrinkle in Time* by Madeleine L'Engle, was



16 NOVEMBER/DECEMBER 1996



DEREK WALCOTT

published in 1962, after twenty-six other publishers had rejected it. Roger Straus's gamble on a book he loved paid off: *A Wrinkle in Time* won the Newbery Medal in 1963.

An important event in the history of the firm was the arrival in 1955 of Robert Giroux, the former editor-in-chief of the trade department of Harcourt, Brace, who brought with him seventeen major authors, including Eliot, Flannery O'Connor, John Berryman, Randall Jarrell, Thomas Merton, and Bernard Malamud. Eleven years later, the firm became Farrar, Straus and Giroux.

Two years ago Roger Straus initiated the sale of his firm to the German publisher, Georg von Holtzbrinck. (Farrar had died in 1974.) Holtzbrinck has a reputation for "hands off" management, and Straus still controls Farrar, Straus and Giroux and keeps the firm's legendary close ties with its authors. Prominent writers such as Tom Wolfe, Scott Turow, and Susan Sontag give the firm financial stability.

Lisa Browar describes Roger Straus as "an entrepreneur, a man of vision. He believes in his authors enough to invest in them—he has a great sense of their possibilities. He nurtures authors in the practical sense, especially the émigré authors, helping them with housing and finances."



Nadine Gordimer

A CROWN OF FEATHERS AND OTHER STORIES BY ISAAC BASHEVIS SINGER (1974)

THE LIFE OF EMILY
DICKINSON BY RICHARD
B. SEWALL (1975)

PASSAGE TO ARARAT BY MICHAEL J. ARLEN (1976)

A SWIFTLY TILTING
PLANET BY MADELEINE
L'ENGLE (1980)

THE RIGHT STUFF BY TOM WOLFE (1980)

A PLACE APART BY PAULA FOX (1983)

DOCTOR DE SOTO BY
WILLIAM STEIG (1983)

PACO'S STORY BY LARRY HEINEMANN (1987)

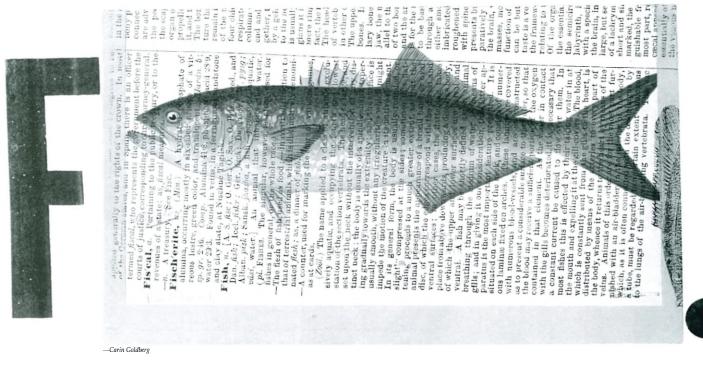
FROM BEIRUT TO

JERUSALEM BY THOMAS

L. FRIEDMAN (1989)

NATIONAL BOOK CRITICS
CIRCLE AWARDS

GEOGRAPHY III BY ELIZABETH BISHOP (1976)



DAY BY DAY
BY ROBERT LOWELL
(1977)

ON PHOTOGRAPHY BY SUSAN SONTAG (1977)

THE HABIT OF BEING: LETTERS BY FLANNERY O'CONNOR (IVAN SANDROF/BOARD AWARD) (1979)

LESS THAN ONE: SELECTED ESSAYS BY JOSEPH BRODSKY (1986)

THE COUNTERLIFE BY PHILIP ROTH (1987)

FLESH AND BLOOD BY C. K. WILLIAMS (1987)

ENCOUNTERS AND
REFLECTIONS: ART IN
THE HISTORICAL
PRESENT BY ARTHUR
C. DANTO (1990)

NEWBERY MEDALS

A WRINKLE IN TIME BY MADELEINE L'ENGLE (1963)

I, Juan de Pareja by Elizabeth Borton de Treviño (1966)

NEWBERY HONORS

THE CRICKET IN
TIMES SQUARE BY
GEORGE SELDEN.
ILLUSTRATED BY GARTH
WILLIAMS (1961)

WHEN SHLEMIEL
WENT TO WARSAW
AND OTHER STORIES
BY ISAAC BASHEVIS
SINGER. ILLUSTRATED
BY MARGOT ZEMACH
(1969)

KNEEKNOCK RISE BY
NATALIE BABBITT (1971)

ABEL'S ISLAND BY
WILLIAM STEIG (1977)



Joseph Brodsky

Robert Giroux, now in his eighties, continues to work part-time for the firm. "He is scholarly, eru-

dite," says Browar.
"To me he exemplifies the great literary editor of the twentieth century, second only to Maxwell Perkins."

The cataloging project for the Farrar, Straus and Giroux archives began in June 1996 and will be completed by June 1997, at which time all the records through 1980 will be available to the public. The firm has also promised to continue to donate its archives. "I think the most valuable aspect of the collection is the editorial correspondence that was carried on while a book was being written and while it was in production," Browar says. "The collection will also document how books come into existence."

from **EPITHALAMIUM** (WRITTEN BY DEREK WALCOTT TO CELEBRATE THE MARRIAGE OF JOSEPH AND MARIA BRODSKY)

Though New York has no finer house than those two R.'s, Giroux and Straus, not an industrial behemoth whose tusks or tax is waxing Roth but manages to pay the rent thanks to Presumed Innocent, and now with its Burden of Proof can keep Tom Wolfe from door and roof, style doesn't mean the rent is paid by poetry or by J. Kincaid, or by thin poets with grotesquely long names like Adam Zagajewski, or crackling consonants that push the tongue through Aleksandr Kushner. Who let these immigrants through the door, whose finger pushed the elevator to 19 Union Square, fourth floor? If you can wait, I'll tell you later. For poetry huge forests must fall; you let one in, you let in all. But thanks to the foreign policy of the two R.'s or rather three, including Roger Straus the Third, the graceful birch of poetry from Russia, Poland, even Ireland rustles its pages, which can be many, witness Selected Poems, Heaney, and studies its own shade at noon, and now I'm coming to the bird, the inevitable nightingale that's heard, its Irish accent pure Muldoon. Endure these bad lines, I'm the guest of honour, let an immigrant tell this, I know an exile who is now blest, I'm from an island, but not Ellis, where rest is work, and work is rest. Prose pays for poetry to be arty, like keeping a mistress on the side, but, gentles all, it's not my party, it's not my fete, instead I've come armed with this epithalamium . . .

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She adds: "The Farrar, Straus and Giroux collection will provide a snapshot of publishing history in the second half of the twentieth century." \Box

Ellen Marsh is a freelance writer in Takoma Park, Maryland.

*Cx FARRAR STRAUS $GIR \bigcirc UX$ Filets BARBARA -Barbara de Wilde



ALEKSANDR SOLZHENITSYN

A RING OF ENDLESS
LIGHT BY MADELEINE
L'ENGLE (1981)

UPON THE HEAD OF THE GOAT BY ARANKA SIEGAL (1982)

DOCTOR DE SOTO BY
WILLIAM STEIG (1983)

CALDECOTT MEDALS

THE FOOL OF THE WORLD AND THE FLYING SHIP BY ARTHUR RANSOME. ILLUSTRATED BY URI SHULEVITZ (1969)

DUFFY AND THE DEVIL BY HARVE ZEMACH. ILLUSTRATED BY MARGOT ZEMACH (1974)

HEY, AL BY ARTHUR YORINKS. ILLUSTRATED BY RICHARD EGIELSKI (1987)

CALDECOTT HONORS

THE JUDGE BY MARGOT ZEMACH (1970)

SNOW WHITE AND
THE SEVEN DWARFS
BY JACOB AND
WILHELM GRIMM.
TRANSLATED BY
RANDALL JARRELL.
ILLUSTRATED BY NANCY
EKHOLM BURKERT (1973)

THE AMAZING BONE BY WILLIAM STEIG (1977)

IT COULD ALWAYS BE WORSE BY MARGOT ZEMACH (1978)

THE TREASURE BY
URI SHULEVITZ (1980)

Puss in Boots by Charles Perrault. Illustrated by Fred Marcellino (1991)

—Courtesy Farrar, Straus and Giroux,Inc.

HUMANITIES 19

THE NOBELS AFTER WORLD WAR II



dispute over NUCLEAR

20 NOVEMBER/DECEMBER 1996



This year is the one hundredth anniversary of the death of Swedish munitions maker Alfred Nobel, whose will set aside money for recognition in the fields of physics, physiology and medicine, chemistry, literature, and peace—awards to become known as the Nobel prizes. It has been a checkered history at times.

AUTUMN IS NOBEL SEASON IN SWEDEN. SPECULATION BEGINS in October, builds to a flurry of November announcements, and ends in a glittering royal ceremony each 10 December, the anniversary of the death of Alfred Nobel. In 1945, rumors floated for weeks that Lise Meitner would share in one or another of the prizes. On 16 November, the Royal Academy of Sciences announced its Nobel decisions: the 1944 chemistry prize to Otto Hahn and the 1945 physics prize to Wolfgang Pauli.

Hahn and nine other German atomic scientists were interned at Farm Hall, an English country manor near Cambridge. At the news of Hahn's award they celebrated, raising their glasses to Hahn. In Sweden, Lise Meitner's friends were furious. From Goteborg, Hans Pettersson wrote angrily, "[We] are indignant about the one-sidedness of the distribution of the Nobel Prize. We are certainly glad that Hahn got the chemistry prize, but by all rights the physics prize should have gone to you."

The injustice was apparent beyond Meitner's immediate circle. Birgit Broomé Aminoff, a scientist herself and the wife of a prominent mineralogist on the board of the Nobel Foundation, wrote: "Long before the release of nuclear energy had been realized on a practical scale, it seemed to me that Professor Meitner had reached a status equivalent to that of many Nobel Prize recipients. It must therefore have been very bitter that for completely unrelated reasons you were forced to leave the laboratory where the now-rewarded discovery was so close, and thereby lost the possibility to complete a work which promised to be the natural climax of a long and devoted career as a scientist."

Meitner, of Jewish descent with an Austrian passport, had fled Germany in 1938 amid rumors that a policy preventing scientists from leaving was about to be enforced.

For Meitner, then age sixty, emigration had ended her thirty-year career in Berlin and interrupted her four-year collaboration with Hahn and Fritz Strassmann on the uranium project. From Stockholm she had continued to correspond with Hahn about their

work; by December 1938, they had discovered barium, evidence for the splitting of the uranium nucleus. In Nazi Germany it was politically impossible for her to publish with Hahn and Strassmann, and her part in the discovery

FISSION

BY RUTH LEWIN SIME

Otto Hahn and Lise Meitner, about 1910, in their laboratory in Fischer's Institute.

was obscured, although she, together with her nephew Otto Robert Frisch, published the first theoretical interpretation of the process in February 1929, named it "fission," and described the huge release of energy that accompanies it.

In her response to Aminoff, however, Meitner was generous: "Surely Hahn fully deserved the Nobel Prize in chemistry. There is really no doubt about it. But I believe that Frisch and I contributed something not insignificant to the clarification of the process of uranium fission—how it originates and that it produces so much energy, and that was something very remote from Hahn."

In 1944 the chemistry committee had, in essence, decided for Hahn but officially it set aside the prize for the following year.

From contemporary accounts it is evident that the chemistry deliberations for the Nobel were stormy. After the war the Nobel chemistry committee voted to reconsider its 1944 award to Hahn—an unprecedented move, and evidence that the original decision was flawed. According to Oskar Klein, newly elected to the Royal Academy, The Svedberg, a member of the chemistry committee, and Arne Westgren, an academy member, "strongly pointed out" that the foundation for the committee's 1944 decision had changed with new information from America and France regarding Meitner and Frisch's contributions and also the new importance of Meitner and Hahn's earlier discovery of U-239, precursor to plutonium. But later, in sessions of the academy as a whole, there was resistance to amending an earlier decision. It was argued that Westgren and Svedberg had reversed their 1944 position (which they admitted) and that the field was too complex to evaluate fully; Klein suspected an important factor was the academy's desire to avoid the appearance of yielding to American influence. In the final plenary session in November

1945, a slim majority voted to leave the award unchanged, to Hahn alone.

The discussions that took place in 1945 illustrate the complexity of evaluating an interdisciplinary discovery, given the statutory requirements of the Nobel awards, the jurisdictional division between chemistry and physics, and the various precedents that had grown over time. In contrast, the

1944 decision appears to be impulsive. One wonders about the haste to award the prize to Hahn during wartime, when it could not be announced, or even mentioned, without endangering him. One wonders also how the chemists on the Nobel committee could have missed Strassmann's contributions—it appears they mistakenly regarded him as a latecomer to the investigation—and why they ignored Meitner's role, given that The Svedberg had already nominated Hahn and Meitner for the chemistry prize in 1939.

In 1944, it seems, Hahn was simply the sentimental favorite: His time had come. Because the committee worded its citation—for his achievements in radiochem-



After the war the Nobel chemistry committee

voted to reconsider its 1944 award to Hahn—

an unprecedented move, and evidence that

the original decision was flawed.

istry and the discovery of fission—to recognize all of Hahn's scientific career and not just the fission discovery, Meitner and others could not help but agree that he "fully deserved" it, but the chemistry committee, not recognizing that fission would be the overwhelming focus of the award, completely failed to examine the extent to which analytical chemistry and physics had contributed to it.

There may also have been a political edge: at a time when their old cultural ties to Germany were crumbling, Swedes could still take pride in honoring a man like Otto Hahn. They valued him personally, as a colleague and friend who had been *Doktorvater* to Swedish scientists and a welcome visitor to Swedish universities and insti-



Meitner and President Harry S. Truman at the February 1946 ceremony honoring Meitner as the Women's National Press Club's "Woman of the Year."

Meitner meanwhile was preparing for her first trip to the United States. She wanted to spend time with her sisters, Lola in Washington and Frida in New York, and to see Otto Robert, who was still in Los Alamos, and the many friends who had scattered all over. Lola's husband, Rudolf Allers, a professor of psychology at the Catholic University of America in Washington, D.C., arranged for a visiting professorship for the spring semester of 1946.

As Lise left for the United States, Otto Robert had some last-minute advice: "As regards publicity, you had better cultivate a philosophical attitude. Half of what is printed in American newspapers is false anyway, so why worry? The best scheme is to be nice to newspaper reporters, then they will at least write nice things about you And remember, in this country it is regarded as perfectly natural to have one's breakfast habits, one's favorite color in stockings, and one's opinion of Beethoven and Mickey Mouse

discussed in the newspapers, so you need not feel selfconscious about it. The idea that people have a private life is a stuffy and un-American notion."

Thus fortified, Lise arrived in New York on 25 January 1946. *Time* reported that when the "pioneer contributor to the atomic bomb" stepped from the airplane and saw the swarm of reporters and photographers below, she went back in to collect herself. Once on the ground, she rushed into the arms of her relatives—Frida and Lola, their husbands, Leo and Rudi, and, to her surprise, Otto Robert, who had traveled by train two days and nights from Los Alamos. With her family again, she was "utterly happy" for the first time in years.

Meitner was swept into a whirl of activity that continued unabated until she left five months later. It began in New York in February when dozens of acquaintances and old friends welcomed her to a meeting of the American Physics Society; in Washington a few days later, more friends and colleagues gathered at a reception in her honor at the Catholic University. On 9 February at a banquet given by the Women's National Press Club, she was designated "Woman of the Year"; seated next to President Harry Truman, she accepted an inscribed silver bowl with a smile, a bow, and no speech—"painless," she told Otto Robert later—and enjoyed the political repartee between reporters and the attending "bigwigs." The president gave the impression of a "jovial, laughing youth,"

tutes; in 1943, he had been elected a foreign member of the Royal Academy of Sciences and had come to Sweden to lecture on fission in Stockholm and Göteborg.

Much later, some of Hahn's associates contended that the dispute over his award in 1945 was purely political, motivated by animosity toward Germany and revulsion against the use of nuclear weapons. There is no evidence for this in the letters that Oskar Klein, newly elected to the Royal Academy, wrote to Niels Bohr, providing details. On the contrary, it appears that the 1945 vote to postpone was a belated effort to properly sort out the science.

Bohr was of the opinion that the 1944 chemistry prize for fission should "in no way" prevent Meitner and Frisch from receiving a physics prize. He nominated Meitner and Frisch for physics in 1946 and chemistry in 1947 and 1948, to no avail.

After the furor over the 1945 prizes subsided, Meitner's friends were determined to find a position for her outside of Manne Siegbahn's institute for experimental physics. Gudmund Borelius was proposing a new facility for nuclear physics at the Royal Institute of Technology; he wanted Meitner to join him there. As she was above the mandatory Swedish retirement age of sixty-five, such an appointment would require approval from parliament, but the government was newly supportive of nuclear research and there was considerable sympathy for Meitner in government and academic circles.

an American trait, she supposed. They talked about the bomb, both expressing the hope that it would never be used again. Then Truman gave a speech that began with a few jokes—another Americanism, she told a friend and ended with a very serious appeal to Americans to give food to starving Europe. The chill of her seven years in Sweden was beginning to thaw.

At the Catholic University, Lise was scheduled to teach a course in nuclear physics and conduct a weekly seminar. At first she worried about her spoken English and also about her ability to understand American English, but the four hundred people who crowded into her first lecture "did not seem unhappy," and more than one hundred continued to attend her subsequent lectures, fifteen in her seminar. She was in constant demand. She talked to high school winners of the Science Talent Search, gave scientific seminars at universities, attended countless meetings, and accepted honorary degrees. Everywhere she left an indelible impression: a small figure, a gentle voice, and an unmistakable air of authority when the subject was physics.

Early on Meitner held a press conference, hoping to be spared private interviews with "idiotic questions." It didn't help. The press pursued her every step; her face was everywhere, from the New York Times to the center of a crossword puzzle in the San Francisco News to article after article in newspapers and magazines. Strangers stopped her on the street, waitresses and taxi drivers wanted her autograph, and mail flooded in, three hundred letters by the end of March, five hundred by May.

Hollywood was interested, of course. Lise was shown a script for a Metro-Goldwyn-Mayer film, The Beginning of the End, which she dismissed as "nonsense from the first word to the last. It is based on the stupid newspaper story that I left Germany with the bomb in my purse, that Himmler's people came to the Dahlem institute to inform me of my dismissal and more along the same lines. I answered that it was against my innermost convictions to be shown in a film, and pointed out the errors in their story." When MGM countered with a much higher offer, Lise threatened to sue. "I would rather walk naked down Broadway!" she told Otto Robert.

For the most part, however, Meitner's American visit was an exhilarating return to life, a reunion with family, friends, and physics that helped assuage the isolation of the years in Stockholm. When she gave seminars in Princeton, she spent evenings with Rudolf Ladenburg and his family, talked for hours with Albert Einstein and Hermann Weyl, discussed physics with Hylleraas, Yang,

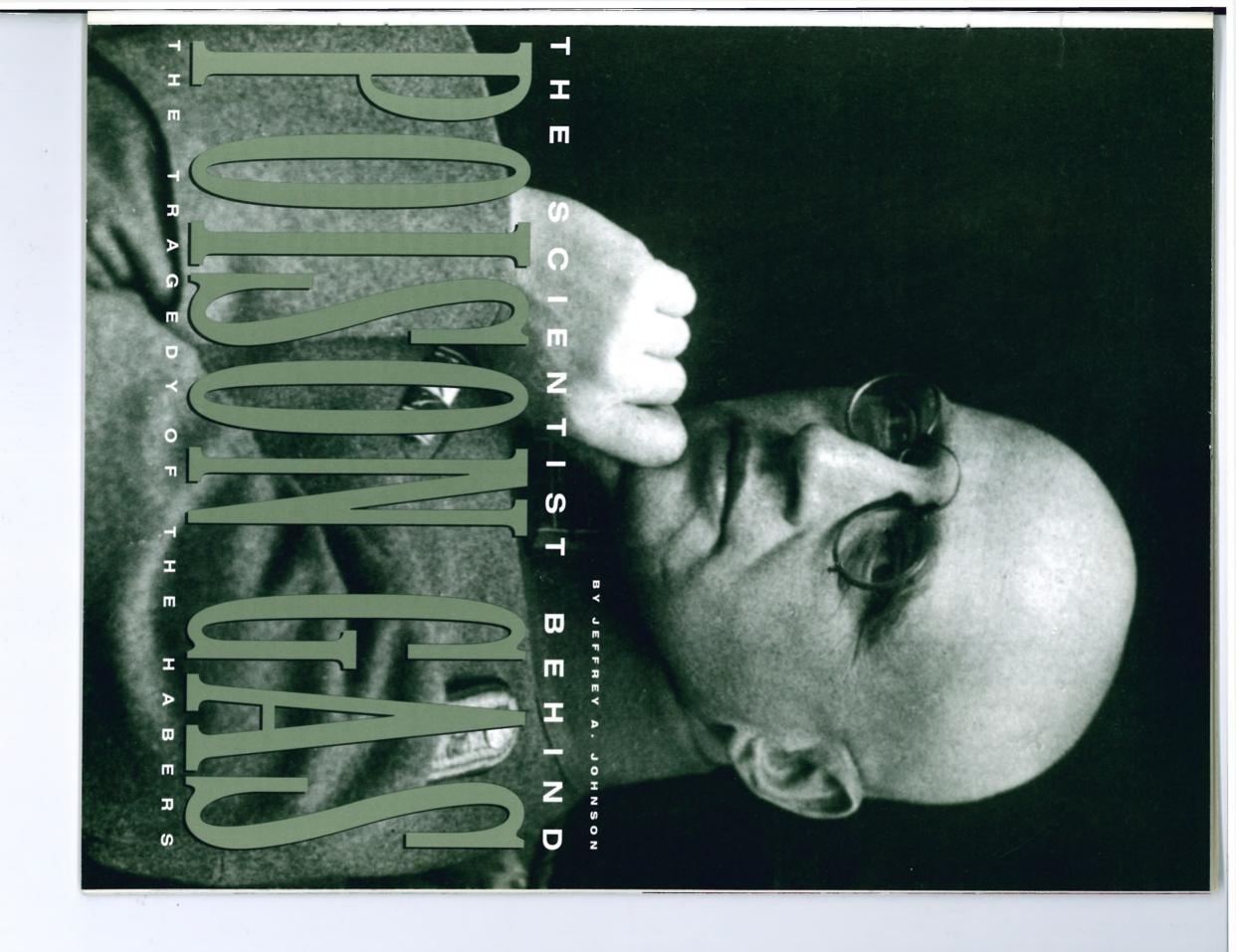
By 1946, peace had already given way to tension between East and West. Many scientists who had worked on the atomic bomb were urgently concerned with its political implications: the balance between international cooperation and national security, the consequences of scientific secrecy, the dangers of a nuclear arms race. Many of these problems had been foreseen before Hiroshima. In Washington, she spent an evening with James Chadwick, who had served for three years as head of the British mission to the American bomb project, but she found him inhibited by unspoken constraints: "I would have liked to know how he stood on the question of the bomb, and the wishes of the Scientists' Committee, but I felt that the manner in which he spoke of the work on the bomb was intended to cut off any questions from me."

Traveling again, Meitner returned to Chicago, where she met Fermi, Edward Teller, Victor Weisskopf, and Leo Szilard at a meeting of the American Physical Society. The meeting itself was clouded by "oppressive secrecy," so that Lise felt "more like a member of a secret society that excludes the public than a participant at a scientific meeting." Whenever the subject was nuclear physics or reactor construction, "all papers had been censored by the military authorities and stopped just at the point where you could hope to learn something new."

After a final week in New York with Frida and Leo, Lise boarded the Queen Mary for England on 8 July. In London the British were belatedly commemorating the 300th anniversary of Newton's birth; the only German they invited was Max Planck. Since Lise had seen him in 1943, he had suffered beyond all measure: his house and possessions destroyed, the final terrible battles of the war, his son tortured and put to death. Lise grieved to see him now, frail and forgetful. But when she was alone with him, "his human and personal qualities were wonderful as ever." It was their last meeting. Max von Laue was also in London that summer, the only German invited to an international crystallography conference. He had been looking forward with great anticipation to seeing Lise again. "What a reunion that was!" he wrote to his son Theo in America. Physically Laue had hardly changed, but Meitner thought he was under the utmost tension, on the verge of weeping or a fit of rage. Where she was preoccupied with the question, "How and why did it happen in Germany?" Laue sought a return to normality. When she expressed outrage that Werner Heisenberg and others had contributed to the German war effort, Laue countered that English, American, and French scientists had done the same for the Allies. He did admit to an ethical distinction, but he believed outsiders had no right to judge: "I am not sure that all those who assign blame would have acted differently if they happened to have been born in Germany." It should be forbidden, he thought, to speak of the past in terms of accusations against individuals, because the occupation forces could never justly assess the individual guilt of millions. He advocated punishment for major Nazi criminals and general amnesty for everyone else.

Meitner had heard much the same from Otto Hahn. On his return from Farm Hall in January 1946, he had accepted the presidency of the Kaiser-Wilhelm-Gesellschaft, newly relocated to Göttingen in the British occupation zone. The Germany he came back to was miserable, cold, and hungry, and his letters to Lise were a litany of hardships: shortages of food, coffee, cocoa, cigars; problems with British and American officials; demeaning travel restrictions; apartments requisitioned by occupation forces; the deaths of Hans Geiger, Otto von Baeyer, and others hastened by poor food and difficult living conditions. Lise sympathized but then sharply reminded him of the suffering and death that Germany had inflicted on others. Hahn's nationalistic self-absorption worried Lise deeply. "How can Germany regain the world's trust if the best Germans have already forgotten what happened?"

Even before the end of the war, Meitner had urged her friends, as representatives of Germany's "best," to openly



n the peaceful Berlin suburb of Dahlem, two gunshots shattered the predawn stillness of May 2, 1915. A woman lay dying, her husband's service revolver in her hand. Any death must raise questions, yet why should this particular suicide be of interest, at a time when so many thousands were offering up their lives to the gods of blood? Consider who this woman and her husband were:

she, Clara Immerwahr Haber, was the first German woman to obtain a doctorate in chemistry at a German university; he, Fritz Haber, was director of the prestigious new Kaiser Wilhelm Institute for Physical Chemistry and Electrochemistry in Dahlem and part of

a small elite I call "the Kaiser's chemists." His work was to play a decisive role, both strategically and tactically, in the war.

Clara Immerwahr Haber's death lay at a crossroads of historical issues: the role of women in science, the connection of chemistry to economic development and to modern warfare, and the development of poison gas as a weapon of mass death. Haber, who developed poison gas, and his wife were both of Jewish origin; it is not known whether her death might have been a protest or what the intimations were for the Holocaust of World War II. In this essay, I want to explore some of these issues within the general context of chemistry in the Great War.

THE GREAT WAR BECAME KNOWN AS

not least because of the work of men like Fritz Haber. Germany began the Great War with more and bettertrained chemists than any of her opponents. In the research-intensive area of synthetic organic chemicals, German industry dominated the world. Many of the leading German chemists, including Haber, were prepared to mobilize their talents for the war effort. In the decade before, they had been working hard to establish a modern institutional and financial nexus between government, industry, and science to promote research in the national interest; this had led to the creation of the Dahlem scientific complex of the Kaiser Wilhelm Society for the Advancement of the Sciences, where Haber worked. Most of the leading companies in the chemical industry were already supporting the complex. With the outbreak of war, these connections took on a new significance, and they could form the basis of an expanded network of interconnections in support of the German war effort.

When the almost universal expectations of a short war proved false with the failure of the German gamble to win with a lightning campaign in France, the war in the West became a war of siege and attrition, in which

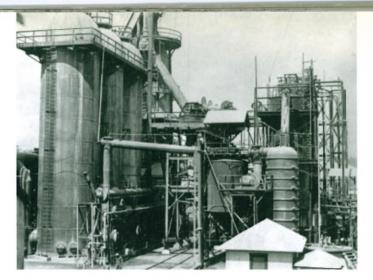
modern technology made possible the mobilization of resources for combat on a hitherto unprecedented scale. Chemistry and the chemical industry, the source of explosives as well as other potential new weapons such as gas, became a crucial factor. In the case of Germany, a highly developed chemical industry helped to make the difference between a war that might have ended with collapse in 1915 due to shortages of ammunition and explosives, and a war that dragged on for another three years, with much greater loss of life, as well as tremendous longterm effects on German society. How could chemistry make the difference between a short and a long war? Haber's work played a central role.

HABER: NITRATES AND GAS

Central to the war effort was the supply of strategic raw materials. Even before the German High Command's Schlieffen Plan failed at the Marne at the end of August 1914, German bureaucrats, chemists, and businessmen who were less optimistic about the success of a 1914-style blitzkrieg had taken steps to organize and secure the supply of these materials through the creation of the War Raw Materials Department (Kriegsrohstoffabteilung or KRA) in the Prussian Ministry of War. After the Marne, it was even more clear that Germany faced potentially crippling shortages in vital materials, including strategic chemicals. This led in September 1914 to the organization of the first War Corporations, private companies under the direction of the government, to coordinate the production, distribution, requisition, and, where necessary, confiscation of vital materials. Much of the story of war chemicals was one of finding a substitute (*ersatz*) product or raw material to use in place of one that could not be imported because of the British blockade.

One of the critical chemicals was nitrogen for producing both explosives and agricultural fertilizers. Germany had previously been dependent upon imports of Chilean nitrates to supplement domestic supplies from coking plants and the Caro-Frank cyanamide process. Without the imports, Germany would have faced disaster within a year, except for the existence of Fritz Haber's highpressure synthetic ammonia technique, developed into a commercially viable process shortly before the war by a team led by Carl Bosch of the Badische Anilin-und Sodafabrik (BASF). After the directors of the BASF met with the KRA and the Prussian war ministry, they agreed to expand drastically the production of synthetic ammonia by the Haber-Bosch process and to build a new plant to convert ammonia to nitrates for producing explosives. While the less efficient cyanamide producers concentrated on producing nitrates for fertilizer, by 1917 the BASF produced 90 percent of Germany's raw materials and intermediates for explosives. Germany could hardly have continued to fight the war on the scale it did after the first year without Haber-Bosch.

Ironically, Fritz Haber had been rebuffed by the Prussian military when he had tried to establish an institutional connection with them in peacetime; nevertheless, imbued with the prevailing values of middle-class nationalism and feeling additional



AMMONIA PLANT.

Page 26:

CLARA IMMERWAHR,
1901, BEFORE HER

MARRIAGE TO FRITZ

HABER.

Page 25:

FRITZ HABER.

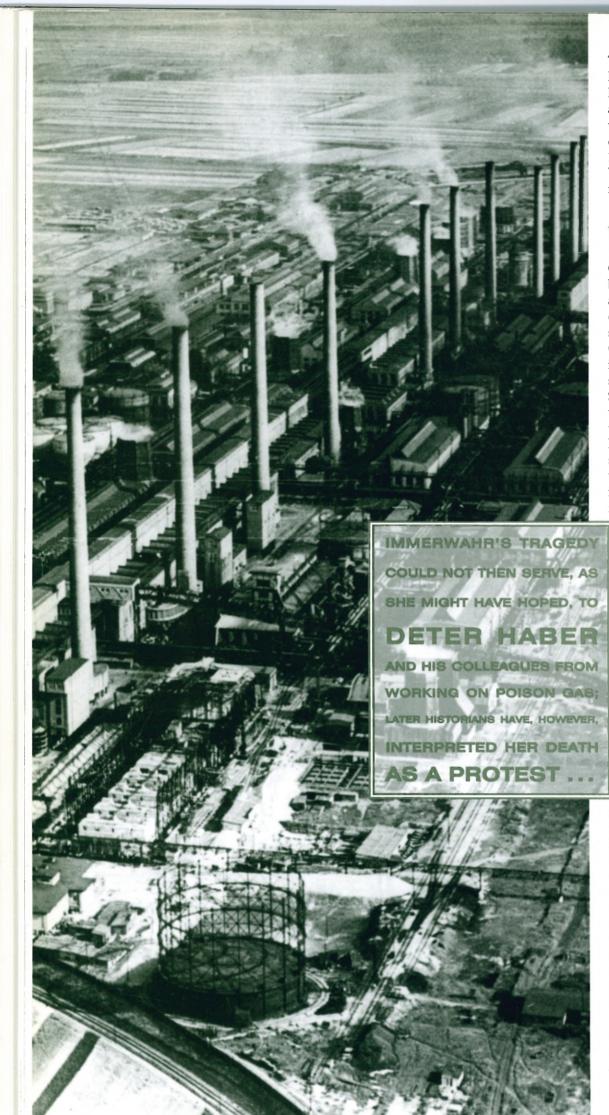
—Archiv zur Geschichte der
Max-Planck-Gesellschaft, Berlin-Dahler.

pressure as a German of Jewish descent to demonstrate his patriotism, Haber was determined to play a significant military role once the war broke out. He understood the logic of ersatz, which led him to work on problems of munitions and nitrates, occasionally representing the BASF in the war ministry. But this question was primarily a matter of time and industrial production, in which Haber had little to contribute. His real opportunity would come at the beginning of 1915, when the new nitrate plants were still in the future and supplies of explosives were so low that some form of substitute weapon was needed that could penetrate enemy trenches but did not require a nitrogen component or new production facilities. These considerations had already led both sides to ineffective experiments with nonlethal irritating gases encased in artillery shells.

Haber's simple, ingenious idea was to use poisonous chlorine gas already being produced in existing electrochemical works—to be released from cylinders under proper wind conditions to drift across no-man's land to the enemy lines, thus requiring no artillery at all. The first experiment, code-named Disinfection, took place at Ypres on the western front, in April 1915. It was a complete surprise and a resounding short-term success, but long delays in getting proper wind conditions had undermined the generals' already limited confidence in the new weapon; aside from the lack of munitions, by committing their reserves elsewhere, they had made impossible the major breakthrough that might have justified the new weapon's violation of international law. Eventually Haber, who because of his Jewish origins could not have obtained a commission in peacetime, headed the section in the war ministry

dealing with all phases of gas warfare; he thereby also transformed the peaceful Dahlem scientific complex into a research center for tactical military science and technology. By 1917 Haber had 1,500 people on his staff, including 150 scientific workers in a wide variety of fields who had been recruited, drafted, or militarily reassigned from other positions. His total budget was fifty times that of the prewar Kaiser Wilhelm Institute for Physical Chemistry and Electrochemistry. Yet Haber was never promoted above the rank of captain. His counterpart in the British army, also a professional chemist, was made a general.

As the production of nitrates expanded, it became possible to overcome the wind problems by again putting chemical agents into artillery shells; by the end of the war more than a quarter of all shells were of this type. After chlorine, moreover, many of the most effective chemical weapons (like phosgene or mustard gas) were directly or indirectly derived from organic intermediates that had been produced for peaceful purposes before the war; the German prewar dominance in organic chemistry helped give the country the initiative in the chemical war until the final collapse. Unfortunately for the Germans, each of their innovations in chemical warfare was sooner or later matched or countered by their opponents. Moreover, they lacked resources for gas defense; by early 1917 shortages of rubber and cotton forced them to begin using less secure leather and substandard paper-textile substitutes in their gas masks. Contrary to Haber's hopes of victory through chemistry, his introduction of gas (like his ammonia synthesis) never produced a decisive breakthrough in the West and simply may have helped to prolong the war and intensify its horrors.



Toward the end of the war, Haber's health declined as he drove himself, haunted by a growing sense of approaching disaster should the western Allies overwhelm German defenses by massive gas attacks in 1919, as they in fact planned to do. Was he perhaps also haunted by the memory of his wife Clara's death?

VOMEN SCIENTISTS

Clara Immerwahr Haber's death can be seen as a tragedy in many senses, although the lack of documentary evidence makes it impossible to be sure in which sense she herself saw it. One tragedy is the waste of a woman's intellectual talents because of prewar social limitations on her ability to work. She had been one of the first German women to study chemistry at the doctoral level in a German university. In March 1899, a decade before the Prussian government officially permitted women to become regular students in its universities, she had become the first German woman to pass the Ver-

bandsexamen, a predoctoral qualifying examination inaugurated in 1898 to strengthen the training of German chemists. In 1900, with a study of the solubility of metal salts, she became the first woman to complete a doctorate at the University of Breslau. After beginning as a research assistant in physical chemistry in Clausthal, Clara Immerwahr's career was cut short by her marriage to Fritz Haber and the subsequent birth of a child. Not only was it virtually unthinkable for Clara, like most women of her social class, to attempt to continue a career combined with marriage and a family, an academic career was effectively

foreclosed by the *Kaiserreich's* refusal to permit women to become university lecturers. Clara had hoped for a married life that would let her experience both scientific achievement and motherhood. But after her early efforts to assist her husband in writing his text on the thermodynamics of technical gas reactions, which he dedicated to her, Fritz's one-sided concentration on his scientific career left her increasingly neglected, intellectually stagnating, and depressed in her confinement to a domestic role.

BASF AMMONIA WORKS AT LEUNA-MERSEBURG AFTER WORLD WAR I. —Courtesy of BASF Aktiengesellschaft

Clara's second tragedy was to witness her husband's transformation from a benefactor of humanity to a military weapons scientist. Whether this was what finally broke her spirit and brought about her suicide in 1915 cannot be proven. Fritz had returned home in triumph to Dahlem the week after he had supervised the successful introduction of this weapon on the western front, winning himself a promotion to captain. He had attended a party in his honor the night before he was due to proceed to the eastern front. Despite the celebrations, all was not well in the Haber household. Fritz and Clara quarreled, and on that same night, while he lay drugged with sleeping pills, she used his gun to take her own life. Fritz proceeded on to the east, as ordered; the suicide was covered up, and any note or letters she may have left were destroyed. Fritz Haber seems never to have discussed the details of her death with any of his associates.

Immerwahr's tragedy could not then serve, as she might have hoped, to deter Haber and his colleagues from working on poison gas; later historians have, however, interpreted her death as a protest against that work and as a plea for "humane science." Sadly, at the time, her death might even have seemed to confirm the views of those opponents of women's higher education who claimed that it was a waste to educate women, because after marriage they would be lost to science. Certainly before the war only a woman prepared not to marry, like Lise Meitner, could expect to continue in scientific research in Germany; fortunately Meitner's collaboration with Otto Hahn on radioactivity research and the availability of a new research institution, the Kaiser Wilhelm Institute for Physical Chemistry and Electrochemistry (neighbor to Haber's institute), made it possible for her to continue despite the lack of opportunity for a university career during the *Kaiserreich*. The irony of the war for Meitner, as well as for many other aspiring women scientists in Germany, was that the same scarcity of resources that forced industry to produce substitute products and the military to use substitute weapons such as Haber's chlorine also led to the substitution of women for men in creative and productive science. For example, while Meitner's partner Otto Hahn was spending most of his time at the front

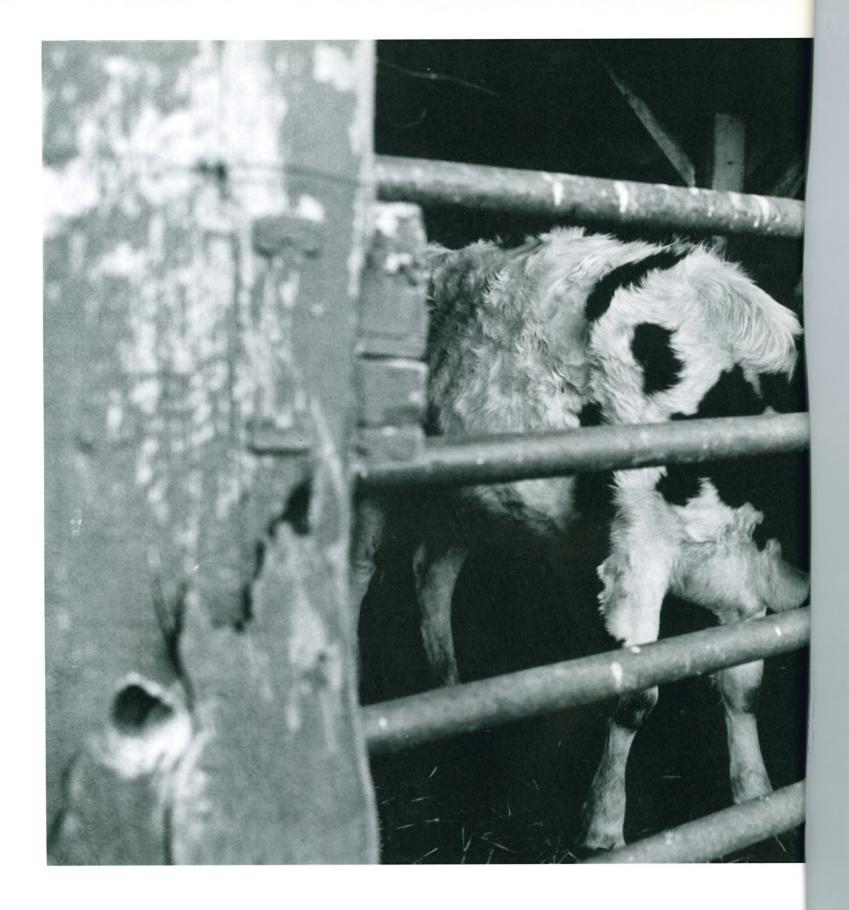
with Haber's chemical warfare troops, from the fall of 1916 (when she completed war service as an X-ray technician) through the end of the war Meitner worked almost independently on radioactivity chemistry and carried out or directed most of the chemical as well as physical work leading to the discovery of the new radioelement protactinium (1917-1918), for which she, of course, gave Hahn equal credit.

Women scientists thereby finally gained grudging respect and recognition from their male colleagues, yet at the same time they made it possible for the men to work more efficiently at mutual destruction. Chemistry in particular became so significant that most of the few remaining younger male university instructors, assistants, and advanced students moved into industry as well as the military during the war, creating especially attractive opportunities for talented women chemists to become academic assistants and do research. For example, Leipzig's three chemical institutes before the war had a total of 161 chemistry students (including one woman) and twenty-five assistants (all men); by the summer of 1918 only nineteen students and ten assistants were left at the university, of whom six and three respectively were women. By 1918, twenty years after Clara Immerwahr first passed the Verbandsexamen, women made up more than 35 percent of the total number of successful candidates versus a prewar maximum of 3 percent. By this time the number of women completing doctorates had quadrupled over the prewar figures, reaching nearly 18 percent of the total, and they increasingly preferred the then dominant fields of organic and bioorganic chemistry, from which they had been excluded. After the war their share would fall again, but never so low as before the war; the Weimar Republic would finally crack open the doors for women to pursue university teaching careers.

These gains for women came too late for Clara Immerwahr Haber. What meaning, then, should we give her death? If, despite the skeptics, we think of her suicide as a warning to her husband, it takes on poignancy because of the longterm, unintended consequences of Haber's chemical warfare work. After the war he sought to maintain German wartime expertise by secretly continuing to produce

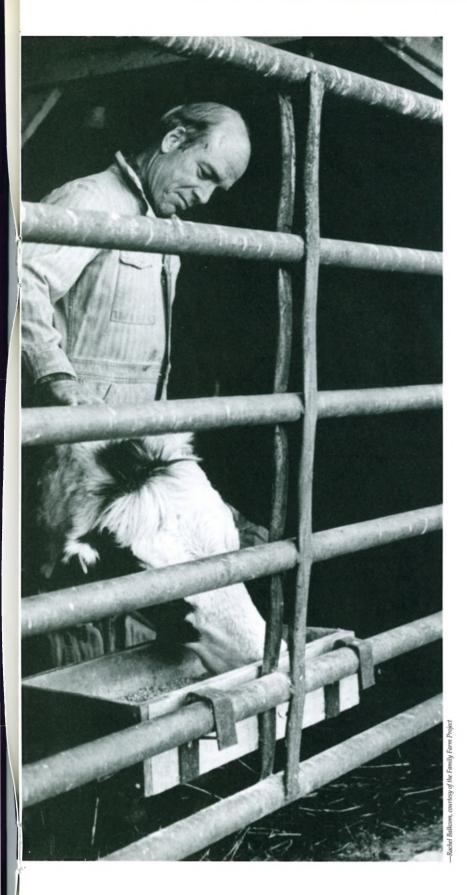
chemical weapons in Spain and Russia, while in Germany developing new chemical pesticides. One of these was Zyklon B, a cyanide compound later used to deadly effect in Auschwitz, where some of Haber's own relatives were to die. The mass murder of the Holocaust derived one of its agents from Fritz Haber's work; moreover Adolf Hitler, who was ultimately responsible for initiating that mass murder, had in October-November 1918 suffered temporary blindness as a mustard gas casualty. Haber had undoubtedly believed that poison gas was more humane than explosives and hoped that it might save lives by shortening the war. Hitler took another view on using gas to save lives. Joining those who would blame Germany's defeat on Marxists and Jews rather than on her enemies' superior resources, Hitler in his twisted logic proclaimed later that putting thousands of "Hebrew corrupters of the people-. . . under poison gas, as happened to hundreds of thousands of our very best German workers in the field, . . . might have saved the lives of a million real Germans." Hitler's rhetoric connecting Jews and poison and the means ultimately used in the Holocaust—suggest to one psychohistorian "a massive revenge" that "points to a Jew behind his gas poisoning. None was behind it in Flanders." Yet indirectly Fritz Haber was behind it, as became publicly known after the war when he was almost simultaneously awarded the Nobel Prize for ammonia synthesis and accused of war crimes for poison gas. One cannot of course blame Fritz Haber alone for poison gas, nor Hitler alone for Nazi atrocities, yet they remain linked in a cruel and tragic irony of history. \Box

Jeffrey A. Johnson is an associate professor of history at Villanova University in Pennsylvania. He is the author of The Kaiser's Chemists: Science and Modernization in Imperial Germany (University of North Carolina Press, 1990). With support from the NEH Humanities Studies of Science and Technology program, he is at work on a history of science titled Chemists, Chemistry, and German Society, 1865-1939. A section on women chemists is to appear next year in the German journal NTM: Internationale Zeitschrift fuer Geschichte und Ethik der Naturwissenschaften, Technik und Medizin.



FROM THE GROUN

30 NOVEMBER/DECEMBER 1996



FEEDING TIME AT THE HALL FAMILY FARM.

ART CASSELL
RETURNS FROM
THE FIELD
WITH HIS
GRANDSON
CARTER.



D UP...

HAT BETTER PLACE to do fieldwork than in a field? Students at Kenyon College didn't just study family farming, they lived it. They left the comfortable remove of the classroom and ventured out into the rural areas of Knox County, Ohio, to drive tractors, feed cattle, explore commodities markets, applaud the annual Antique

HUMANITIES 31

GENERATIONS WORKING TOGETHER ON THE SHINABERRY FAMILY FARM.



Tractor Parade, hear stories that farm families had passed on for generations, and even witness a 4-H rabbit judging.

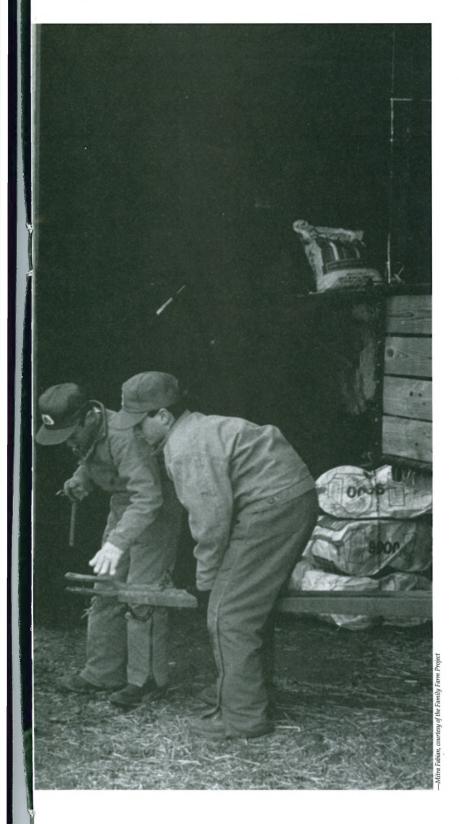
The project was the idea of Howard L. Sacks, the recipient of an NEH Distinguished Teaching Professorship.

Hailing from urban environs, most of the students knew nothing about the rural areas surrounding Kenyon and even less about farming. The goal was to connect their classroom experiences to participation in the community. Several students were motivated by the opportunity to learn more about the place in which they had lived for four years.

In addition to Kenyon undergraduates, the course, "Fieldwork: The Family Farm," attracted a professor of art who,

joining the class while on sabbatical, had been photographing Knox County farms for several years; an associate professor of history with experience in local history research; a professional photographer documenting agricultural fairs and festivals; a schoolteacher and self-proclaimed "farmer's daughter" wishing to gain new insights into family farming; and a long-time Knox County resident interested in the course's public involvement.

The students conducted extensive fieldwork. Then, with research well under way and archives brimming over with interviews and photographs, they decided to take things one step further. The students developed *Rural Delivery*, a





Organic
Farmers and
Brothers
Glenn and
Rex Spray in
Front of
Their stored
Feed Corn.

thirteen-part radio series on family farming in Knox County. Despite no experience with radio or audio production, the students organized each five-minute program around visits with an individual family. Each student took responsibility for a major production task: fund raising; radio and cassette distribution; booklet editing, design, and production; and cassette production. Designed for both local and national distribution, the series was reproduced on cassette and boxed with a thirty-two-page booklet of essays, biographies, and photographs documenting family farming.

Rural Delivery debuted on Mount Vernon's WMVO followed by a live discussion program. Several other Ohio

stations have already arranged broadcasts and it is now being distributed nationally.

And so, the success of the "Fieldwork: The Family Farm" course is revealed in many ways—the valuable archives full of documentation and photographs, the community's enthusiasm for the radio series, a Web site devoted to family farming—but perhaps the best measure of success is found in the students who were transformed. They remarked that, before this course, they could not have imagined gladly getting up at 7 a.m. on a Saturday morning to clean out barn stalls just for the chance to talk with a farm family, or anxiously awaiting a middle-of-the-night phone call inviting them to participate in the birth of a calf. \square



Technological advances, higher wages, fitness crazes, and the myth of childhood taking place at the turn of the century helped

> spur this cultural shift. From bicycles to lighted roller skating rinks, from jacks to tag, from dress-up to football, "Let's Play" at the Rogers Historical Museum in Arkansas examines how adults and children played a hundred years ago.

hundred years ago, the development of playtime

The show approaches pastimes from several perspectives. How children played once they were encouraged to indulge in imagination and toys were mass produced; how adults embraced card and board games once

the development of lithography made them more available; how outdoor sports like croquet and swimming took hold as part of a return to nature by the new urban middle class; and how physical fitness was emphasized by groups like the Young Men's Christian Association and in organized sports such as baseball and athletics for women in clubs and schools.

The bicycle mania that began in the 1880s is especially significant. Within twenty years there were more than ten million bicycles in use in the country. This phenomenon, along with the acceptance of public swimming, changed forever how women dressed—allowing them to shorten their skirts, wear bloomers, and expose their arms.

Photographs, documents, oral histories, and artifacts describe the customs and equipment that made playtime what it was. The exhibition is on display at the museum in Rogers until February 1, 1997.

By Amy Lifson

GEORGE THOMPSON ON HIS TRICYCLE, c. 1912, Lenoir CITY, TENNESSEE.

Around the Nation

Arkansas—An exhibition called "Let's Play" runs through January 1997 at the Rogers Historical Museum. See page 35.

California—A public conference to explore the Mexican history of Los Angeles takes place on November 9. "Redescubriendo Nuestra Historia: Mexican Los Angeles, 1781-1996" will be a daylong program at the El Pueblo de Los Angeles Historical Monument and will include panel discussions, performances, and presentations.

DELAWARE—Charlayne Hunter-Gault will be the Delaware Humanities
Forum speaker on November 20
at the University of Delaware in
Newark. Hunter-Gault is a national correspondent on PBS's The NewsHour with Jim Lehrer and is the recipient of both Emmy and Peabody awards for her work in broadcast journalism.

On November 13, a panel discussion held at the Delaware Center for the Contemporary Arts in Wilmington will explore the role of political art and its ability or inability to affect change. "African Animals in Folklore and Culture," November 23, is a day of public programming at the Delaware Museum of Natural History in Greenville. Activities include storytelling, gallery tours, films about African culture, and making African animal ceremonial masks.

The second of a five-part book discussion series called "The Journey Inward" takes place on November 25 at the Concord Pike Public Library.

The series focuses on women's autobiographies—this month's discussion will be on *Letters of a Woman Homesteader* and led by Thomas Pauley from the University of Delaware.

GEORGIA—"The Southside Community of Valdosta," an exhibition that chronicles the history of blackowned businesses between 1930 and 1960, opens at the Lowndes County Historical Museum in

Chicago Humanities Festival Looks at Birth and Death

BY AMY LIFSON

Charlayne Hunter-Gault is the Delaware Humanities Forum Lecturer.



or the past six years, more than 15,000 people have gathered in Chicago to explore a contemporary issue through the lens of the humanities. This year, writers Edward Albee and William Styron, historian Stephen Ambrose, director Richard Maltby, and other leading thinkers and performers appear at the annual Chicago Humanities Festival, November 8, 9, and 10. Sixty-eight programs scheduled across the city will address this year's topic, birth and death.

The topic arises from the knowledge that the current generation has more power to control the timing of birth and death than any other in history. With this power comes the need to examine the ethical, social, and cultural implications of its use. The festival sets out to do this through history, literature, and performance.

On Sunday at Northwestern University School of Law, Stephen Ambrose, author of the best-selling biography *Undaunted Courage*, talks about the suicide of Meriwether Lewis and the effects that event had on his reputation and on those he left behind. "Lewis would have been more of a hero if he had not done it," says Ambrose. "It was almost an embarrassment for the next generation." According to Ambrose, stories began to circulate about Lewis's death being a murder when the

36 NOVEMBER/DECEMBER 1996

A roundup of activities of state humanities councils in November and December.

Compiled by Amy Lifson

November. The exhibition uses oral histories and photographs from public and private archives to tell the stories of the entrepreneurs who flourished in the Southside during this time.

Residents of northeast Georgia celebrate the publication of *The New Georgia Guide* with a program of speakers, a driving tour of the area, and a barbecue lunch on November 9 in Clarksville.

The traveling exhibition, "Beyond Category: The Musical Genius of Duke Ellington," opens December 12 at the Brunswick-Glynn Regional Library. An accompanying lecture by Mark Tucker will examine Duke Ellington's place in jazz history.

IDAHO—The statewide project, "American Diversity, American Identities," continues in ten libraries this winter. The book

discussion series examines texts including Woman Hollering Creek, Invisible Man, Their Eyes Were Watching God, Love Medicine, and others.

ILLINOIS—The seventh annual Chicago Humanities Festival takes place November 8-10, featuring authors, scholars, and performing artists examining the theme of birth and death. See story below.



Historian and biographer of Meriwether Lewis, Stephen Ambrose.

public became incredulous that a great man at the age of thirty-five would take his own life. "It was unacceptable."

But Lewis's friends and contemporaries never doubted it. Thomas Jefferson knew he was prone to melancholy, and even his closest friend William Clark understood that Lewis's drug addiction, alcoholism, bankruptcy, and feelings of failure about their expedition for a northwest passage had finally become too much. Ambrose says that like most suicides, Lewis's left a terrible mess for his friends and family. Besides natural feelings of guilt and helplessness, they were also left with an unmanageable manuscript due to Lewis's months of writer's block.

Other programs throughout the city all weekend look at birth and death from several perspectives. On Saturday in the Field Museum of Natural History, visitors can find out "What Assyrian Queens Wore on Their Way to Heaven." Archaeologist McGuire Gibson presents a slide lecture about how and why Mesopotamian queens decked themselves out on their voyage to the next world.

Across town on the same day, Roosevelt University's faculty and students present a performance of Edward Albee's 1959 play, *The Sandbox*, which tells the story of a live-in mother treated with contempt by her grown daughter. Discussion groups about the play continue at the university afterward.

Whereas other festivals such as Spoleto in Charleston, South Carolina, or the Edinburgh Festival in Scotland specialize in the arts, the Chicago festival is rooted in the humanities. Former chairman of the Illinois Humanities Council and CEO of the John Nuveen company Richard J. Franke set out in 1989 to plan a celebration of ideas that would stimulate community interest in history, literature, art, music, and philosophy.

His effort drew the cooperation of commercial and cultural institutions throughout Chicago and today is produced by more than twenty organizations including the Chicago Children's Museum, the Chicago Council of Foreign Relations, and the Art Institute of Chicago. Funding from dozens of private corporations makes sure that this million-dollar festival is still affordable to everyone—tickets to most programs are only \$3 each. □

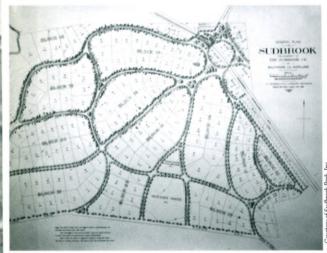
INDIANA—A creative writing festival in Indianapolis brings together Kurt Vonnegut, John Updike, and Dan Wakefield for a public conversation on the themes of spirit and place.

Other activities at the festival on November 17 and 18 include creative writing workshops for professional writers and college and high school students.

Kansas—Scholars and theologians from around the world representing several different faiths will gather November 3 and 4 at Bethel College in North Newton for a symposium on "Gordon Kaufman's Theology as Imaginative Construction." Kaufman, author of *In Face of Mystery: A Constructive* Theology (1993), is considered a "public" theologian because of the way he seeks to link theology to the social issues of our time. One of the goals of the symposium is to assess how a theology that has been shaped by a particular heritage can relate with the larger culture of the arts, sciences, and people of other religious faiths.

Maryland—Frederick Law Olmsted designed the community of Sudbrook Park at the same time his landscape architecture changed the look of public parks in America forever. An exhibition about Olmsted's legacy to the Maryland community runs through November 17 at the Maryland Historical Society—it includes a symposium on November 10 and a book documenting the town's history.

F. L. Olmsted's original design for the community of Sudbrook, Maryland, in 1889.



Free lectures will be offered by the Annapolis Symphony Orchestra before each of its five Friday-night subscription concerts this season. Rachel Franklin, a faculty member at the University of Maryland Baltimore County, will lead the discussions on twentiethcentury composers Hindemith, Bartók, Prokofief, and others.

The final session of a discussion and video series on the lives and works of American poets will take place at Bowie Library on November 7.

"Land and Water, People and Time," on display at the Smith Island Visitors Center, presents an exhibition on the language used on Smith Island. "What Did You Say?" begins in November and offers audiotapes of typical Smith Island conversations and photographs of where storytelling and other social interaction take place.

A conference on November 15 and 16 looks at the historical struggle of Baltimoreans with race, ethnic, religious, cultural, and economic tensions in their city. The conference begins at the University of Baltimore and concludes the next day at Coppin State College.

Humans have enjoyed and used the timber, wildlife, and water resources of the Battle Creek Cypress Swamp for more than twelve thousand years. A new exhibition opening in December at the Battle Creek Cypress Swamp Nature Center in Prince Frederick explores this relationship between people and the swamp.

Massachusetts—Programs in November look at the life and work of Worchester native S. N. Behrman (1893-1973). See opposite page.

"Understanding the Native American Experience in Every Chapter of American History" is a Five Colleges, Inc., seven-part seminar in Amherst for history teachers and museum and historical society staff members. November 7, Thomas Doughton, member of the Quinsigamond band of the Nipmuc Nation, will lecture on "Indians of Massachusetts and the Civil War." December 12, Amy Gazin-Schwartz, University of Massachusetts Archaeological Services, will run a workshop on modern, nondestructive archaeological techniques appropriate to nineteenth-century sites.

The exhibition "A State of Hope: Irish Immigration during the Potato Famine" closes December 29 at the Museum of Our National Heritage in Lexington.

NEBRASKA—A symposium on "Gender Issues: A Balancing Act" takes place November 7 at Hastings College.

NEVADA—Two events continue the free public readings and discussion series by prominent environmental writers at the University of Nevada, Reno. John Janovy, Jr., author of Keith County Journal and Vermilion Sea: A Naturalist's Journey in Baja California, will speak on November 11 and 12. Louise B. Young, author of Earth's Aura, The Blue Planet, and The Unfinished Universe, will speak on December 3 and 4.

New York—Visitors to the Brooklyn Historical Society's exhibition "New Neighbors: Sunset Park's Chinese Community" can learn to speak Chinese by pushing a button to hear simple phrases in four of the dialects heard along Eighth Avenue; hear stories of recent immigrants from China; and use "talk-back boards" to discover the ways in which their own family histories are mirrored by those of today's new Brooklynites. The exhibition, which runs through January 1997, focuses on the emerging Chinese-American community of Bat Dai Do (Eighth Avenue) by exploring immigration, family life, neighborhood economies, and community development.

Two public programs this winter at the historical society are lunch-time lectures: November 7 on how *Bat Dai Do* came to be, given by Greg Ruf, professor at the State University of New York at Stony Brook; and December 6 on "New York before Chinatown," given by John Kuo Wei Tchen, professor at New York University's department of Asian-American studies.

Оню—Miami University presents The Imposter by Mexican playwright Rodolfo Usigli on November 22 as part of its yearlong celebration of Latin American culture. Usigli's papers were recently obtained by the University world writer with Worcester roots is remembered by his hometown this fall in a series of lectures, exhibitions, and performances celebrating the works of Samuel Nathaniel Behrman. Behrman, who became a respected writer for

screen, stage, and print, always kept his ties to this

city in western Massachusetts-specifically through

his autobiography THE WORCESTER ACCOUNT

Worcester's Native Son

BY AMY LIFSON

work was prevalent on stage (FANNY, SERENA BLANDISH), in film (ANNA KARENINA, A TALE OF TWO CITIES), and in magazine print as a regular writer for the NEW YORKER.

Edmund Hayes, professor of English at Worcester Polytechnic Institute will talk about

to this

Behrman's writings and read scenes from THE COLD

wind AND THE WARM on November 6. Hayes will give an overview of Behrman's career, following

Writer S. N. Behrman in 1945. his continuing ties to Worcester.

(republished this fall by Tatnuck Bookseller Press) and
his play THE
COLD WIND AND

THE WARM.

Behrman was born in 1893 to Joseph and Zelda Behrman. His accounts of life at 31 Providence Street depict a bustling Jewish immigrant community complete with matchmakers. On display at the public library through November 15 is an exhibition showing the people and places of Behrman's childhood. The period photographs are accompanied by Behrman's own descriptions from THE WORCESTER ACCOUNT, which was first printed in installments in the NEW YORKER.

Behrman left Clark University in 1914 to spend his

last two years of college at Harvard. He received his B.A. from Harvard and his M.A. from Columbia. In New York City, Behrman found his first success as a writer when in 1927 the Theater Guild produced his play, THE SECOND MAN. Until his death in 1973, his

Con Panage

Another writer from Behrman's neighborhood, but born twenty years later, is Milton Meltzer. Meltzer, author of A PICTOR-IAL HISTORY OF **BLACK AMERICANS** (1956), written with Langston Hughes, will speak on November 3 about his own literary career coming from Worcester and compare his and Behrman's hometown experiences.

Previously in this series, sponsored by the Worcester Historical Museum, was an exhibition at the town's public library of Behrman's correspondence. In 1958, Behrman wrote about the same library: "I have worked in

many libraries since, including the British Museum, but I have never found one as cozy and responsive as the Worcester Public Library on Elm Street. For me it is the matrix of all libraries, and I never go into another one without remembering it." \Box

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and will be officially dedicated at a campus symposium December 6 and 7.

PENNSYLVANIA—Several Commonwealth Speaker Presentations will occur this winter throughout the state: November 10 at the YWCA of Altoona, Linda Patterson Miller on "American Diarists: Day-by-Day Personal Accounts through the Centuries"; November 12 at Alvernia College in Reading, Katherine Dennick-Brecht on "Pennsylvania Families: Yesterday, Today, and Tomorrow"; November 18 at Fox Chase Library in Philadelphia, Vicki Abt on "A Sociologist Looks at Popular Culture"; November 19 at the Warren County Historical Society, Perry Blatz on "From Defeat to Victory: The Struggles of Pennsylvania Labor from the Homestead Strike of 1892 to the Anthracite Strike of 1902"; November 24 at the Pennsbury Society in Morrisville, Alison Duncan Hirsch on "Women's Place in Early American History"; and December 5 at the Reading-Berks Human Relations Council in Reading, Stephen Katz on the "100th Anniversary of the 1896 Plessy vs. Ferguson Case."

Other activities include a symposium on November 2 at Conrad Weiser High School in Robesonia commemorating the 300th anniversary of Weiser's birth, a workshop on November 10 at the Germantown Jewish Center in Philadelphia on Jewish and black relations, and a tour and lecture on December 12 at the Wyck House in Philadelphia about the abolitionist societies.

SOUTH DAKOTA—Several programs preview the exhibition "Anne Frank: A Child of the World," to be at the Sioux Falls Convention Center January 26 through February 16, 1997.

November 13 through 15, the Minne-Ia-Kota Girl Scout Council will provide scholar-led discussions in Yankton, Sioux Falls, and Brookings as a preview to the exhibition. Also in November, three showings at secondary schools of "Living Voices," a film based on interviews from the



book, *Friends of Anne Frank*, and several evening community discussions about the Holocaust.

On November 17 in Eureka, scholar Sally Roesch Wagner discusses the Germans from Russia at the Zion Lutheran Church.

Texas—The Institute for the Humanities at Salado concludes a series of seminars and workshops on ethical issues entitled "Integrity: Medicine and the Humanities."

On the weekends of November 2-3 and 16-17, Nobel laureates Michael Brown and Paul Berg engage the public in discussion on topics in medical ethics. Questions to be examined: How can the humanities have an impact on medicine and its technology? Can medical institutions be virtuous? How can the study of ethics be acknowledged by social planners, regulators, and insurers of today? What does a physician do when duty to the patient and the good of the larger community come into conflict? The evening lecture programs will include responses from humanities scholars Herbert Reynolds and Mac Nigliazzo.

VERMONT—More book discussion series continue this winter in libraries throughout Vermont. "Creating a Character" examines works about how writers go about creating memorable characters—Monday evenings at the Springfield Town Library. "Yankees and Strangers" looks at popular images of the pastoral New England town—Wednesday evenings at the South Burlington Community Library. "Sport and the American Experience," a tri-state project with New Hampshire and Maine, continues

with a discussion of Mark Sullivan's *The Fall Line*—
November 6 at the South Hero Community Library. Books for most of these discussions are available on loan in advance from the libraries.

Washington—"Reaching Home: Pacific Salmon, Pacific People" runs through January 15, 1997, at the Whale Museum in Friday Harbor. A lecture by sculptor and poet Tom Jay about the mythology of

salmon accompanies the exhibition on November 2 at the museum.

The Northwest Documentary Film Festival at the Rose Theater in Port Townsend features a presentation from the maker of *Hoop Dreams*, Frederick Marx. The festival runs November 1-3 and will show works by several documentary filmmakers.

Speakers in the state include Sara Edlin-Marlowe on Sacagawea on November 3 at the Yakima Valley Community College; Edward Vajda on the political history of women in Russia on November 4 in Bainbridge; Elaine Partnow portrays poet Emily Dickenson on November 7 at the Redmond Library; Keo Capestany presents "Wrestling with English" on November 7 at the Vancouver Community Library and November 13 in Bremerton; Thomas Kearns on "Dr. Jenner's Incredible Smallpox Vaccine Experiment" on November 9 in Metaline Falls; Theresa Trebon discusses the history of hand weaving and the industrial revolution on November 10 in Port Angeles, November 14 at Fort Steilacoom in Lakewood, and November 25 in Bellingham; Walt Crowley on the fragmentation of contemporary media on November 12 at the Coupeville Library; Brian Culhane on "Gaiety, Tragedy, and Community in Robert Frost" on November 13 at the Mercer Island Library; Raymond Egan on the history of Fort Steilacoom on November 13 at the Medical Lake City Hall and December 6 in Yakima; Antoinette Botsford on the literary portraits of the raven on November 15 at the Northwest Puppet Center in Seattle; Brian Culhane on "The Struggle of Reading Walden" on December 4 in Spokane. □

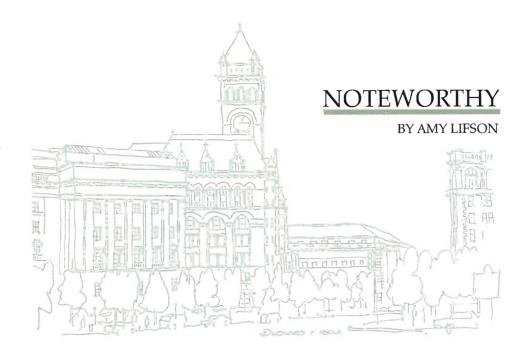
AMERICA'S BIRTHPLACE

On the banks of the James River in Virginia, archaeological finds have confirmed the site of America's first successful English settlement. Only two years into a ten-year project, director William Kelso and his crew of archaeologists and volunteers have dispelled a century-old belief that remains of the 1607 Jamestown fort were irretrievably washed into the tidal river.

The site of the dig was chosen "some by accident and some by archaeology," says Kelso. A surviving brick church nearby, as well as documents and artifacts, helped narrow down where to begin looking for the fort. Kelso suspected that the church, in the European tradition, had been rebuilt again and again on the same site.

With just soil stains to indicate palisades, post holes, and buildings, Kelso's crew finally got the evidence they needed to declare it the fort at Jamestown Island. Finding two wall lines in position relative to a cannon placement, they were able to calculate the angle and length of the rest of the fort. These dimensions matched those recorded by one of the colonists, William Strachey, in 1610.

In what Kelso describes as "an emotional experience," the crew uncovered a burial site inside the fort the day before the public release of Jamestown's evidence. The body, which is probably a white male in his midtwenties, has evidence of gunshot



wounds in the leg and maybe the shoulder. The story of his death is still speculation, but there is record of a Captain Kendall, about that age, having been executed for mutiny. His descendents are assisting with DNA testing of the body to determine if the remains are Kendall's.

"What the skeleton offers us is an instant snapshot of time," says Kelso. "It reminds you immediately how dangerous life was for these people—not just worrying about disease, starvation, and unfriendly Indians, but also political enemies within their own colony."

RECOGNITION FOR EXCELLENCE

Winners of the annual Helen and Martin Schwartz Prize for Excellence in the Humanities were presented at the national conference of the Federation of State Humanities Councils. The award is named for the former chair of the Indiana Humanities Council, who was also one of the founding members of the Federation.

There have been two Schwartz awards given each year since 1984—one for a community-initiated regrant project and one for a council-conducted project. "Nez Perce Music Archive II" is this year's top regrant. Directed by Loran Olsen and funded by the Idaho Humanities Council, the project uses state-of-the-art technology to preserve the traditional music of the Nez Perce by transferring sounds and speeches from wax cylinders, discs, and reel to reel and cassette tapes to compact discs.

"Nosotros: The Hispanic People of Oregon" won in the council-conducted category. The Oregon Council for the Humanities spent three years collecting oral histories and other research to complete a comprehensive book on the Hispanic people of the state.

The 1996 American Association for State and Local History Award went to the exhibition "Southern City, National Ambition: The Growth of Washington, D.C., 1800-1860" from the Octagon Museum. □

APVA Jamestown Rediscovery Excavation site, summer 1994.



Calendar

NOVEMBER • DECEMBER

BY STEVEN SNODGRASS



More than 250 works, including *The All-Powerful Hand*, from the colonial viceroyalties of New Spain (1535-1821) and Peru (1542-1824) are featured in "Converging Cultures: Art & Identity in Spanish America." The Brooklyn Museum exhibition comes to the Phoenix Art Museum December 14.

Mrs. Mitchell LaFond weaves a fishing net at Carron Net Company in February 1944. "Harvesting the Inland Seas," at the Wisconsin Maritime Museum in Manitowoc, focuses on Great Lakes commercial fishing since the 1830s.





—Princeton Art Museum Portrait Head of a Woman

At the Toledo Museum of Art, large-scale classical bronze sculptures are the focus of "The Fire of Hephaistos," a Harvard University Art Museums exhibition.

ENDOWMENT EXHIBITIONS





Haggadah, Altona, 1737, by Joseph Leipnik.

"From Court Jews to the Rothschilds: Art, Patronage, and Power, 1600-1800" tells the story of Jewish officials in the Germanic kingdoms, dukedoms, and principalities of central Europe. The exhibition is at New York City's Jewish Museum.

This daimyo armor is featured in "Japan's Golden Age: Momoyama," which assembles more than 150 of Japan's most treasured artworks, many of them never before seen in the West. The Dallas Museum of Art exhibition continues through December 1.

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Lise Meitner, about 1930.

Continued from page 24

acknowledge their nation's crimes, admit the contributions of their own passivity, and disavow the Germany of the Third Reich. Max Planck had done so already in 1943, when he had told her in Stockholm, "We have done the most horrible things; terrible things must happen to us." Planck recognized individual responsibility and collective guilt, but among Meitner's friends, almost no one else did.

For herself she was seeking something deeper: horror, rage, anguish—an emotional reaction to match her own. Samuel Goudsmit, who had been unable to save his par-

"The Hahns are coming

for the Nobel

I must attend the Nobel

never done

time, when the Hahns

I fear it might

ents in Holland, remarked at the time, "I was gripped by that shattering emotion all of us have felt who have lost family and relatives and friends at the hands of the murderous Nazis—a terrible feeling of guilt." Was it only Jews and other victims of the Nazis who were stricken with grief and guilt, while Germans professed innocence or ignorance orremarkably—their own victimization? Did Germans feel nothing, did they have nothing whatever to say? Was it, in the end as in the beginning, always to be a "Jewish problem" and never a "German problem"? If so, Lise knew that her old friendships were mostly memory and nothing remained of the Germany she had once cherished.

Lise's experiences in America had clarified her perspec-

tive. The person who most closely shared her views was James Franck; he, too, had no hesitation about sending food packages to Germany, but he found the process of renewing old ties painful and subject to misunderstanding. Others judged Germany far more harshly. Einstein turned his back on Germany forever, vehemently dismissing reports of postwar difficulties as a shopworn "campaign of tears" [*Tränencampagne*]. The Germans would slaughter again, he insisted: "I see among Germans not a trace of guilt or remorse."

In the United States, Lise found that most Americans simply lumped all Germans together. When she began

early in December

ceremonies . . . Like it or not,

banquet, which I've

before. But if I don't go this

are being honored,

be misunderstood."

-Lise Meitner in a letter to Margrethe Bohr

her talks with a plea for aid to starving Germany, the response was invariably "Have you forgotten what the Germans did?" And when she tried to refute the widespread press reports that Hahn had been a Nazi, she realized that few seemed to think it made much difference.

In London, she was asked by the British commissioner for science in Germany to convince Laue that changing the name of the Kaiser-Wilhelm-Gesellschaft was essential for a symbolic break with the militarism of the past. Planck understood; Laue resisted. And in Göttingen, Hahn objected bitterly: "The fact that the name is so repellent to the U.S. does not, in my opinion, speak for a great deal of generosity If now everyone who had held a position in Germany since '33, and everything that has happened be damned, then one must wonder why the outside powers did not break off relations after '33." Hahn's argument was that responsibility for nazism was so widespread that no single group, certainly not Germans, could be held accountable. In this version of history, atrocious behavior was not confined to Germans or Nazis but was a general attribute of all nations and people. "I would almost doubt that the behavior of the occupying forces is so much nobler than that of the Germans in the occupying countries "

Lise was aghast. "That a thoughtful German could seriously say, 'I would almost doubt that the behavior of the occupying powers today is so much nobler than that of the Germans in some of the occupied countries.' In Poland 2 million people were killed, not in war, but methodically killed. [The current estimate is more than three million.] When [pastor Martin] Niemöller gave a speech declaring that he shares the guilt, he said that 6 million Jews were murdered, and that in Dachau 283,765 people were put to death between 1933 and 1945. In England a prominent physicist who values German science and culture very highly told me that German professors were sent to Poland with instructions to destroy all books of Polish history, and that this assignment was

carried out with German expertise and thoroughness. The 'serf-people' [Helotenvolk] of Poland were not to retain even the memory of their independent existence. I write all this in honest love for Germany. If the best Germans do not understand now what has happened and what must never happen again, who should instruct young people that the path that was tried was tragic for Germany and the world? In the reports of the Nürnberg trials it was said that every time visual evidence of the horrors of the concentration camps was shown, Schacht [former Reichsbank president Hjalmar Schacht] looked away. As if by doing that it didn't exist. The enormous problems that the Nazis have created do not permit one to look away...."

"I don't know if our nation is worse than any other," Hahn later wrote. ". . . Don't be angry. But believe me, we also want to know what happened and how all of this could have taken place Do you really believe that the majority of Germans knew of the horrors of the concentration camps or the gas chambers?"

Hahn's wife Edith entered a plea for truce: "Again you are fighting with each other. That is such a pity, as basically we all agree, don't we? But we simply can't continue, and you must understand that one nervous breakdown in 1938 was enough for me, and I simply can't go on. We don't care what Fichte said, there are people like that here and there, and there are even quite decent Nazis, only I think very stupid, just as there are indecent anti-Nazis. And horrible to say, there will always be wars, and we can only hope that we won't live to see the next one."

By then it was November 1946, and the Hahns would soon arrive in Stockholm for the Nobel ceremonies. Edith had written that they were looking forward to "perhaps the only days we will spend in a free country for the rest of our lives . . . and to the shops, and good food, and no political arguments, Lise, we are so tired of them, and tired and worn out ourselves. It was 12 years, of which you experienced only the 5 easiest ones."

Lise stopped arguing. It had been futile anyway, and she did not want to spoil the Nobel occasion for Otto and Edith. November brought one more disappointment: the 1946 Nobel Prize in physics was awarded to Percy Bridgman. On the day of the announcement, Lise sent Otto a card. "The chance that I might become your Nobel colleague is finally settled. If you are interested, I could tell you something about it." Otto did not respond.

"The Hahns are coming early in December for the Nobel ceremonies," Lise wrote to Margrethe Bohr. "Of course I am looking forward to it, but it will not be easy." Lise had a new evening dress made to replace the one black velvet dress she had worn for eight years. "Like it or not, I must attend the Nobel banquet, which I've never done before. But if I don't go this time, when the Hahns are being honored, I fear it might be misunderstood." To Otto Robert she confided, "Mentally it will be a bit of an *Eiertanz* [like walking on eggs]."

It began the moment Otto and Edith stepped from the train on 4 December. On hand were Lise, a Swedish official, friends, and journalists. *Dagens Nyheter* carried a front-page photo of Hahn's arrival, noting the presence of Lise Meitner, Hahn's "former pupil." *Svenska Dagbladet* reported that Hahn spoke at length about Strassmann, about the bombing of his institute in Dahlem and the loss

of his correspondence with Rutherford, about Russia and his hopes for the peaceful use of atomic energy. Hahn had not mentioned Lise's name.

At dinner that evening with the Hahns and several friends, Lise's Eiertanz faltered briefly. "Agitated discussions with Lise," Otto noted in his diary. "But these subside. Lise does not mean it badly. But the others agree, in Sweden we should forget politics for once."

The problem was that Hahn himself had no intention of forgetting politics. He had come to Sweden to use every iota of his Nobel publicity as a platform to plead for Germany. Lise's preparations were more personal. She hovered over Otto and Edith, sent chocolates to their hotel room, took them sightseeing around Stockholm and shopping on the elegant Kungsgatan. They needed everything: warm clothes and shoes, formal evening wear for the Nobel ceremonies, housewares, gifts, and, above all, food. They looked forward to every meal and prepared dozens of food parcels to send back to Germany. Nearly every day Lise

arranged small dinners for them at her home or larger gatherings with Swedish friends and others who had come to town.

Meanwhile in press conferences, interviews, and radio broadcasts, Otto single-mindedly campaigned for Germany. Unhappy Germany! Oppressed by the Nazis first and now the Allies, struggling to make a future for its unfortunate youth! Lise expected that, but she was taken aback by Otto's metamorphosis from apolitical scientist to zealous propagandist. In disbelief she heard him say he was glad Germany had not built the bomb and caused the needless deaths of thousands. When he claimed that the Allied occupation of Germany was as unjust and cruel as Germany's former occupation of Poland and Russia, Meitner, Otto Stern, and Pauli objected angrily. Hahn was undeterred.

Several days went by before Lise fully understood that she no longer had a place in Otto's life, or even his memory. When asked by the press to reflect on his life's work, he did not speak of their thirty years together. When he talked about fission, he did not mention her contributions. Not once, in any of his public statements, did he so



Hahn, Meitner, and Emma (or Grete) Planck, about 1910.

much as speak her name. Lise's friends were shocked. They wondered at her restraint, but there was nothing she could do: she could not beg for fairness, force him to remember what he had willed away, breathe life into a friendship that had become a hollow shell.

The Nobel ceremonies took place, as always, on 10 December. By tradition, the king of Sweden dispenses the awards and a great banquet follows, at which the science laureates usually say a few words and the literature laureate delivers the main speech of the evening. In 1946, the person with the most to say was Otto Hahn. Speaking for Germany, "probably the most unfortunate country in the world," he wanted his international audience to know that it was "really not true that all Germans and especially German scientists subscribed to the Hitler regime with flying colors." He asked that German youth not be judged harshly, for they had "no chance to form their own opinion, no free press, no foreign radio broadcasts, and they could not get to know foreign countries." In fact, most Germans deserved sympathy, for "not many people outside Germany know the extent of the oppression which most of us experienced for the last ten or twelve years."



At the center of Hahn's discomfort, always,

was Lise Meitner. With her, he could never

be completely sure his version of the discovery

of nuclear fission would hold.

Hahn's speech was well received, "going straight to the heart," according to one newspaper. Certainly Hahn was pleased; it established him as a leading voice for German science, and for Germany as a whole.

In his Nobel lecture three days later, he could not ignore Meitner entirely, but by describing the discovery exclusively in terms of radiochemistry he gave no sense of their ongoing collaboration and emphasized instead that the discovery had been made in opposition to the experience of nuclear physics.

Hahn's behavior in Sweden hurt Meitner personally, damaged her professionally, and contributed to her ongoing iso-

lation in Sweden. There is no indication that he ever understood, or cared. In a personal autobiography many years later, he scrambled the facts and emotional context of their discussions in Stockholm. On that occasion, according to Hahn: "I had quite an unhappy conversation with Lise Meitner, who said I should not have sent her out of Germany when I did. The discord probably stemmed from a certain disappointment that I alone was awarded the prize. I did not talk to Lise Meitner about that, however, but a number of her friends alluded to it in a rather unfriendly manner. But I was really not at fault; I had only been looking after the welfare of my respected colleague when I prepared her emigration. And after all, the prize was awarded to me just for work I did alone or with my colleague Fritz Strassmann, and for her achievements Lise Meitner received many honorary doctorates in the USA and once even was 'Woman of the Year.'

Much of what he wrote was patently untrue and revealed more than Hahn may have realized. Hahn neither "sent her out" nor "prepared her emigration." Nor had he been concerned for her welfare. His instinct had been to protect himself and his institute, not her.

At the center of Hahn's discomfort, always, was Lise Meitner. With her, he could never be completely sure his version of the discovery of nuclear fission would hold. And so, in what he knew would be his final memoir, written when he was in his eighties, he gave his own version of the circumstances for one last time: He distorted the facts of Meitner's emigration to avoid acknowledging that she would have shared in everything had she not been forced to flee; he denied that she took part in the discovery; and he twisted the issue of the Nobel Prize, because he would not concede that it was wrong for him to be rewarded for work he had done collaboratively. The last sentence of Hahn's passage is oddly defensive, a bald assertion that he alone deserved the prize and Lise Meitner should have been satisfied with whatever else came along. Lest he be considered ungenerous or averse to giving credit where due, Hahn pointedly let his readers know that he gave part of his Nobel award—"a substantial sum"—to another colleague, Fritz Strassmann. Again, this was more self-serving than accurate. The amount was less than 10 percent. Strassmann's wife called it a "tip" [Trinkgeld], and Strassmann refused to use it.

EPILOGUE

The Nobel deliberations are sealed for fifty years. In examining the archives of the Hahn decision, Sime and two fellow scholars found that the papers reveal serious flaws in the Nobel decision-making process. They wrote in the August issue of *Nature*: "They show the difficulty of evaluating an interdisciplinary discovery, and a lack of scientific expertise in theoretical physics. And they shed light on Sweden's scientific and political isolation during the Second World War, which hindered understanding of Meitner's contributions to the discovery." □

Excerpted from Lise Meitner: A Life in Physics by Ruth Lewin Sime. Printed by permission of the University of California Press, 1996.

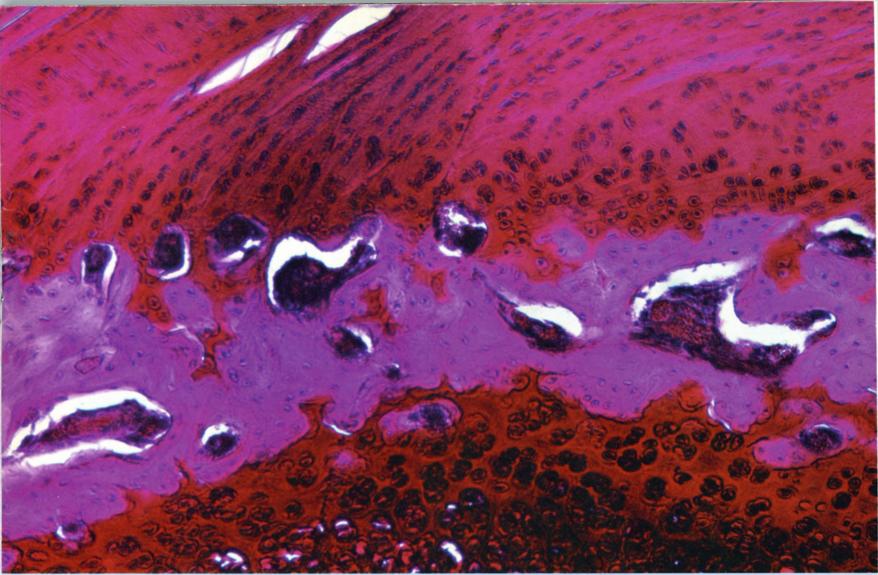
Ruth Sime is on the chemistry faculty at Sacramento City College in California. Work on the Lise Meitner project was supported by a grant from the Humanities Studies of Science and Technology program at NEH.

Blood Brothers: From Typing to Genetics

BY WILLIAM H. SCHNEIDER

The history of medicine records few breakthroughs as dramatic as Karl Landsteiner's discovery of human blood groups in 1900.

Although there had been growing experimentation in the last quarter of the nineteenth century on the agglutinating, or clumping, properties of human blood, most researchers were still convinced that the phenomenon was a reaction from mixing human blood with the blood of a different species or from a pathological disorder. It was Landsteiner who had the insight to test whether or not there was specificity within the human species—that is, whether or not it was a normal condition for the blood of some people to react with the blood of others. For this and subsequent work, Landsteiner won the Nobel prize for medicine in 1930. His discovery of the blood groups opened up new fields of hematology and serology



- ©Photodisc

and advanced the knowledge of the fundamental biochemical workings of the human body. From it were to come significant applications over the next decades: assuring compatibility in transfusions and providing evidence in legal cases.

Landsteiner, the son of an Austrian journalist, entered the scene as a number of factors were coming to play: industrial and university support for research was growing, publication of studies was more widespread, and more powerful tools such as microscopes were making it possible to examine hitherto undetectable phenomena.

Landsteiner trained in medicine at the University of Vienna and spent five years studying with leading chemists in Switzerland and Germany. In 1897 he became an assistant at the University of Vienna Pathological-Anatomical Institute, where he was to remain for the next eleven years. Although his primary responsibility was autopsies (he performed 3,639 of them), Landsteiner took time to study the question that interested him most: the reaction of blood to foreign substances—immune reactions.

Blood group research at the time was focused on effects of disease or the mixing of species; however, a different thought struck Landsteiner. In a footnote to a 1900 experiment involving bovine, swine, and human blood, he wrote:

The serum of healthy humans not only has an agglutinating effect on animal corpuscles, but also on human blood corpuscles from different individuals. It remains to be decided whether this phenomenon is due to original individual differences or to the influence of injuries and possible bacterial infection.

Landsteiner proceeded to test blood samples from twenty-two doctors, staff members, and healthy patients at his institute. He found a pattern of agglutination and non-agglutination that could be explained by dividing the subjects into three groups based on whether their cells and sera clumped or not. (The sample was too small to turn up the rarer AB group.)

Landsteiner labeled the categories of individuals A, B, and C, depending on their agglutinating properties. This was later changed to A, B, 0 (zero) because the last group's cells had no agglutinating properties. When two of Landsteiner's students confirmed his findings by testing more than one hundred subjects, they also found a small group whose cells were agglutinated by sera from both A and B. That category became AB. By 1911 the ABO nomenclature had been worked out.

As Landsteiner and his students were proceeding in their work, the properties of agglutination were being uncovered by others. Jan Jansky, a Czech, wrote about the phenomenon in 1907 and an American, William Moss, in 1910. (Moss added a note indicating that Jansky's discovery had been brought to his attention after he submitted his own findings to the *Bulletin of the Johns Hopkins Hospital*.) Where Landsteiner had used letters, Jansky

and Moss used Roman numerals—and sets of Roman numerals that differed from each other. The confusion grew. The problem was compounded by subsequent researchers, who confirmed and extended the findings but in the process applied the labels depending on whose previous work they cited.

American, British, and French researchers generally used Moss; other Europeans used Jansky or, especially among the German researchers, Landsteiner.

It is a grim fact that the First World War made blood transfusion more necessary than in

peacetime. Surgeons in the field faced two problems: coagulation of the blood and the possibility of hemolytic shock. Before the war most European surgeons used the direct method of transfusion, which involved sewing the artery of the blood donor to the vein of the patient. Then in 1914 and 1915 the anticoagulant sodium citrate was discovered by three separate researchers. Along with improvements in syringes and storage tubes, this permitted doctors to make indirect transfusions. The British adopted it first, although a year after the war began; the French did not do so until after the disastrous Battle of Verdun in 1916 when enormous numbers of

wounded were lost for lack of transfusion. By the time the American Expeditionary Corps arrived in France in 1917, however, the beginnings of an organized system of blood transfusion were in place at the front. One outcome permitted by the possibility of storage (plus a more rapid test) was the luxury of blood typing for compatibility, and between the wars the question of an international nomenclature for blood groups was

	aesignai	es agglutin			ealthy N	
		Blo	od Cells Fr	om:		
	Dr. St.	Dr. Plecn.	Dr. Sturl.	Dr. Erdh.	Zar.	Landst
Serum fro	m:					
Dr. St.		+	+	+	+	
Dr. Plecn.	1 2	-	+	+		
Dr. Sturl.		+	-		+	
Dr. Erdh.	-	+	-	-	+	
Zar.	-	-	+	+		
Landst.	-	+	+	+	+	
Fig. 1.2						
Fig. 1-2 Researche	er	Blood	type nom	nenclature		
Landstein	er (1901)	A	в о	AB		
Jansky (19			III III	I IV		
Moss (191			III III	IV I		

prompted largely by the need to identify blood in storage for transfusion.

In 1921, the American immunological, bacteriological, and pathological associations recommended the Jansky system over Moss's, but there was resistance: Three-fourths of U.S. hospitals were still using the Moss nomenclature in 1927. That year the National Research Council took a different tack: It recommended as a compromise using the ABO nomenclature of Landsteiner, who had emigrated to the United States and joined the Rockefeller Institute. The decision was bolstered the next year by a similar recommendation from the League of Nations Permanent Commission on Biological Standardization.

Although ABO eventually became the universal practice, it took some time before the confusion was sorted out and the letter system became widespread. Even after World War II a dual system of "O, IV" and "A, II" was in use. Not only was the naming of the blood groups complicated, so was the application of the discovery in everyday life. Outside the laboratory setting and outside the urgency of war, blood transfusions became a

civilian medical issue and a measure of the cultural attitudes of the time. Their use raised questions of whose blood was being used and whether it carried with it any other qualities. In fact it was not until another war, the Korean conflict of the 1950s, that U.S. Army blood banks stopped classifying blood by the race of the donor.

In the meantime, the widespread testing of blood groups led to further research and applications. Landsteiner himself was involved in the discovery of two new blood group

systems; and the recognition of the inheritance of blood types helped open the new field of human genetics. It was in recognition of this path-breaking work that Landsteiner received the Nobel Prize in 1930, thirty years after his initial discovery. □

This article is adapted from William H. Schneider's forthcoming book, The First Genetic Marker: The History of Research on Blood Group Genetics, 1900-1950. Schneider, professor of history at Indiana University-Purdue University Indianapolis, received funding from the Humanities Studies of Science and Technology program.

Continued from page 13

without stirrups, and compelled him to go through the various paces. He fell off continually: every time, despite his prayers and tears, he was lifted up and set upon its back again. After weeks of torture, the difficult task was accomplished: he had got his balance.

> —George Hinzpeter WILLY'S TUTOR

Only when Wilhelm grew to manhood did he find happiness—in the Prussian army. "I really found my family, my friends, my interests everything of which I had up to that time had to do without." Under the army's influence Wilhelm hardened and distanced himself from his parents, especially his mother, whom he began calling "the English Princess." By now Queen Victoria found him insufferable. "As for Willy, that very foolish, undutiful and, I must add, unfeeling boy, I have no patience with him and I wish he could get a good skelping as the Scotch say." The English queen was not alone in her judgment. Even his own father agreed. "Considering the unripeness and inexperience of my eldest son," he wrote to the German chancellor, "together with his leaning toward vanity and presumption, and his overweening estimate of himself, I must frankly express my opinion that it is dangerous as yet to bring him into touch with foreign affairs."

Wilhelm showed little interest in diplomacy, but he was fascinated with ceremony and military trappings. He loved taking part in war games with his army, and the sport of hunting was a preoccupation he took to extremes. On one hunt in 1896 he fired off some 1,600 rounds of ammunition. His entourage was often the butt of unusual and sometimes cruel jokes. New members boarding his yacht were "baptized" in champagne poured over their heads, followed by the painful order to carry a block of ice barehanded around the deck. One elderly Prussian general was made to imitate a dog by jumping over a stick.

Wilhelm's office was called "general headquarters." The lowest of his servants were issued uniforms and ranks. His own wardrobe contained some two hundred uniforms. He prized collecting the uniforms—and titles—of other nations. He was especially proud of being made an honorary admiral of the British navy by Queen Victoria. "Fancy wearing the same uniform as St. Vincent and Nelson!" he exclaimed. "It is enough to make one giddy."

Wilhelm's posturing served more than to satisfy personal whim and vanity. He was perceived as the personal embodiment of the empire, created only seventeen years before he had become kaiser. Both nation and ruler were young, dynamic, restless, belligerent, and insecure. The Imperial Chancellor Otto von Bismarck described him best: "The Emperor is like a balloon. If one did not hold him fast on a string, he would go no one knows whither."

The German empire was largely a creation of the political genius of Bismarck. Not since Napoleon had Europe seen such a dominant and effective leader. In 1847 he had entered politics and found it to his liking and quickly rose up the ranks. Upon becoming ministerpresident of Prussia, he made a famous pronouncement: "The great questions of the day will not be decided by speeches and the resolutions of majorities...but by iron and blood." He quickly went about showing what he meant by using war to unify the German states. There were victorious wars against Denmark and Austria. These victories threatened France, and another war ensued in 1870. Napoleon III and his army, which was thought to be the finest fighting machine in Europe, surrendered in humiliation. The Franco-Prussian war brought the German states together, and Bismarck took full advantage of the opportunity this afforded, arguing for the creation of a new German empire with the Prussian king, Wilhelm I (Wilhelm II's grandfather), as emperor. The states agreed and made their proclamation on French soil in the Hall of Mirrors at Versailles. This, combined with a heavy war indemnity and the loss of the rich iron-mining and manufacturing territory of Alsace and Lorraine, was a grievous insult to the people of France.

Having established Germany's prominence on the battlefield, Bismarck turned his attention to keeping peace through diplomacy. While he served as imperial chancellor, there were no wars among Europe's major powers—Germany, France, Austria-Hungary, Russia, and Great Britain. The secret to peace, he believed, was to never forget the importance of being a majority of three on "the European chessboard." All politics reduce themselves to this formula: "try to be a trois in a world governed by five powers."

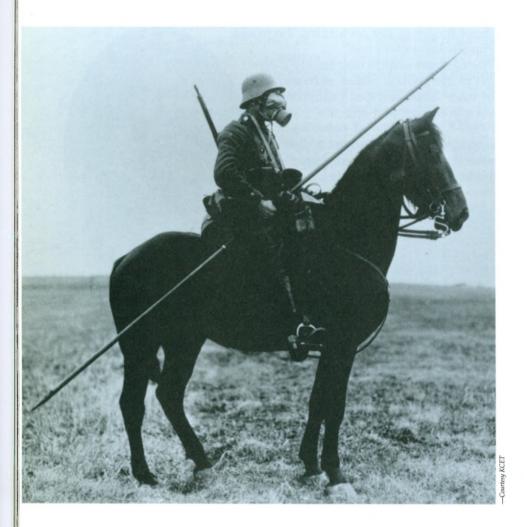
Bismarck's main concern was the possibility of a link between a hostile France and Russia. He created alliances for protection. The first military alliance was Austria-Hungary, which provided a buffer against Russia. Bismarck then wooed Russia. His masterstroke was what became known as the "Reinsurance Treaty"—a secret agreement with Russia against Austria. Only a mastermind could have devised such a series of secretive and manipulative treaties. And only a mastermind could maintain them. When Wilhelm II became the German Emperor in 1888 at age twenty-nine, he quickly began upsetting Bismarck's delicate balance of power.

Wilhelm insisted on building a formidable German navy. Why, he argued, should Britain alone dominate the seas? The British were building a



King George V -Courtesy KCET





A war of contradictions, World War I combined the first use of chemical warfare with a nostalgia for cavalry.

new class of battleship, the powerful Dreadnoughts. Germany, the kaiser declared, should have them too. The German fleet was ordered to double in size.

The image which danced before Wilhelm's eyes as the most wonderful prospect for the future was to see himself at the head of a great, a very great, German fleet starting out on a peaceful visit to England. At the heights of Portsmouth the English sovereign at the head of his high seas fleet would await the German Kaiser. The two fleets would file past one another; each of the sovereigns standing on the bridge of their respective flag ships wearing the naval uniform and decorations of the other. Then following the obligatory embraces and kisses, a gala dinner with splendid speeches would be held at Cowes.

—Bernhard Furst von Bulow Memoirs

The British saw it differently. "The German Emperor is aging me," wrote Lord Grey. "He is like a battleship with steam up and screws going, but with no rudder, and he will run into something some day and cause a catastrophe." Britain declared it would build two ships for

every German battleship. An arms race at sea was under way.

Half-British himself, Wilhelm's ambivalence about his mother's nation was never resolved. He simply could not understand why the expansion of German naval strength poisoned Anglo-German relations. His affection for things English was a matter of record, but his attitude to the English disclosed a fundamental volatility of mood and mind. He was capable of deep sensitivity one moment, and at the next, the most outrageous remarks. Images of bloodshed were only just under the surface of his mind. During a strike in 1900, Wilhelm telegraphed the commanding general: "I expect that when the troops move in at least five hundred people should be gunned down."

Such intemperate behavior would be the

stuff of caricature, and not tragedy, but for the fact that Wilhelm was the autocratic head of state that gave him a set of roles far beyond those of any other contemporary European monarch. He was Supreme War Lord, and the leader of the strongest army in the world. He exercised personal authority over every major appointment in the state. He saw himself as the embodiment of a vigorous new nation, yet he clung to ideas, as his Uncle Bertie, the Prince of Wales, put it, "more suited to the Middle Ages."

By this time Bismarck had long ago gone into retirement, taking along with him to the countryside thousands of bottles of fine German wine. He could only watch in horror as his life's work was dismantled, bit by bit. Britain, which had long espoused a foreign policy of "splendid isolation," began seeing advantages to forming alliances with France. From his country estate, Bismarck had few kind things to say about Wilhelm and his bellicosity. On any occasion where he found a German coin in his hand, he was said to turn the kaiser's likeness away from his eyes, "so I will not have to see that false face."

When a British message to the kaiser in December 1912 made it clear that Britain would not tolerate a repeat of the Franco-Prussian war with its humiliation of France, the kaiser was livid with rage. He took this diplomatic question as a matter of personal honor. Who had the right to tell him what was or was not tolerable? He called together his chief military (though not his political) advisers. The kaiser initially pushed for an immediate declaration of war. But military and naval planners urged caution. They needed more time. The Kiel Canal linking the Baltic and the North Sea, which would allow the passage of the wide Dreadnoughts, would be finished in eighteen months' time. Other preparations were under way to strengthen the army. Caution prevailed. Eighteen months from December 1912 was the summer of 1914.

The kaiser both represented and deepened the profound instabilities within European life in the years before the Great War. He didn't bring about the war single-handedly; but his larger than life personality reflected everything that could—and did—go wrong with the European world order. In the end, the kaiser's naval expansion was a disaster. It gained Germany not England's respect, but its suspicion. That reaction only made the kaiser—and Germany—even more encircled and insecure.

ome damned foolish thing in the Balkans," Bismarck predicted, would ignite a major war. For years, the Balkans had been a hostile ethnic and cultural maze straddling the three worlds of Europe, Russia, and the Ottoman Empire. Austria controlled much of this area—what until recently was known as Yugoslavia. Dozens of Slav nationalist groups were clamoring for independence. As Bismarck had foreseen thirty years earlier, it was an explosive mix.

Knowing the Balkan problems he would soon inherit as emperor, the Austrian Archduke Franz Ferdinand had hinted of sharing power with the Slavs. Hoping to demonstrate his friendship, Ferdinand decided to pay a visit to the provincial capital of Sarajevo. The day was poorly chosen: it was the anniversary of the end of Serbia's military independence. Dressed in a field marshal's uniform, his six-car motorcade entered the city on June 28, 1914. Waiting for him were seven assassins recruited by a Serbian secret society, the Black Hand.

The first would-be assassin did nothing. The second conspirator tossed a bomb at the archduke's car. The chauffeur saw it coming and sped away. The bomb exploded in the road, wrecking the following car and wounding three aides and several spectators. The nineteen-year-old bomb thrower swallowed a cyanide pill and jumped into the nearby river to drown. Neither attempt at suicide worked, although he nearly died at the hands of the mob that hauled him out of the river. Ferdinand, although incensed by the attack, insisted on maintaining the day's agenda and spoke at the town hall. This took him by other assassins, who made no move. After the speech, he decided to alter the prearranged itinerary and visit the hospital where the injured from the earlier bomb attempt had been taken. His driver then made a wrong turn that took them face to face with the seventh and final assassin. He turned out to be also the most determined.

His name was Gavrilo Princip and he was nineteen years old. A Bosnian, he had twice tried to enlist in the Serbian army. Both times he was rejected as being too small and too puny. Now, with pistol in hand, he took aim at the archduke's car and fired two shots at point blank range.

Inside the car, the archduke opened his mouth to speak, and blood spilled over his tunic. He turned to his wife, begged her not to die, and collapsed. He had been shot in the neck, she in the lower stomach. Within minutes, both were dead.

The Austrian Emperor Franz Josef wrote to the kaiser, seeking his support:



Tsar Nicholas II

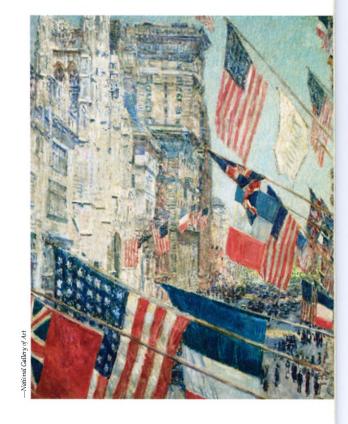
—Courtesy of KCET

The bloody deed was not the work of a single individual but a well organized plot whose threads extend to Belgrade No one can doubt that its policy of uniting all Southern Slavs under the Serbian flag encourages such crimes and the continuation of this situation is a chronic peril for my house and my territories. Serbia must be eliminated as a political factor in the Balkans.

Eliminating Serbia "as a political factor" meant localized military intervention and occupation.

The kaiser gave the Austrian ambassador, Count Szogyeny, his assessment of such a move. The risks of a larger war were low. "Russia is no way prepared for war," he told the ambassador. Austria could be assured of Germany's full backing.

With Germany's support, Austria delivered an ultimatum to Serbia which declared that the assassination had been planned and supported by Serbia and that Serbia had forty-eight hours in which to open its borders to Austrian officers to conduct an investigation. Serbia swallowed its national pride and accepted most of the conditions, but the Austrians ignored the concessions, declared war, and began shelling Belgrade. "This means a European war," the shocked Russian foreign



Allies Day, 1917, by Childe Hassam.

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Shell-shocked soldier.

British troops in September, 1918, exhausted and eager for the Armistice that was just two months away. minister announced to the Austrian ambassador. "You are setting Europe alight!"

Serbia looked to Russia and its tsar for protection. A cousin to both the kaiser and Britain's King George, Nicholas too was driven by oldworld traditions.

By July 30, Nicholas was being told that there was no longer an option—Russia had to mobilize. "Think of what awful responsibility you are advising me to take!" he snapped at his staff. "Think of the thousands and thousands of men who will be sent to their deaths!" After an hour of resisting, he signed the order.

Once Germany and Austria had decided for war, there was no way to avoid escalation. German war plans were based on knocking out the French army before Russian mobilization was complete. This meant invading France from the north, through Belgium. Invading Belgium was bound to bring Britain in, as signatory of the treaty ensuring Belgian independence.

One day after the tsar ordered a total mobilization, Germany mobilized.

Everyone claimed that they had been pushed into a "defensive war." The truth was otherwise. The war had been made, and the moment of its outbreak had been chosen. Germany may have pulled the trigger, but it did so as part of a political community which collectively let the peace of Europe slip through its fingers. Why did they do it? Wilhelm II, Nicholas II, Franz Josef of Austria, Raymond Poincare, president of France, H. H. Asquith, prime minister of Britain, were ultimately responsible for the decision to go to war in 1914. Over and over again, we are presented with the image of those at the centers of power detonating a charge they thought they had carefully measured, and then finding out its explosive potential dwarfed even their most terrifying dreams. □

The Great War and the Shaping of the Twentieth Century will be broadcast November 10-13. The film is a coproduction of KCET/Los Angeles and the BBC in association with the Imperial War Museum. The project has received major financial support from the National Endowment for the Humanities. Additional funders are the Corporation for Public Broadcasting, the Public Broadcasting Service, and the Arthur Vining Davis Foundations.

Blaine Baggett is executive producer of The Great War; Jay M. Winter, chief historian; and Joseph Angier, producer.



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ISSN 0018-7526

SECOND CLASS MAIL POSTAGE & FEES PAID NATIONAL ENDOWMENT FOR THE HUMANITIES PUB. NO. 187526