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Wisconsin Academy Review

A JOURNAL OF WISCONSIN CULTURE



*Shashlik Country Stew
Crown roast Ragout
Satay Braised shank
Moussaka Cassoulet
Navarin d'Agneau
Offal Fricassee Haslet
Tete Gigot Kebob
Scotch broth Ladies
finger stew Curry
Brains a la Remoulade
Mulligatawny Gigot
Head with Marjoram
Stewed Tomatoes Satay*



Closeup of carving on sunflower chest, oak and pine, ca. 1670–1700. Probably from the shop of Peter Blin of Wethersfield, Connecticut.

Front cover: Favorite Recipes by Frances Myers. Etching, computer, 15 x 20 inches, 1996.

Back cover: Sheepish by Frances Myers. Woodcut, stamping, 73 1/2 x 82 inches, 1997.

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“It Was a Love Fest”: The Wisconsin Authors
Speak Program in its Second Year
by James A. Gollata

The Wisconsin Academy of Sciences, Arts and Letters was chartered by the State Legislature on March 16, 1870, as a membership organization serving the people of Wisconsin. Its mission is to encourage investigation in the sciences, arts, and letters and to disseminate information and share knowledge.



This issue of the *Review* offers a kind of time-warp travel experience from colonial America to outer space, with a side trip to exotic Nepal—all within the confines of our mission to maintain a Wisconsin connection with whatever topic we explore.

We begin with the seventeenth and eighteenth centuries as represented by extraordinary collections of colonial and Early American furniture now housed in Wisconsin. This is the first of several articles through which we will learn about these important artifacts that reveal much about the early history of our nation. In the Summer issue, we will feature colonial and Early American household accoutrements, including silver, pewter, and wrought iron pieces; and in the Fall issue, we will reproduce the work of such major early portrait artists as Peale and Copley. For

this series we are fortunate to have as a guide George Parker, who has long been interested in colonial listings.

We leap to the twentieth century and the role of scientists at the University of Wisconsin–Madison in the exploration of space. In 1887 Robert Louis Stevenson wrote about his physicist/inventor/engineer father, Thomas Stevenson, whose lighthouse illuminations guided mariners throughout the world: “His service to mankind took on forms of which the public knows little and understands less.” For many of us, these words apply today with regard to our understanding of the work behind the development of this great modern instrument of illumination and research, the Hubble Space Telescope. Again, we have a most able guide in astrophysicist Arthur Code. In this issue we present “The Hubble Space Telescope” Part One, which describes the beginning, the development, and the early disappointments. The second part of this mini-series will address the steps taken to correct the problems and the role the Hubble is playing in current explorations of space.

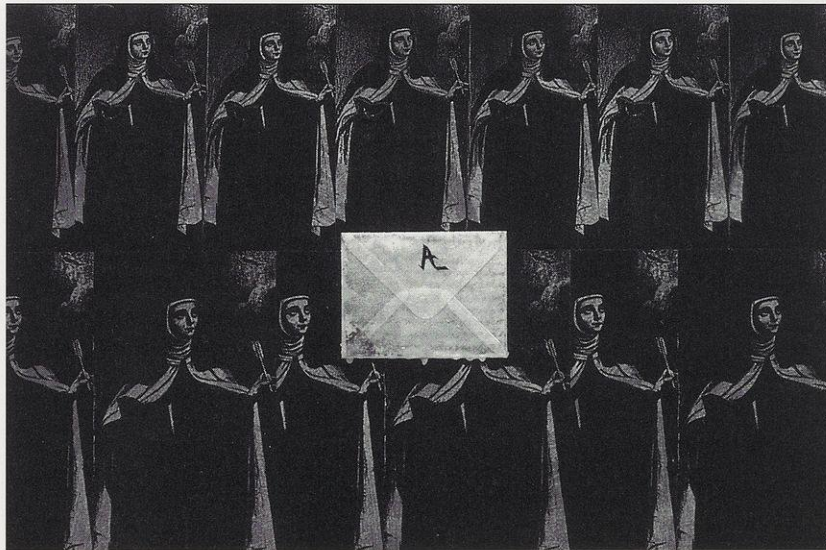
It is one of the wonderful serendipities of editing and publishing that occasionally just the right article comes in, unsolicited, at just the right time. It happened last summer when I was talking with Arthur Code about the possibility of his writing these Hubble Space Telescope articles for the *Review*, and a manuscript came across my desk on the life of Edwin Hubble himself! I’m grateful both for Professor Gale Christianson’s

generous research and his uncanny timing. Also I want to express appreciation to Richard Dreiser at the Yerkes Observatory for his help and expertise.

It is always a pleasure when Academy staff can collaborate on projects. In this instance the *Wisconsin Academy Review* and the Wisconsin Academy Gallery team up to feature the work of Frances Myers. She is the subject of our Galleria

department in this issue, and her work can be seen throughout the month of April in the Academy gallery.

Claire Burkert, daughter of artists Robert Burkert and Nancy Ekholm Burkert, draws us into the colorful ambience of Nepal through excerpts from her journal, kept during the early days of her work with some of the women of that country. Her parents have been long-time friends of the Academy—Nancy Burkert was



A is for Aesthetes by Frances Myers. Wax, ink, xerox, collage, 16 x 22 inches, 1993.

named a fellow in 1986—and it is gratifying to welcome a second-generation Burkert to these pages.

Through special arrangements with Alfred Knopf Publishers and author Margot Peters, we present excerpts from a biography of May Sarton. These excerpts appear simultaneously with the March 1997 release of the book. While much of what Sarton wrote was autobiographical, this is the first major account of her life, written with the understanding that it would be published after her death.

Thus we look back toward the Mayflower, ahead to the mysteries of space, savor some stories of adventurous lives along with art, poetry, book reviews, and a report on the recent Wisconsin Authors Speak project sponsored by the Academy’s Center for the Book and the Center for the Book at the Library of Congress.

Faith B. Miracle

Wisconsin Academy Gallery Schedule

March: Kevin Earley, furniture

April: Frances Myers, prints/installation

May: John Miller, prints

CONTRIBUTORS

- Claire Burkert grew up in Milwaukee. A visit to Nepal in 1989 led to her work with the women to establish cooperatives whereby they could market their native arts. Her efforts have been successful, and she is now being sought by other countries who hope to develop similar programs. She is currently at work in Vietnam in addition to keeping in touch with the project in Nepal. Burkert and the artists in the project were subjects of a 1994 documentary film titled "Colors of Change: Janakpur Women Paint the Future."
- George Parker is chairman and chief executive officer of the Janesville Foundation and Caxambas Associates and former chairman of the board of The Parker Pen Company and Manpower, Inc. He holds degrees from Brown University and the University of Michigan and holds honorary doctor of laws degrees from Milton College and Brown University. He is a member of the Archaeological Association of America, the National Institute of Maritime Archaeology, and the Save Our Everglades initiative. He lives in Janesville and Marco Island, Florida.
- Gale Christianson is Distinguished Professor of the College of Arts and Sciences and professor of history at Indiana State University in Terre Haute, where he teaches courses in the history of science and biography. He is a Guggenheim fellow, a Huntington Library fellow, and has authored six books, including *This Wild Abyss: The Story of the Men Who Made Modern Astronomy* and *Fox at the Wood's Edge: A Biography of Loren Eiseley*. His most recent book is *Isaac Newton and the Scientific Revolution*.
- Margot Peters, award-winning biographer and Pulitzer Prize nominee, was born in Wausau and lives in Lake Mills. Her books include biographies of Charlotte Bronte, George Bernard Shaw, and the Barrymores as well as a novel, *Wild Justice*, published under her pseudonym, Margaret Pierce. She retired from the University of Wisconsin–Whitewater Department of English in 1991. Her biography of May Sarton is being released by Knopf in March 1997.
- Arthur D. Code received his Ph.D. in astronomy and astrophysics from the University of Chicago and has been active in stellar astronomy, galactic structure, extragalactic studies, radiation transfer theory, astronomical instrumentation, and space astronomy. He came to the University of Wisconsin in 1950 and established the university's Space Astronomy Laboratory, which has been an active participant in the national space program since the formation of NASA in 1958. He has published and lectured widely and served on numerous advisory panels and committees. He is currently Hilldale Professor of Astronomy Emeritus and a scientist at the National Optical Astronomy Observatory at Kitt Peak, Arizona.
- Tim Porges is a writer, critic, former poet and artist, and is currently editing a collection of Fluxus performance texts and writing two interlocking essays: on genre culture and on the gridding of imaginary spaces as a mapping tool for visualizing conflicts in late-modern culture, "a sort of update" on Georg Simmel's "Metropolis" essay. He considers his "spiritual home" to be Oakland, California, where his sister lives and where his brother is buried. He holds an M.F.A. degree from the University of Wisconsin–Madison.
- Judith Strasser of Madison is a senior producer and interviewer for "To The Best of Our Knowledge," which is heard on Wisconsin Public Radio and other stations throughout the country. Her articles and poems have appeared in such publications as *Poetry*, *Kenyon Review*, *Prairie Schooner*, and the *Wisconsin Academy Review*, and her poetry is forthcoming in *Nimrod*.
- Frances Myers, a Wisconsin native, is a print and installation artist and professor of art at the University of Wisconsin–Madison. She has received two National Endowment for the Arts fellowships and an H.I. Rommes Fellowship. She has exhibited in one-person and group exhibitions in such American cities as New York, Chicago, San Francisco, Los Angeles, and Washington, as well as in England, Germany, and France. Her work is in most major print collections in this country and abroad, including The Metropolitan Museum of Art, New York; the National Museum of American Art and the Library of Congress, Washington, D.C.; and The Chicago Art Institute, and in major museums in Boston, Philadelphia, and Houston.
- Marianna Wright has been nominated twice for the Pushcart Prize for fiction and has been honored for her writing by other literary groups. Her prose and poetry have appeared in such publications as *Word of Mouth* and *Mobius*. Nonfiction and criticism have appeared in *New Directions for Women* and *Feminist Voices*, among other publications. New work is forthcoming in *Poetry Motel* and *New Novel Review*.

Early American Furniture in Wisconsin

by George Parker

The period from approximately 1650 to 1820 represents an acknowledged high point in American decorative arts. In furniture, there were no fewer than five distinct stylistic periods of design. Each one was a building block on the previous styles and also a reaction to these styles. The five periods which overlap one another in sequential order are Seventeenth Century, also called Pilgrim; William and Mary; Queen Anne; Chippendale; and the Federal-Empire period. Captions for the accompanying photographs will explain some of the major design characteristics of each period, although the stylistic evolutions are probably self-evident.

Wisconsin is fortunate to be home to several major collections of colonial furniture. It is safe to say that the largest accumulation of these artifacts west of the Alleghenies exists right here in this state; and if the major collections in Wisconsin were combined, the aggregate would only be exceeded in both quality and size by the great DuPont American decorative arts collection at Winterthur, Delaware. Why so much of this furniture found its way to Wisconsin is hard to say; it is interesting to note, however, that none of these Wisconsin collections is more than fifty years old, while most have been in existence for over forty years.

The key to the understanding of all of this is the fact that these furniture collections consist of pieces that are solely American in origin. They represent the highest sophistication and quality achieved in furniture design in America in the years prior to 1783, when the Treaty of Paris was signed, formally ending the Revolutionary War and establishing official recognition of the new United States. Only the Federal-Empire period represents the artistic creativity in furniture of the new republic. Furniture made in this last period is almost always either Hepplewhite or Sheraton in style, named after the two great



Governor Carver arm chair, oak. Massachusetts, ca. 1660–70. This is a high-style example of a chair from this early period when even the more affluent homes in the colonies were sparsely furnished. This would have been the chair where the master of the house sat while all others used benches; thus the term “chairman” evolved, referring to the prominent individual in the room.

British designers George Hepplewhite and Thomas Sheraton who, in turn, followed the lead of the Adams brothers who worked in the 1770s in England.

The pieces depicted here are not the everyday items that were available to the average colonial household. This furniture

was probably owned by only 1 [one] percent of the population. Each item was handmade to order; mass production as we know it today did not exist. Further, the more detail desired by the purchaser, the higher the cost—if the buyer wanted carved rather than plain knees on a set of dining room or parlor chairs, there was an additional charge.

The working definition of these pieces is “urban high-style furniture of the period.” “Urban” because this furniture was made in the cities where the market for it existed; “high-style” refers to the fact that the pieces were neither crude nor rustic, and furniture makers closely, but not submissively, followed the English pattern books of the period.

According to the 1790 census, the population in America was approximately 3,000,000. This does not include the slave population or the Native American population. The slave population was approximately 681,000 in 1790; a reliable estimate of the Native American population is not ascertainable. The fact that black craftsmen made furniture is well documented, but the output was small and existed mostly in the South. There is no evidence that Native Americans contributed to what is essentially a European-derived stylistic development, modified and tailored to meet colonial tastes and conditions.

The artisan-craftsmen-cabinetmakers who produced these pieces were either Americans, born here and familiar with what was happening in England, Ireland, and Scotland, or emigres, primarily from London and Dublin. There is very little influence of continental Europe to be seen in colonial furniture.

Another characteristic of these immigrant craftsmen was the fact that they almost immediately adapted to the local interpretation of what had been developed in London, Dublin, and Edinburgh style centers. Generally, American furniture tends to be taller, slimmer, and simpler than its Old World counterparts. Like all generalities, this can be an oversimplification when one studies the furniture made in Philadelphia and New York in the years



Greg Anderson



Greg Anderson

ABOVE: Carved sunflower-tulip, two-drawer chest, oak and pine. Connecticut, ca. 1670–1700. Probably from the shop of Peter Blin of Wethersfield, whose output of these chests numbered about forty in all.

LEFT: William and Mary high chest of drawers, burl maple. Boston, ca. 1710–30.

immediately prior to the Revolutionary War when Philadelphia was the British Empire's second largest city, second only to London.

At the moment, with the exception of the American wing at the Milwaukee Art Museum, these Wisconsin collections are in private hands. Two of those collections, however, are scheduled to be in the public domain in the future.

It has been said that "a chair consists of four legs, a seat, and a back. All the rest is art." This could apply to all of the pieces pictured here. What is so remarkable about this furniture is the combination of creativity, sophistication, and craftsmanship. We are fortunate that so much of it remains to study and enjoy today—and particularly fortunate that much of it exists in Wisconsin. *ra*



Greg Anderson



Greg Anderson

ABOVE: William and Mary bunfoot chest, walnut. Pennsylvania, ca. 1710–30.

LEFT: Queen Anne lowboy, walnut. Philadelphia, ca. 1735–50. This piece represents the first use of the curved, or cabriole, leg with the lobed, or Spanish, foot.



LEFT: Queen Anne arm chair, walnut. Massachusetts, ca. 1730–50. The legs are the more common unembellished form of cabriole leg, terminating in a pad foot.

BELOW: Queen Anne daybed. Boston, ca. 1735–60. This daybed is one of seven or eight of its kind in existence. They were used as beds for guests before guest rooms were known; also for invalids.





LEFT: George II-style carved chair, walnut. Newport, ca. 1750–70. Created by the Townsend-Goddard families, probably by John Goddard, best known of the craftsmen from these two families. A carved lobed shell appears in the center of the serpentine crest rail above a pierced splat. The legs are cabriole-style with ball-and-claw feet.

BELOW: Queen Anne tea table with large, pull-out slides, mahogany. Boston, ca. 1740–60. This table was exhibited at the John Brown house in 1965. It descended in the Gardiner family of Newport and is known by that name.

FAR RIGHT: Chippendale clock. Philadelphia, ca. 1753. Carved by master craftsman known as “the Garvan carver,” considered to be the best carver in the colonies prior to 1765.

RIGHT TOP: George II-style side chair, walnut. Boston, ca. 1740–45. Carved by John Welch, who also made picture frames for John Singleton Copley. This chair is part of a group owned by Harry Bromfield, a prominent Boston merchant who also lived in London in 1749. The fluted shell crest with acanthus leaves below flows into trailed vines and flower heads above the vase-form splat.

RIGHT BOTTOM: Chippendale carved block-front bureau-table, mahogany. Newport, 1750–55. This is the genesis of a high-style and regionally specific form of eighteenth-century American furniture, associated principally with Newport. It represents the high quality cabinet-making tradition of the Goddard-Townsend group.



Greg Anderson



Greg Anderson



Greg Anderson





Chippendale chest on chest, mahogany. Philadelphia, ca. 1750–60. This is the early version of this furniture form. The shell in the drawer was possibly carved by Nicholas Bernard.



*Chippendale lowboy, walnut.
Philadelphia, ca. 1750–65.
This lowboy, or dressing table,
is typical of the work done
during the third quarter of the
eighteenth century in
Philadelphia.*



*Chippendale hairy-paw-foot
card table, mahogany.
Philadelphia, ca. 1765–70.
This foot is a rare variation of
the more common claw-and-
ball foot.*

Chippendale block-front desk, mahogany. Massachusetts, ca. 1760–70. The block-front form is principally found on the eastern shore of New England, although a few New York examples exist.



Block-front bureau table, mahogany. Massachusetts, ca. 1760–80. This is the greater Boston version of the kneehole desk, or bureau table. It does not have the shells on top of the blocks, as is the case in Newport pieces.





LEFT: One of a pair of Chippendale side chairs with scrolled feet, mahogany. Philadelphia, ca. 1765–76. The scroll-foot form is the rarest of all the furniture foot-style options found in artifacts from the eighteenth century.

BELOW: Chippendale carved fire screen, mahogany. Philadelphia, ca. 1770. Another example of the hairy-paw foot; created by Nicholas Bernard and Martin Jugiez, who were partners after 1763.





Chippendale pier table, or side board, mahogany. Philadelphia, ca. 1770. Possibly by Richard Butts, the partner of John Pollard, who was the greatest of the later Philadelphia designers-carvers.



Chippendale camelback sofa, mahogany. Philadelphia, ca. 1770. Sofas were rare in colonial America and very costly due to the amount of fabric needed to cover them.



ABOVE: Highboy, mahogany. Philadelphia, ca. 1770. Carving attributed to James Reynolds, probably from the shop of Benjamin Randolph. The highboy form as it was developed in Philadelphia is considered to be the best expression of the American rococo movement. Note that the drawer fronts were all cut from the same log, creating an integrated look for the facade.

ABOVE RIGHT: Chippendale tripod tea table with ball-and-claw feet, mahogany. Philadelphia, ca. 1779. Made by Thomas Affleck and possibly carved by John Pollard.



Sheraton federal-style card table, mahogany and satinwood. Boston, ca. 1800–15. Attributed to John and/or Thomas Seymour.



An arm chair and a side chair from a Sheraton dining room set, which included ten side chairs and two arm chairs, mahogany. New York, ca. 1800–15. Identified as "the Benjamin Moore chairs." The Reverend Moore was the last president of King's College, now known as Columbia University. He served simultaneously as the Anglican bishop of New York.





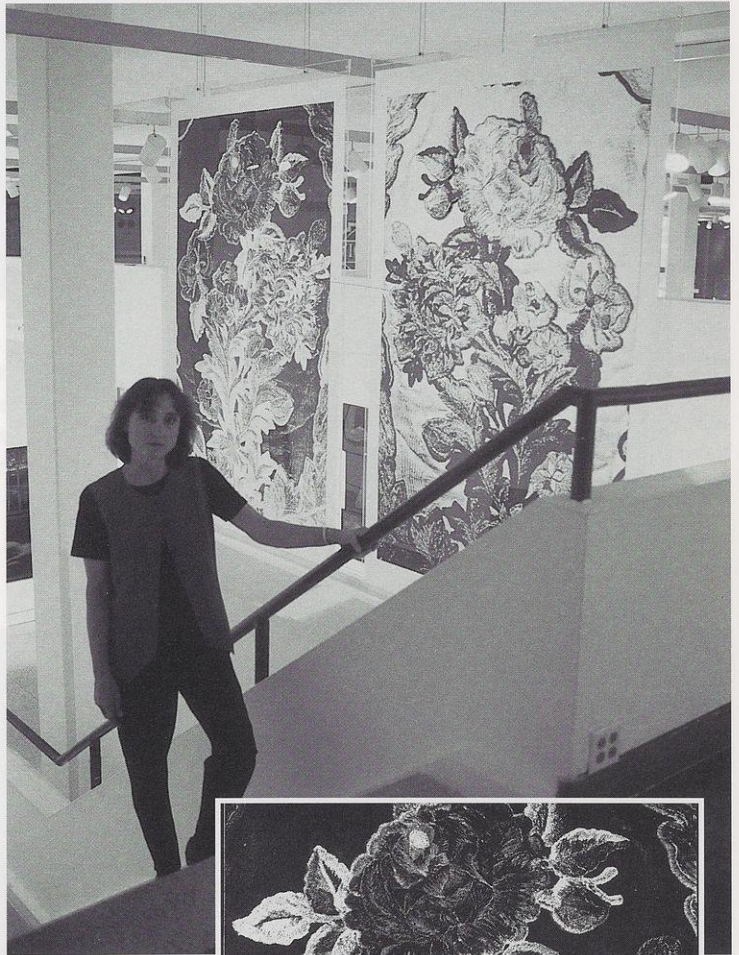
The Art of Frances Myers

by Tim Poges

Frances Myers is at least three artists. Every few years, she finds a new medium, a new subject, a new set of formal concerns. In turn, she invests in each a phenomenal depth of skill and technical finesse. When I first met her, twenty-five years ago, she was the best intaglio printer I had ever seen. Her large architectural landscapes were impossibly perfect exercises in continuous tone. This is how most careers are earned in printmaking: You do something better than anyone has imagined it possible to do it, and it becomes a kind of benchmark for future reference. Mary Cassatt's softgrounds, Peter Milton's sugar-lifts, the amazing huge mezzotint Chuck Close did at Crown Point Press, the fantastic hybrid prints Masami Tereoka did with Ken Tyler, and so on—printmaking has a history of inventions, but also of heroic virtuosity. It's sort of like the circus that way. And Myers has been part of that history for some time now. But that's only one of her, and there's more.

Printmaking, especially etching, is a transformative medium. As with ceramics, there is a point in the process when the machinery takes over, and what it gives you back is always more than went in. People fall in love with the transformation, with the surprise of it, even the occasional disaster. It's not like discovering a vocation. There's nothing social or divine about it; it's just you and the machinery. The technology is simple and quite old. It's a wonder that people still manage to surprise themselves with it.

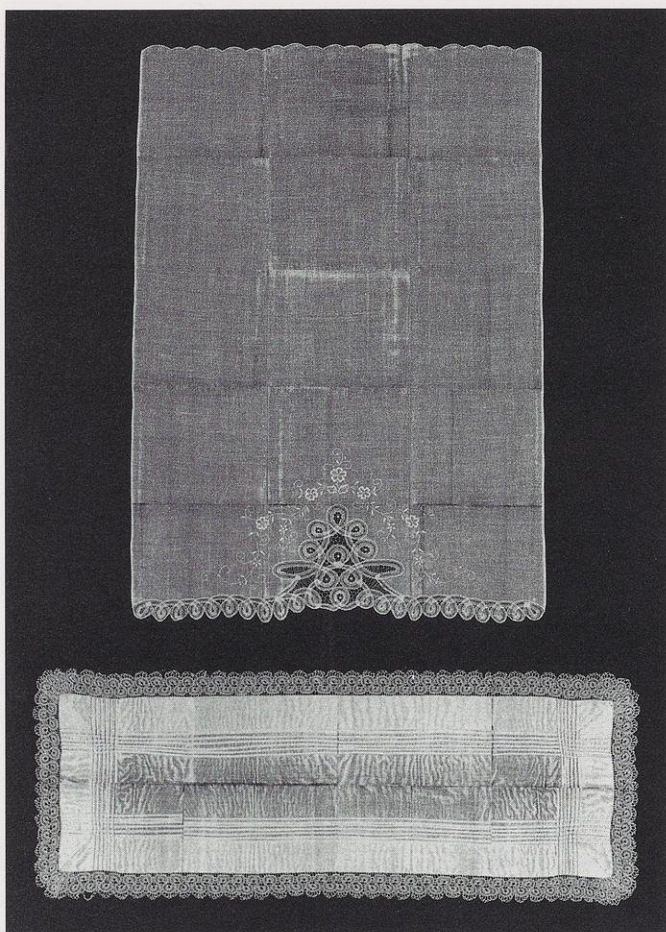
Some artists go on to seek that kind of transformation elsewhere, as Myers has. Her photocopied textile images



The Artist

RIGHT: The Prague Chasuble; The Prague Chasuble (reverse). Digital and electrostatic media, vellum, plexiglass, 84 x 58 inches, 1996.





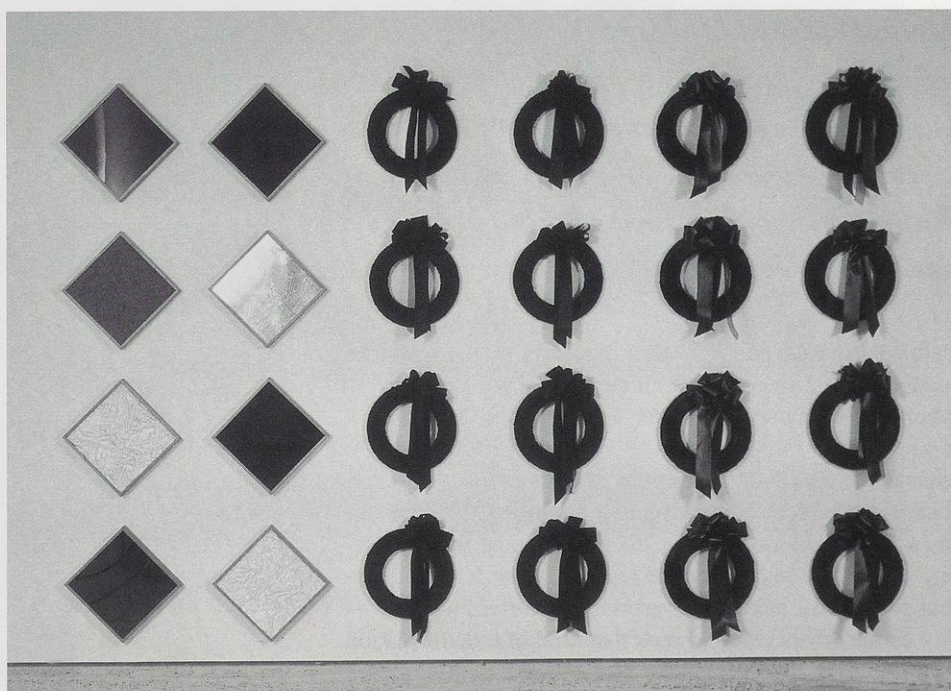
TOP LEFT: Obligatory Preparations. Photocopy, collage, 69 x 48 inches, 1994.

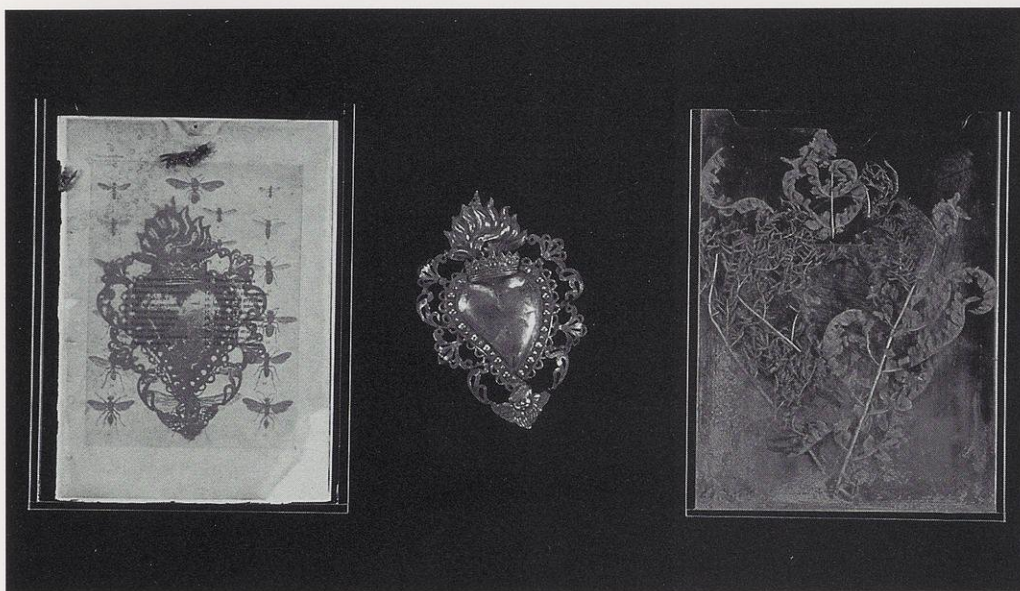
TOP RIGHT: The Stag. Photocopy, collage, 47 x 22 inches, 1994.

RIGHT: To Come to Terms (acts, words). Mixed media wall installation (wood, lead, ribbon, cloth), 8 x 12 inches (16 items 15 1/2 inches in diameter x 3 inches deep; 8 items 14 1/2 x 14 1/2 x 2 inches).

OPPOSITE TOP: A Consideration of the Phenomenon of Ecstasy, detail. Mixed media installation, 70 x 96 inches, 1993.

OPPOSITE BOTTOM: To Reveal/To Conceal. Etching, xerox, collage, wax, 48 x 32 inches, 1992.





are a direct extension of her earlier intaglio work. People find a suggestion of the Shroud of Turin in these images; and she denies that anything so direct or religious is intended, but it's easy to see how the connection comes to her audience. It's the sense of the accidental arriving at the miraculous, like the miracle images of Christ on a taco, or Elvis's face on Mars.

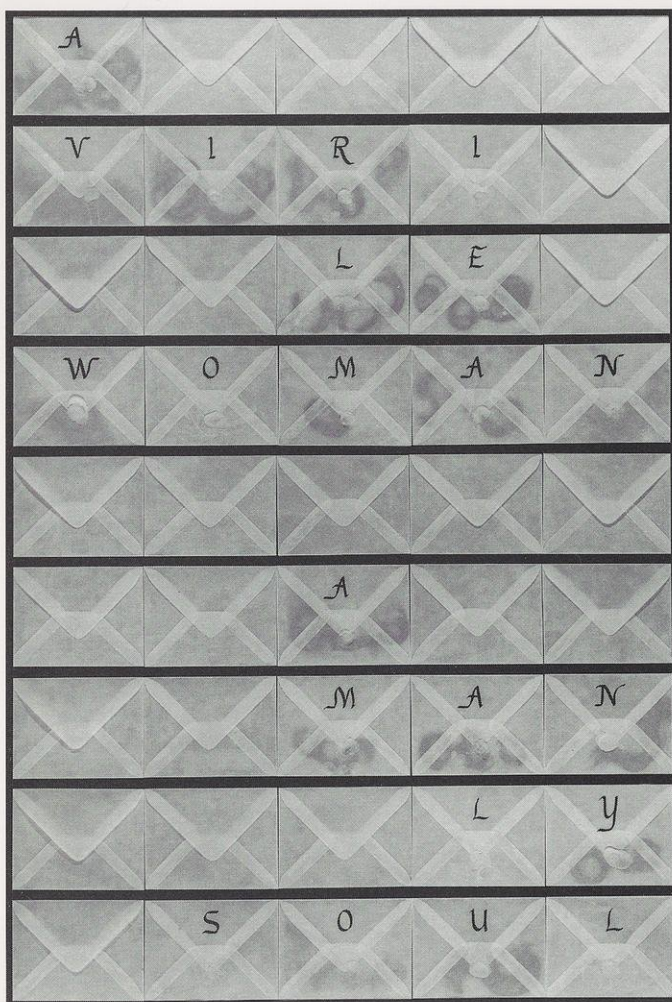
Magicians often have a kind of professional cynicism about such miracles, and there's a little of this in Myers's attitude about the aura of the sacred that happens to much of her work—inescapable, really, since so much of it borrows from the history and liturgy of the Catholic church. Her interest in the church, though, is more social than spiritual. It's a matter of family history and of the rituals that sustain the material culture of family life. And her initial interest in these materials lay in what might be done to them. To a man with a hammer, the world is a nail waiting to be hit. To an etcher with a press, the world is similarly transformed. Give the same etcher a photocopier and a computer, and the world which enters the process becomes the world of digitized information

as well as that of incidental surface. Then again, if this happened to everybody, you'd be reading about everybody, and you're not. Information and production have their own signatures; adjusting the one to the other requires a strong sense of the ritual requirements of both. Myers is unusually sensitive, among artists, to what ritual is and does.

Printmaking is sort of a ritual—well, certainly, it's at least ritualesque. Submersion in its processes can attune a person to the values of ritual: its sociability, its comforts, its slow release of the miraculous. The ritual of the mass

both gives us miracles (bread becomes flesh, wine becomes blood) and hides them in softening, familiar experience. The rituals of the dinner table and the linen closet carry the burdens of family intimacy through our lives, allowing us to forget them and still keep them in reach.





A Virile Woman. Collage, wax, hair, silk, 48 x 32 inches, 1992.

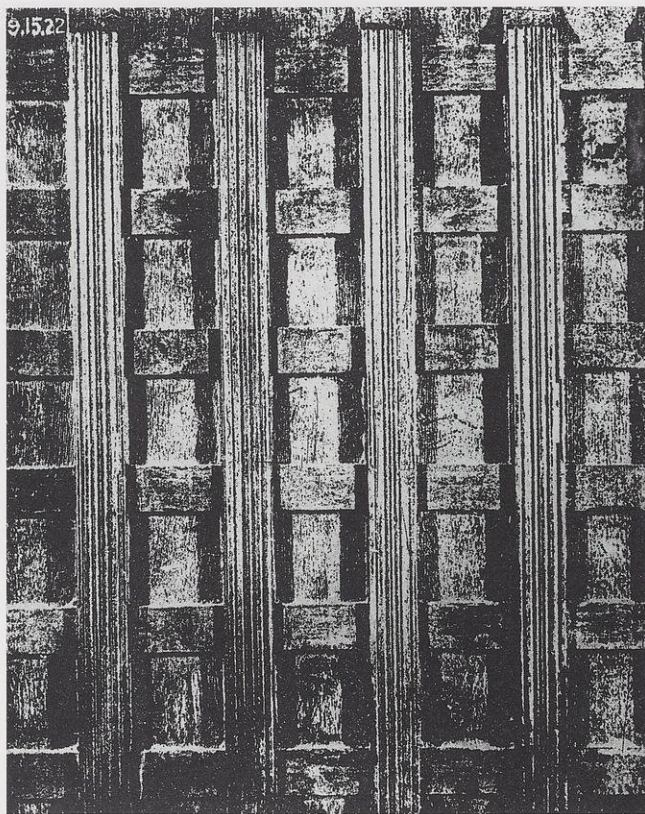
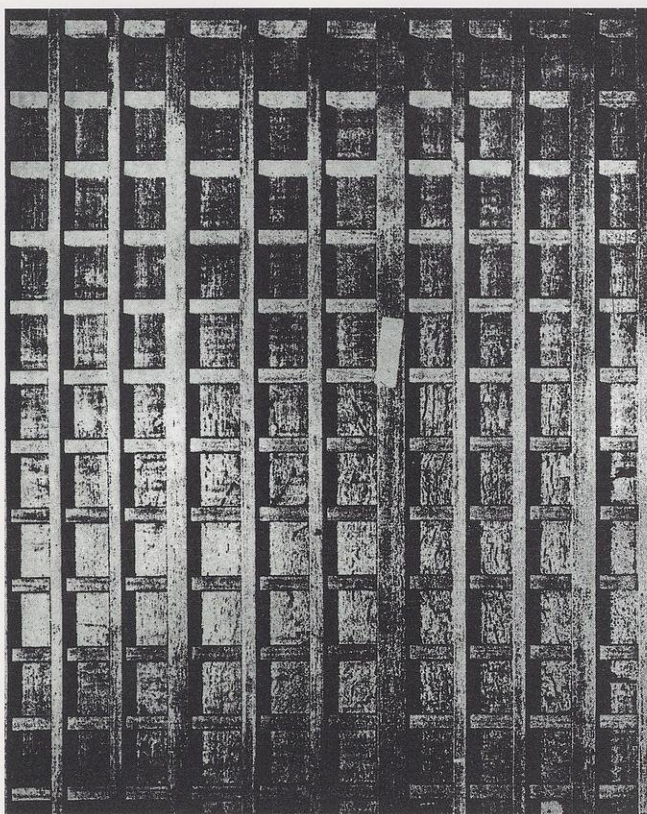
What I'm trying to describe here is how an artist begins a career as an image-transformer, a virtuoso etcher and printer, and then gradually becomes a collector of materials, which at some point become not just part of the process, but a significant part of the finished work. That these materials are cultural and are a part and parcel of social rituals, which are burdened with specific and similarly two-faced language, doesn't escape her. Nor does the fact that all ritual has another face, at times hidden, of the miraculous doesn't escape her. Like Joseph Cornell, Myers begins with a set of transformations, becomes a collector and assembler of montage materials, and further develops into a word/image artist. She perceives these changes as abrupt, each one leading to a specific body of work. And she perceives these bodies as rational, commanded by the logic of her materials and led to the next abrupt change by an enchainment of language, a kind of necessary fiction. There are contradictions, but no more than are already there in the language. There is continuity, but only in the residuum of her materials and techniques. Her transformations are, then, both more radical and less arbitrary than they appear to be.

Cornell described his vast collection of files and materials as a sort of collective object. It was "a diary journal repository laboratory, picture gallery, museum, sanctuary, observatory, key . . . the core of a labyrinth, a clearinghouse for dreams and visions . . . a childhood regained."

The differences between Myers and Cornell as collectors and artists can all be found here, as well as the similarities. Like Teresa of Avila, her primary subject for the first three years of this decade, Myers has a kind of pragmatic and practical sense of the miraculous. Teresa, one of the great spiritual athletes of all time, still located the spiritual fairly precisely between the personal and the political. A child of the Inquisition, she could not do otherwise. Teresa saw her *Interior Castle* as a sort of secret heterotopia and gymnasium for the soul. Her repetitions are always rhetorical and instructive. She is at her most moved, and moving, when most contradictory.

Using Teresa and her life as a context for teasing out the differences between Myers and Cornell is a tricky business. Maybe it all comes down to attitude and timing; the language the artist uses to explain herself, rather than the work itself. Dore Ashton writes about Cornell that his use of repetition is not the "intellectualized notion of serialization, but more like the ritual repetition of the alchemist." Myers, by contrast, grounds her own use of serial imagery in her experience as a printmaker and an ironized sense of the social (comforting and hypnotic) and disciplinary values of repetition. An example of this would be found in her *A Virile Woman*, from 1992. She encloses bits of human hair—some hers, some not—in a suite of forty-five envelopes which she has made identically, out of a wax-coated, translucent paper. She then presents these envelopes in a classic grid, submerging them into its structure, atop which she floats the text "A Virile Woman, a Manly Soul," taken from the church's way-after-the-fact recognition of Teresa of Avila as a doctor of theology in 1970. The grid, and the discipline of its manufacture, interceded between the text and its reader's life, metonymically stood for by the body's remnants, the memory of a ten-year-old's first haircut, a trace of secret content. Consider, in this connection, what de Certeau has to say about Teresa of Avila's *Interior Castle*: that, like Duchamp's *glass*, it is a transparent, finite space that has no place of its own, yet includes "many dwellings." The models of the celestial Jerusalem (anapocalyptic image) of "paradise" (and the image of the origin) and of "Heaven" (a cosmological image) become miniaturized and combine in a transparent gem where "He takes His delight."

He, in this case, is Christ, but it might as well be Cornell, in his imagined crystalline space, his little houses, and his delight, like Christ's, is the joy of return and recollection. After all, what can you give the God who has everything? The well-exercised soul is a space in which He remembers Us. But the construction of artwork as a place for the soul, or its author, to rest and regain the visions of a Perfect Childhood, though perhaps not *exactly* or *all* that Cornell had in mind, is *absolutely* not what Myers seeks in her work. For some, the return of the repressed (that Alchemy

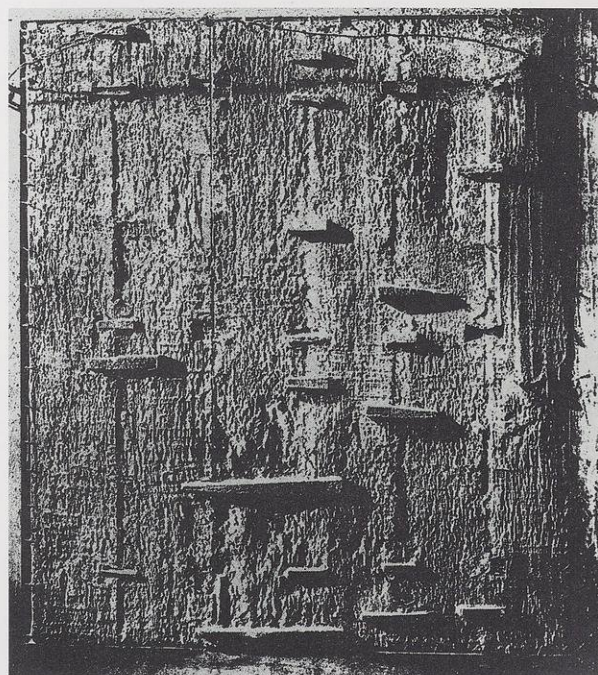


Ashton speaks of) is a welcome and anticipated moment. But for others, there is no pleasure without irony, not even—or maybe, especially not—that of beauty. Maybe it's just that we already have Cornell and his cult of childhood as a paradise regained, and we don't need another. Beyond that, you could say that Cornell's peculiar genius, like Teresa's, was a function of his pathology—that he transformed secondary narcissism (as she did) into the diegesis of great art. Myers is at a distance from both of them: more social and ironic, and more aware that the confection of memory is just repression by any other means; that the childhood you remember is largely the childhood you still hope to have.



I look at the body of Frances Myers's work on Teresa of Avila as the equivalent of a novel and at the work she's done since as the equivalent of what you do when you've finished a novel and are getting ready for the next one. Anything new might be It, or might turn out later to be part of It (I write this with the confidence and sympathy of a man whose novel has been up on blocks for years). Her work on Teresa led her to altar cloths as a possible key to new work. But cloth in tablecloths, trousseau linens, and the like seemed promising. Especially so because when transformed by photocopying, they become hyperreal, gaining new, lunar complexities of surface accident.

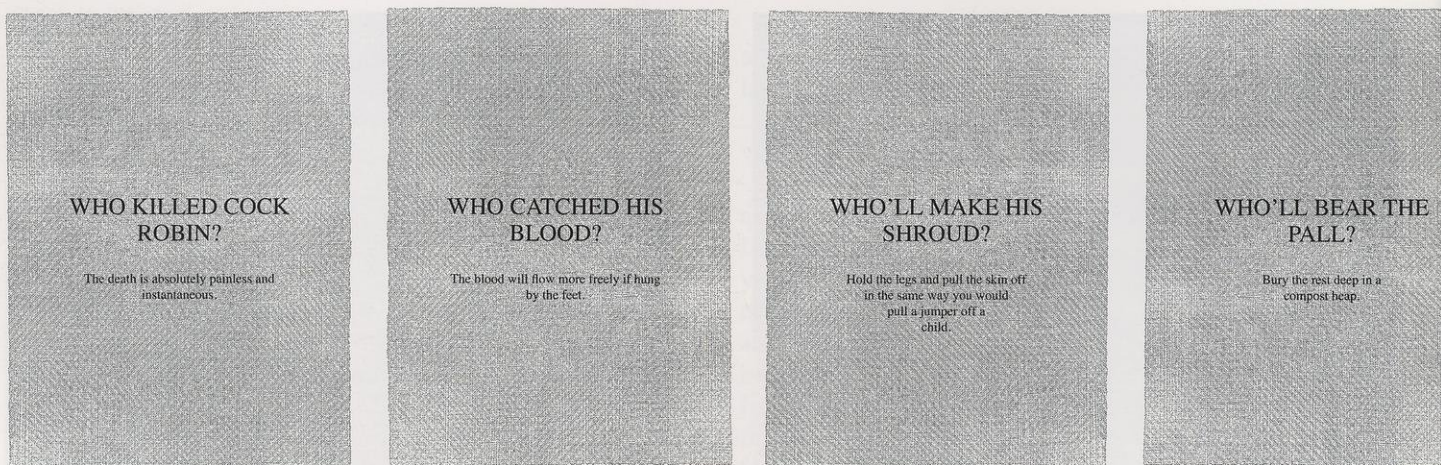
In his essay on the Uncanny (the Unheimlich) Freud spends quite a lot of time meditating on the other face of the



ABOVE: The Verso Suite—Madonna and Child (Anonymous), 11 x 9 3/4 inches, 1996.

TOP RIGHT: The Verso Suite—Allegory (Hieronymus Bosch), 12 x 9 inches, 1996.

TOP LEFT: The Verso Suite—St. Luke Drawing a Portrait of the Virgin (Rogier Van der Weyden), etching, 12 x 9 inches, 1996.



Who Killed Cock Robin? Relief and softground etching, 30 x 113 inches, 1997.

term: the homely (in German, *Heimlich*, which also means *secret*). The homely, or domestic, space is the space of family secrets, of comfort foods, of the mysteries of the linen closet and the larder: the forgotten/remembered space of the domestic (m)other. Freud's remembrance of that space is completely, sentimentally male. Frances Myers's recent work is all about that space and its remembrance and is also deeply gendered: female and feminist. In her work, the symbols of faith and the language of domestic ritual are always present on the surface and are always in the process of ironic subversion. In this work, language is presented without trust. Where there is a text, there is always a subtext, always visible. And where there is repetition, the forgotten space to which it leads us is never without death and pain; mother's secrets, now told.

The great achievement of Teresa of Avila's spiritual life was a rhetorical triumph over death and pain. The image of Teresa which introduced Myers to her as a subject was Bernini's famous marble of Teresa in her rapture of transverberation, in which what she was experiencing, not to put too fine a point on it, was death at God's hands. It's all well and good to talk about death and rebirth as part of the shamanic transformation, but Teresa was quite specific about how much it hurt, which was plenty. No matter how much closure you have, you finish work on someone like that with something left over, and Myers is clearly not finished with death as a topic. Her 1995 work includes a display of funerary wreaths and black-bordered, framed textiles. This is elegant work; but death seeks its place, and elegance (Baron Saturday style) is only a partial solution.

Animals are killed so we can eat them. They may only be animals, but they really die. As children we read about lambs, but we eat lamb. We imagine Christ as a stag, but we eat venison. There aren't any huge moral lessons here, but there's something about language, how you learn it and how early you learn from its abuse. The world into which Teresa de Ahumada, the saint-to-be, was born was one in which horrible damage had

been done to language. The inquisitors had turned public language, including the language of the confessional, into an Orwellian device of interrogation, extortion, and oppression. The Latin of the church fathers had become a frozen artifact of empty ritual and brutal authority. Teresa's language in her writings is, by contrast, fluid and contradictory. Taken as a whole, it is an artifact of subversion, a work of art.

Our own world of public language is similarly ruined by spin doctors, tyrants, and religious thugs. It's a landscape of bad faith, largely uninhabitable. Just as the dream world of medieval faith was inaccessible to Teresa—obliging her to falsify it and invent a new one—so the dream world of bourgeois culture, the modernist imaginary, is closed to us. Myers describes the nursery rhymes in her current work as the "veneer of ritual," which suggests that we should look beneath for some kind of real life. Similarly, she uses and writes texts in which horrible things, like animal slaughter, are described in language that makes them seem casual and ordinary: Skinning a carcass is described as like "pulling a jumper off a child." This makes me feel like I'm at a lovely restaurant ordering Cassoulet from a waiter who prods me in the belly and asks me if I really want to eat that. As a total experience, it's memorable, even wonderful, but not, at a certain level, gratifying. I know it's not meant to be, and I know the author of my unease worries about being perhaps a tad too moralistic. I order and eat anyway, and it's lovely. Pleasure doesn't die when it's made more complex.

On the lovely wallpaper, Little Boy Blue is sloughing off, as we are also sloughing off, while "everywhere at every time trains are moving," dragging nuclear death back and forth across the heartland. It's impossible not to love an artist so drawn to virtue but unsure of its possession, so unsure of closure. We have no unconscious awareness of death. We have to learn it from each other, and moralizing (or not) is the first choice our teachers face. There's fashionable honesty, and then there's honesty. This is the second kind. ♫

WHO'LL TOLL THE
BELL?

Truss nicely and roast in a hot oven.
Decorate with buttered
croutons.

LITTLE BOY BLUE, COME BLOW
YOUR HORN.

*In the dead of night the convoy crossed the lonely
plains.
In an unexpected ice storm the tractor-trailer skidded off the
two-lane highway.*

A SHEEP'S IN THE MEADOW,
A COW'S IN THE CORN.

*They swept the area for radiation leaks, and the bombs were
transferred to another truck.
Our trucks have traveled 80 million miles, said the spokesman.*

WHERE IS THE BOY WHO LOOKS
AFTER THE SHEEP?

*They can be totally engulfed in fire without incurring damage
to the cargo.
The couriers are trained in counterterrorist tactics - they are
armed and bulletproofed.*

HE'S UNDER THE HAYSTACK FAST
ASLEEP.

*The convoys move at night and are tracked by satellite.
Right now there are convoys going from somewhere to
somewhere.*

Little Boy Blue. Magnesium relief etching, screenprint, 84 x 54 inches, 1997.

At Work with Women Artisans in Nepal: A Journal

by Claire Burkert

In 1988 I received a grant from the Ella Lyman Cabot Trust for a four-month feasibility study to see if women of the Maithili culture in Nepal, who usually create ephemeral art for special occasions, could produce this traditional art for income. I was interested in working with women of this culture partly in response to a report on Maithili women in Nepal which stated:

Ideal behavior for adult women . . . is almost total seclusion, and so women are not perceived as needing a means of communication with the outside world—if anything, such a skill might cast suspicion on their character.

Meena Acharya, *The Status of Women in Nepal*, 1980

For generations the Maithili women have not gone to school, have not participated in organizations, and have been left out of the political process. Women are further divided amongst themselves by caste, class, and position within the family. Women must take care who sees them in the village, and they should not mingle with different castes or visit other villages. When some of the Brahmin women began in the project, they veiled their faces before other Brahmin women who were senior and related. So many divisions are hard to overcome. In addition, within Nepal there exists a habit called *kutaa tarne*, which means that as soon as someone rises, you “pull down his or her legs.” Women who rise to become leaders suffer the sharpest attacks from others who are jealous.

Now nine years have passed, and I am still involved in a project to improve the lives of the Maithili women. Once it was found that village women could indeed successfully produce and market their art themselves, I began helping the women to form a non-governmental organization. This organization, the Janakpur Women’s Development Center (JWDC), is unique in Nepal for its success in empowering women through their artistic tradition. But the daily struggles continue as the women grow into their new roles as artists, organization members, and managers; and each day is a mix of joy and frustration. The joyful times come with feeling that we are united, that we are all



Claire Burkert

women and friends. And always it is a pleasure seeing what the women can create, for their skill and imagination are boundless. Frustrating times come when it seems that no reasoning can quiet an argument, enforce a rule, or engender trust and support among “sisters” for their own elected women leaders.

All through these years I’ve kept journals which have recorded the days’ events, and I have selected those from Janakpur which show the process of the days as we both succeed and fail to meet our goals. In journals I’ve also tried to put down the details of daily life in a culture with values and traditions vastly different from mine.

What follows, then, are accounts which mirror the spectrum of emotions and events which were part of my working life in Nepal.





ABOVE: Kumiya paints turtles.

LEFT: Manjula as I first met her in her home in 1989.

BELOW: A girl in a nearby village practices paper painting in hopes of gaining admission to the center.





ABOVE: Representatives of the Janakpur Women's Development Center voting for members of their board of directors.

LEFT: Kumiha, Manjula, and Baachi prepare for an exhibition, 1989.

BELOW: Manjula working toward an exhibition, 1989.

Janakpur October 1989

Baachi Devi Teli agrees to try to paint the bright animals on her wall on paper and brings me into her courtyard where a four-day-old baby lies in the sun. I'm overwhelmed by the miracle of the baby's tiny feet and hands, and at its survival amongst the turmoil of small children who run and nearly slip and trip over it. Baachi provides me with a chair as her sister-in-law, a child bride of twelve in a yellow sari, stares from a doorway.

I dole out two pieces of paper, explaining to Baachi she can make whatever comes out of her head—an elephant and a flower, that would be nice—and the paper can be divided into two if she chooses. I give her a brush. She wants ten rupees for paint—an amount which seems excessive. I tell her to provide a bill. The brush and paper are already in a child's hands. I'm not at all optimistic that she will produce anything, but it feels good to explain my plan to a room full of interested women (one of whom rests her hand on my shoulder and inspects my earring; another who declares the shape of my nose is good).

We move on with our guide, Sundar Devi, an strong old woman with quick feet, few teeth, and a hoarse voice (she yells at me, thinking a louder voice will help our understanding). I've asked her to take me to the home of Rina Kumari. An old woman passes us, moving slowly and supporting herself against the mud wall of her house. She holds her stomach and one breast. She pauses and cries. Never have I seen a woman cry as she does, openly, with such obvious pain. I don't recognize her, but indeed it is Rina Kumari, and so she leads us into her house and pushes open the doors to the wedding chamber where nearly two years ago I had placed my tripod amongst tiny potatoes which rolled everywhere from under the bed, and I had set about my work trying to ignore the screaming children outside

the window. I'd photographed her Shiva with the photo of Nepal's royal family hanging next to it. The painting and photograph are still there, colors nearly as bright. As usual, I have not remembered the room being so small. Rina Kumari had once



sat in the corner and asked me to take her photo. She'd smiled and asked what caste I was, and Bimal had answered that I was, like her, Kayastha. And she'd complained how the young kids all wanted love marriages, and that the girls weren't doing these paintings for the marriage chambers any longer. I'd remembered her as a friendly woman and had hoped she'd paint for me a Shiva. But artists, I've found, are as transient as the art—and sometimes more so. Though the painting of a happy Shiva is still there, I doubt that Rina Kumari can outlive her painting.

I am pressed on to the home of Gyatri Teli, a beautiful woman who it is said is thirty-five (people here age in blocks of five and ten). Gyatri has never been to school but has the bearing of a sophisticated woman and accepts the paper graciously. In her home women are making baskets for sending dowry.

I give Gyatri three pieces of paper, write down her name in my book, and prepare to leave when another woman who all along has been watching me interrupts. Her skin is dark and taut across her face, and her eyes not bright and clear as Gyatri's. She wants paper, too. Unconvinced she fully understands my mission, I nonetheless give her paper. "But what should I make?" she asks, rightly noting I had made her no assignment such as the painting of an elephant, flower, or bird. And then she asks, "But what about writing down my name?" and wants to know what I've done with my notebook. She watches me write down her name as well as her husband's name, then she opens up her roll of paper. "May I do two elephants? Mouth to mouth?" she asks, her two hands pressed flat, thumb to thumb against the page. "And I'll paint some flowers in the space between their mouths?"

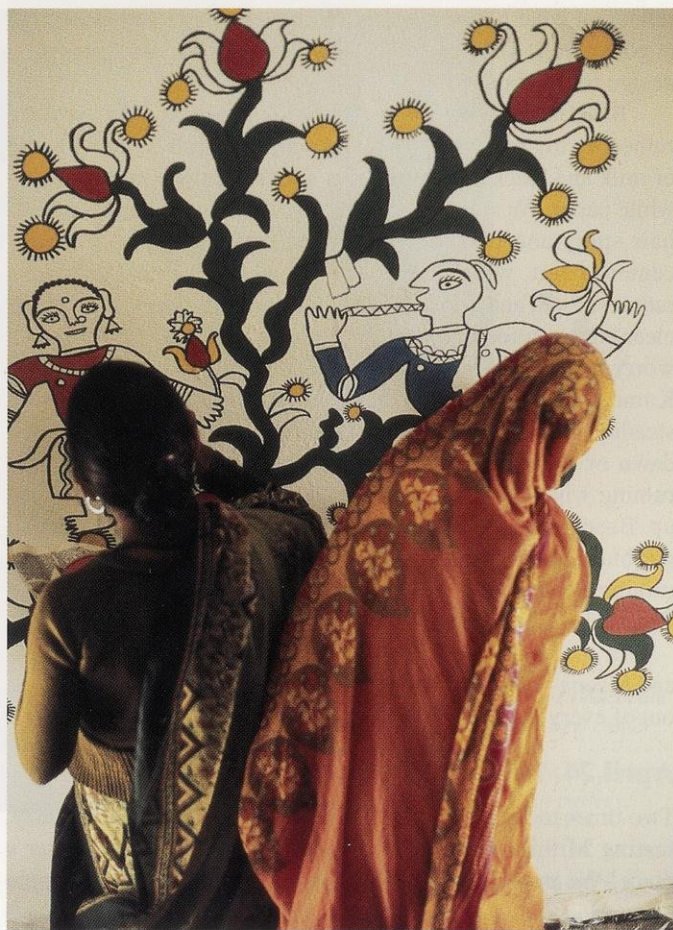
What a pleasure it is to offer rolls of paper and to see such excitement to create. Today there is no reluctance, no excuse that there's a lack of time. With the new names written in my book, we seem to have embarked on the beginning.

March 29, 1990

We are preparing for our first exhibition.

It is somewhat confusing who prefers sticks wrapped with cloth and who needs pens. When I bike off to buy pens, the stout Brahmin three are just arriving. I hurry back. In addition, Manjula has brought a friend named Heera who insists she, not Manjula, made paintings on three sheets of paper I gave Manjula, so to her I dole out one of my best new sheets to paint on. Sukamari meanwhile is making terrible lines and is calling for a decision on colors. In my state of half control I know it's best to stall her. Then Anuragi and Kumiya arrive. Kumiya looks befuddled—someone in her extended family has died. I hope that means she won't be able to make her odd turtles, but unfortunately she's very eager to make them. And so she sits on the floor with a piece of paper, and she begins painstakingly to execute her famous turtles, not once ever complaining or suggesting there might be something else she'd like to do.

Anuragi gives me her great "Namaste" greeting which means bending her head coyly from side to side, squeezing one shoulder up to her eye, and grinning to show her fabulous circu-



Manjula and Kamarun paint a mural in Kathmandu.

lar rows of teeth, the best in all of Janakpur if not the world—teeth even and curving like seats in a grand auditorium or coliseum. She sits on the piece of paper I give her, thinking it her personal floor mat, and is slow to understand she must get off it, then goes through an elaborate blowing and dusting ritual to clean it. Her parrots immediately look terrible. She tells me she wants to do goddess Kali. She does one, not planning for the border so that this Kali ends without feet. She's somewhat disturbed by this, turns her paper over, and does one properly with quick sweeping gestures. When it's done she parades it around, showing off with pleasure her image of the Kali. She does not seem disappointed when I tell her that her lines are still rough, fit for wall painting but not for paper. When I next look back at her she's found a scrap of old paper and is making Lord Shiva on his bull. It delights her and she shows everyone before going to work on more birds. By the end of the day she's making big fat borders around the birds, and using up my poster paint to do it. I do think Anuragi dwells half in the air with the gods she's busy talking to.

Sukamari continues her horrendous Shiva. I try to help Grija, and in taking her pen discover that her hand is without several fingers—perhaps she is a leper, but I have no time to

reflect on what her problem is. With Annapurna and Baachi all is going well. They periodically ask for advice and I suggest a design for the border.

Back in the main room, Rekha's painting is quickly being ruined by my expensive gouache while Manjula's border made of milk and black powder smears over her entire sheet of costly white paper. We somewhat fix the problem by giving it a coat of hair spray and then covering most of the page with brown cement paint, which does not adhere well either, but looks rather smooth and good. Meanwhile Mundrika has returned. It's clear her rendition of a wedding painting is not good, but I can't worry about her, nor Anuragi blissfully drawing her gods, nor Kumiya intent upon her turtles, making them ever so slowly but steadily, as if she'd made these poor spidery turtles since the dawn of time. Grija is adding color to her painting, instantly ruining whatever good was in it. I'm telling Sukamari to give up. Baachi waits for me to tell her where to put white, where to put blue. Manjula's friend I've also convinced to stop as she's ruining good paper. Mundrika spills ink on her painting, and I'm glad so she won't have to finish it.

In the end, it is the Brahmin three—Baachi, Annapurna, and Meena—who save the day. I tell myself if I get one painting out of every day, we can make it—and today there are four.

April 24, 1990

Two times today I find calm. Once, when I lead the weary, lazy, fasting Mithila along with energetic Kumiya to the potter's place. We pass down the road blotted with shade and people

like luminous dabs of color moving beneath the thick mango trees, and I see all the world as brush strokes of paint, and everything, even my anxiety, seems a painted illusion.

Then calm again at the potter's place, which is a hit. On the way there I don't know what Kumiya is talking about—something of course about the five turtle-shaped rice vessels she has made for me out of mud and dung and rice husk in her village and which took fifteen days to complete. I don't know if she understands that today she will attend a ceramics training, and that she is now going to make turtles out of a mold in clay. Certainly the highlight of the day is when the potter, Shanta Kumar, shows her how a turtle can be formed by a mold. She smiles her wide smile, claps her hands, laughs. She has to be shown again and again as Shanta Kumar fills the mold with clay, attaches to it another piece of clay, pulls it back, and a finely etched little turtle emerges. When he rolls it into a ball she stretches out her strong arms as if to rescue it—then moans as if it's killed.

Finally she has her own small clay fish and turtle to take home with her, two offerings in her hand which she chuckles over, shows others on the road, and at last reveals to everyone in my house. How fitting that Kumiya, who has patiently made turtles for three days, bent over the little molded turtles, painstakingly giving them their individual characteristics—their jailhouse stripes, their bullseyes—and fixing them in a galaxy of small swirls, scorpion shapes meant to be rice seedlings, and polka dots—and all this with her shaky hand, and never losing her energy or humor (though once she asked Manjula to stand all over her body as some sort of massage).

And even though I do lose patience with her—how fitting she should be the one to see the miracle of the clay turtle's birth. And her own turtles she's talked so much about will soon have their rebirth in clay when she receives ceramics training, and she is awed by the wonder of all the creation I'm showing her.

I go to the bazaar to do shopping and give the ultimatum that they must clean up. But when I return, everyone is lounging around, and Kumiya is on the ground practicing the writing of her name. She is as excited about her name as much as she is her turtles, but her handwriting will cause further ruin to her painting, whereas Premdi's handwriting is elegant, quite in contrast with her clumsy, thick-lined fish. Kumiya bends over the paper

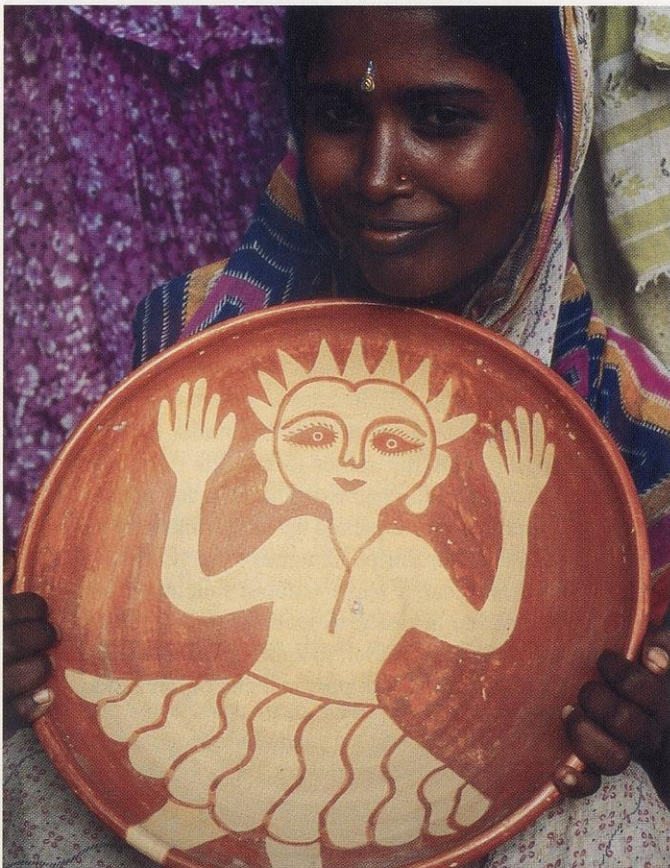


Kamarun paints peacocks.



LEFT: The women decorate our new center.

BELOW: Suleka with pottery.



with her name on it—she’s managed to hold on to this scrap for a week. It’s always with her when she comes and when she goes. I’ve asked her nephew to teach her, but he only writes her name again and again and she copies with all kinds of miserable contortions of the letters. The K is all wound wrong, like a serpent on a stick. The Y, which is unlike our English Y, looks like a slingshot, or a very plain V. She forgets the I as well as the A. So she fills her time for the rest of the day, busily absorbed in trying to make her name, creating no more turtles.

January 1993

We are deep into building our organization. Each day, more strange things to learn. The mystery today concerns learning to keep a cashbook. “Heera, how many pieces of handmade paper did you buy?” “Fifty pieces of paper at forty rupees, Sister.” “How many rupees did you spend, Heera?” But forty times fifty rupees is an impossible sum to calculate. They pull out new calculators (*coolaters*, Kamarun calls them). The mystery continues. Manjula comes up with 2,500; Kamarun says 9,000. We spend fifteen minutes on this calculation, each woman offering a unique answer. At last agreeing on a sum, we move on.

“What did you purchase today, Heera?” “Twelve bottles of paint at twelve rupees each.” But even Indu is baffled by this one. So the day moves on, well spent, perhaps, but with little visibly accomplished.





Members of the Janakpur Women's Development Center in front of the new building.

In 1993, with help from the Australian, Danish, Japanese, and German governments and a non-governmental organization called Save the Children Japan, we completed the building of our center. It's a beautiful place under mango trees which the women decorated with traditional mud relief designs. We all took part in a brick-laying ceremony.

July 1993

I'd forgotten that the potter caste helps out in religious ceremonies, but here is our potter Mongol bending over the trench dug for the foundation, with a ceremonial pot filled with mango leaves. The whole pot covered with red powder and filled with leaves enters the hole. Manjula's father-in-law, a pandit, is here in the trench, too, with an elaborate design on his forehead, something like two yellow highway lines stretching between two roundabouts. I say I may die of heatstroke standing in this hole—is there an umbrella? Manjula says, "Don't say that!" The women begin to bless me—may I have a husband and children and come to live here. I say may their daughters' daughters' daughters work here, and they say may I be here when my hair is white, and I say may we all be here, lying on the veranda while our daughters' daughters give us massage.

Manjula points and entreats me to listen to her father-in-law who is speaking in a stream of Sanskrit, some of which I'm asked to repeat. Strange-sounding words are mixed with names of gods I know: "... *obgabegum papgabam Ganesh* ..." and then I must pick up some tumeric, sindhur, rice, tulsi leaves,

mango leaves, flowers. The father-in-law makes a ring of straw on my right ring finger—I tell the women this brick-laying is like a marriage ceremony in my country.

It is moving, the uttering of strange words, being asked to shower handfuls of flowers over a banana leaf, over the entombed pot—while the father-in-law spoons water out of a brass vessel with a ladle fashioned from a leaf. You know all of this is for their gods, and you are the vehicle. The women continue to watch, and up there in the hot sky are the gods, and you are right there in the middle. Holding the handful of flowers you feel richer than you've ever imagined being.

Then our ceremony breaks up—Mongol shovels dirt over the flower-strewn pot, Nilam passes gracefully through the laborers with blessed pieces of cool cucumber and broken-up sweets. Manjula feeds her father-in-law his due feast—he is disgruntled because I only had five rupees in my pocket to give him. Kaniya and Galo have picked up long sticks and are meanwhile batting down our unripe mangoes—we'll be lucky to see any ripe ones this year. I leave without much sentimentality, urging the women to get back to work. But for moments there under the sun we were together, in another space, solid together once again, and not lost in our personal and organizational worries and concerns.

August 23, 1994

Sometimes I look at Annapurna and Anuragi and fear the day when one of them dies, the day when Anuragi goes on one last

barefoot pilgrimage and never returns. I want us all to be together forever.

The women want a clause in the charter which allows their daughters to take over when they become too old to paint. I reject the idea totally, and then think, why not? Why not keep the family going?

On hard days when I think of the future it hits me that I'll never be free of this project—it's like an alcoholic husband or a debilitated child. Yet other times I feel joy. So how do I turn the weight into a blessing and not let serious things be heavy things? How do I prevent responsibilities from being burdens? How do I find a life in the midst of all the responsibilities?

Our guard Bharat comes in and out of the rooms, so naturally responsible as well as instinctively attracted to an event. He appears bearing a stick and a piece of cloth and begins clearing the mold from the ceiling just as I'm shouting about the lack of attention to the spread of mold. He notices the new trainees spilling paint on chairs, lifts the chairs out of the way, requests the new trainees to keep the paint on the paper; arrives here and there, ever helpful, our angel guard.

So I wish for another angel of lightness to come administer to me, rub the sour expression from my face, massage my back till it is straight and free of tension. And then I will stop to appreciate:

- a beautiful painting of a peacock
- a rich orange color created in the silkscreen room
- Bina in a purple sari making a purple potholder
- the potter Mongol's strong, humorous face
- the warmth in the calls coming from many rooms at once, "Sister!"
- a rainbow in dense clouds just beyond our gate
- the children crying "Russian bye, bye!" as I walk home through the village, their confused, innocent good will.

September 1995

A sure sign that something is happening. Ahead of me I see a woman, much shorter, much more frail than I. She wears an ordinary yellow and red sari pulled tightly around her small hips, and plastic shoes. For a moment she steps off the brick path, seeing if she can move faster on the smooth dirt. She clutches a handbag of black vinyl, just like the ones sold in all the shops this year. Her speed and the way she is clutching the handbag makes me think she must be one of ours. She is walking with a sense of purpose. Hers is not the graceful walk of a woman going to the field or to the bazaar, a walk neither hurried nor slow, the steps of yet another day. I get closer, although with legs far shorter than mine she is moving quite fast. Then she turns. It is Abusuman. She tells me she's running late. Checks her watch. She's come from Ward No. 8, she tells me, as if I knew or were concerned about wards.

This is what I can't explain to the people who come and evaluate us according to "result indicators," "deliverables," "outputs," and the "gender framework." What it is that the women have that they didn't have before, and what it is this

project has given them? The desire to get somewhere; that sense of purpose, so that their arriving late really matters—to others, and to themselves; that their presence is counted on, valued; that being there matters to a whole organization to which they belong. Not that the quickened pace and awareness of time necessarily gives her a better life than the woman who makes her way without counting minutes to her work in the fields. Perhaps in a developed world one hundred years from now, women will again be endeavoring to balance baskets on their heads as they amble to the fields without checking their watches. But if that happens, it will be because women have experienced both ways of living and have made their choices.

September 1995

Indu, our chairperson, calls. I ask, "How was Beijing?" "It was good, sister, only coming back on the plane I got my period and oh—there was so much trouble."

Indu arrives. She's brought back loads of glossy brochures from projects in other countries and has looked at the photos. She has met women at the Beijing conference from all over the world and intends to write to them, although she hasn't yet considered how they will be able to read her Nepali. She carries a United Nations Development Fund for Women handbag and writes with a United Nations pen. It's hard to imagine her on the plane, sleeping in hotel rooms. Chinese rain, tour bus rides, food arranged according to Vegetarian and Non-Vegetarian, and none of it, she says, tasted good to her. Still, as Indu tells us what she did and saw, she seems different, distanced, as if perhaps still traveling on a plane between two worlds.



Today many of the women of Janakpur and other small villages can read and write. They are able to travel unchaperoned to Nepal's major city, Kathmandu, where they market the paintings and pottery created by the women of their cooperative. They also understand the proper ways in which money is exchanged for paper, paints, and other supplies necessary to continue their work.

There was a time when women of Nepal were not allowed to sit at the dinner table with the men of the house. Today, for many of these women life is quite changed. Manjula provides a good example: When the mural she and her friends created was unveiled at the United Nations building in Kathmandu, Manjula delivered a speech before the attending government officials.

In 1994, I began work in Vietnam as well, as a consultant for projects aiming to uplift women of ethnic minorities through the ability to generate income. There, too, my days are a blend of anxiety and pleasant surprise. Thus I continue my work with women whose knowledge and experience are quite different from mine. And I continue to have feelings both of loneliness and connectedness. ♡

Color representation of photographs was made possible by a generous contribution from Carol B. Phelon.

Hubble Space Telescope

by Arthur D. Code

PART ONE: BEGINNING AND DEVELOPMENT

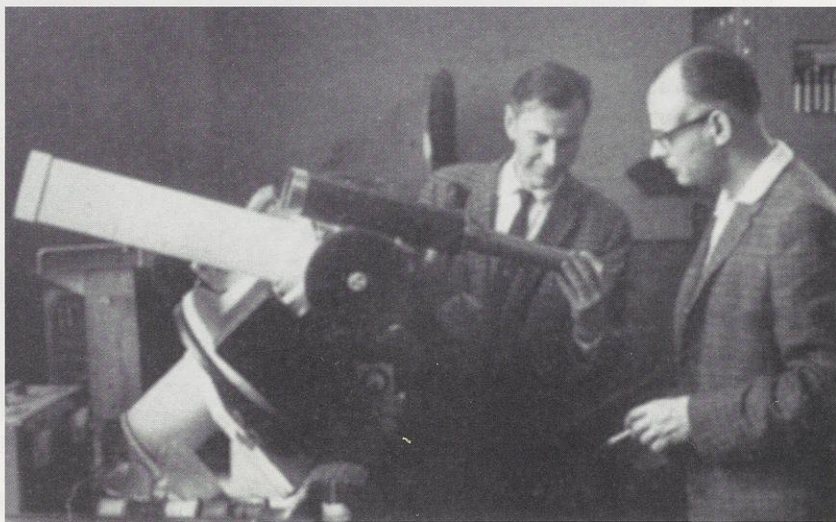
Space Telescope's Origins

For centuries astronomers were constrained to view the universe from the bottom of an ocean of air. Of all the light that comes to us from the planets, stars, and nebulae, only a small fraction makes it to the surface of the earth. Most of the radio, infra-red, ultraviolet, and X-ray radiation is absorbed or scattered in our atmosphere. Moreover, what we do see of the surface of a planet or the structure of a galaxy has been distorted by the intervening air. While twinkle twinkle little star may be an inspiration to the poet, it is a frustration to the astronomer. It is to minimize the adverse effects of the earth's atmosphere that major astronomical observatories are placed on isolated mountain tops. For a long time astronomers dreamed of carrying out their measurements from above this sea of air, but not until the launch of Sputnik in 1957 did realization become a possibility.

There are three advantages to observing from *above* the atmosphere. The sky is darker, and we should expect to be able to see fainter objects; moreover, the sky is always clear and dark as seen from an orbiting observatory. We can see, however, not just visual light that the eye is sensitive to, but light from across the electromagnetic spectrum: from radio waves to energetic gamma rays. Finally, the stars do not twinkle; that is, the images are as steady and sharp as the telescope optics permit. The first orbiting observatories took advantage of the fact that we could view the universe in other wavelengths, i.e., see the universe in "a light of a different color."

The first observatory in space was Explorer VI, a gamma ray telescope. Explorer VI was the creation of William Kraushaar, a University of Wisconsin professor then at Massachusetts Institute of Technology, and George Clark, a professor at MIT. It was launched in 1961, and it searched for sources of high-energy radiation in space.

The first true optical observatory in space was the Orbiting Astronomical Observatory (OAO2) launched in 1968. Looking out one end was the Smithsonian Astrophysical Observatory's "Celascope," which was basically four ultraviolet television cameras. Looking out the opposite direction was the Wisconsin



Theodore Houck (right) and the author in the early days of the University of Wisconsin space astronomy laboratory. They are examining a small telescope to be operated automatically by computer control similar to techniques that would later be employed in orbiting telescopes.

Experiment Package (WEP). WEP consisted of seven different telescopes making measurements of the brightness and spectrum of celestial objects in the ultraviolet.

OAO functioned for fifty months in orbit around the earth. It received pointing and setup commands from the ground and transmitted the data back to ground stations distributed around the earth. For the first time, we learned what planets, comets, stars, and galaxies looked like in the ultraviolet, and they looked quite different than they do when seen with a ground-based telescope.

An observatory called the International Ultraviolet Explorer (IUE) continued to send back information on the ultraviolet spectrum of stars from a geosynchronous orbit (like those of communication satellites) for some eighteen years and was only recently turned off.

The OAO's and IUE made use of the capability of measuring this light of a different color. They were also relatively small telescopes with pointing precision only sufficient to collect the light, not image it—that is, make a picture of the sky. The idea of a large telescope in space capable of capturing sharp images without the disturbance caused by a turbulent atmosphere pre-dated these early satellites but was a much

more difficult undertaking. The Hubble Space Telescope is the first to have achieved this performance, but it took many years and some agonizing setbacks before it came to be. Throughout those years, the University of Wisconsin played an active and important role.

The Evolution of Space Telescope

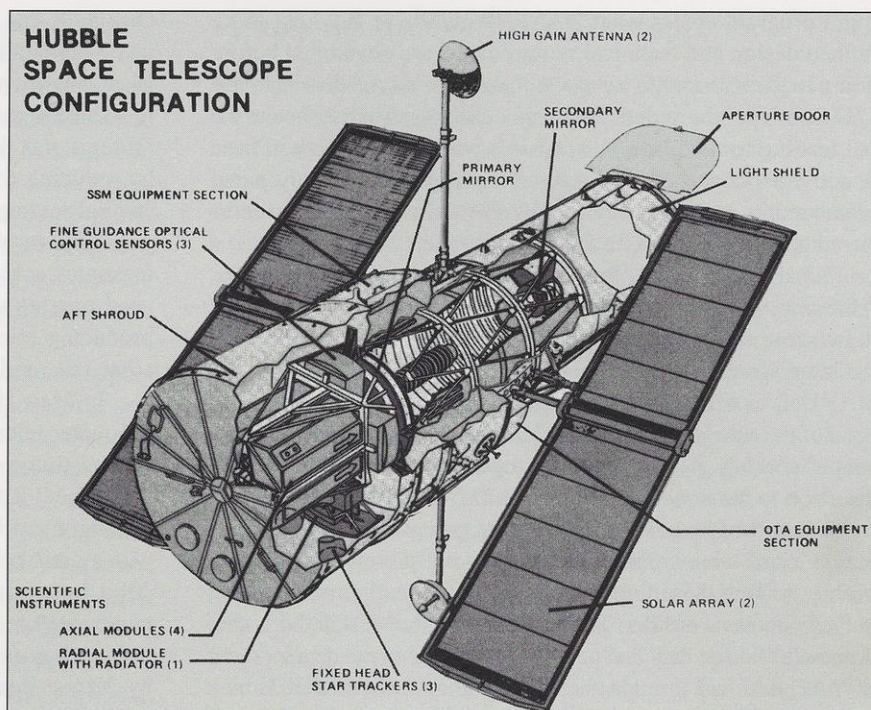
Sputnik I was launched on October 4, 1957, and ushered in the space race. In the United States, the National Academy of Sciences sent out a letter soliciting suggestions for a 100-pound satellite. This letter, written by physicist Lloyd Berkner, then at the Carnegie Institute's Department of Terrestrial Magnetism in Washington, D.C., started a chain of events that led to the activation of the space science board of the National Academy and the emergence of a national space science policy. University of Wisconsin faculty were involved in the planning, particularly in the fields of meteorology and astronomy.

Thus when NASA came into being a year later, in October 1958, the space science board members and respondents to Berkner's letter became the architects of NASA's space science mission. Of course, telescopes in space were a part of this program from the beginning; but it really was not until the summer of 1965 that the plan to build a large space optical telescope was initiated. That year, the space science board met at Woods Hole, Massachusetts, for summer workshops on space science.

The working group on optical astronomy prepared a recommendation for the development of a telescope of about 120-inch aperture. It was believed that this size telescope could be launched in the nose cone of a Saturn V rocket. In response to this recommendation, the National Academy of Sciences formed an ad hoc committee on the LST (large space telescope) which first met in April 1966. This committee, chaired by the eminent Princeton astronomer Lyman Spitzer, prepared a report titled "Scientific Uses of the Large Space Telescope." It was here that the contributions such a telescope could make to unlocking secrets of the structure of the universe were first documented.

Lyman Spitzer had first discussed such a telescope as far back as 1946; and throughout the early years, we often jokingly suggested that the initials LST stood for Lyman Spitzer's telescope, not the large space telescope, for he was indeed the leading advocate for such a telescope. The path from 1966 to the eventual launch in 1990 was a long and difficult trail beset with many obstacles. Prior to 1970, the efforts concentrated on trying to develop some consensus within NASA and among members of the astronomical community.

James Webb, the NASA administrator, established the Astronomy Mission Board in 1967 to advise NASA in the plan-



A drawing of the Hubble Space Telescope showing the three structural components: the optical telescope assembly, containing the telescope mirrors and guidance unit; the support system module, which provides power via solar paddles, motors, electronics, communication, etc.; and in the aft end, the science instruments, which may be replaced with new instruments from time to time by a shuttle rendezvous, such as took place in February.

ning and conduct of all astronomical missions in space. From 1967 through 1969, the board met nearly every month. As a member of that board I came to appreciate how partisanship and acrimony can disappear when participants are able to meet so frequently in a common cause. The reports of the Astronomy Mission Board included an evolutionary approach to a large space telescope.

The Astronomy Mission Board was terminated following the report to the newly inaugurated President Nixon by the space task group chaired by Vice-President Agnew. This report focused on manned missions with the goal of placing an astronaut on Mars and relegated science to a lesser status.

As the climate of acceptability for a large space telescope developed within NASA, the agency entered into preliminary feasibility studies, or what was called Phase A. Typically a

Author's Note

In this discourse I have tried to use constraint and not make excessive use of acronyms; however, I want to give some flavor of the language employed within an agency such as NASA. Without an adequate glossary, one feels quite lost; but the use of abbreviations and acronyms is not a matter of elitism, rather it is in the interest of brevity.

flight program enters what NASA terms Phase B where more refined design and technical requirements are developed before going to Congress with a request for a “new start,” that is, Phase C/D funding, where detailed design and construction is carried out leading to a launch. Wisconsin’s participation in the Phase A activities consisted primarily of committee and study panel membership and advocacy among our colleagues by virtue of our ongoing research with OAO.

At the Marshall Space Flight Center in Huntsville, Alabama, a Wisconsin astronomy Ph.D., Bob O’Dell, was drawn from the directorship of Yerkes Observatory to become the large space telescope project scientist. Under the leadership of O’Dell at Marshall Space Flight Center and Nancy Roman, head of the astronomy branch at NASA headquarters, space telescope working groups were put together to provide scientific direction to the final evolution of the Hubble Space Telescope.

When the Phase B science working group and instrument definition teams were organized, the Wisconsin presence was highly visible. Among those important Wisconsin scientists participating in these studies were Drs. Ted Houck and John McNall, both now deceased. (Earlier they had played a major role in the development of OAO and had brought that expertise with them. Ted Houck chaired one of the NASA committees prior to the Phase A/B activities, while John McNall served on two Phase B working groups as did Dr. Robert Bless, whose later contributions were many.) At that time a large space telescope seemed to be only a few years away. However, the bumpy road was just beginning.

At the core of the problem, of course, was cost. Twice after appearing on the NASA and President’s budget, the space telescope was removed by Congress. It was only by the combined efforts of NASA, industry, and the astronomical community that the space telescope received a congressional go-ahead.

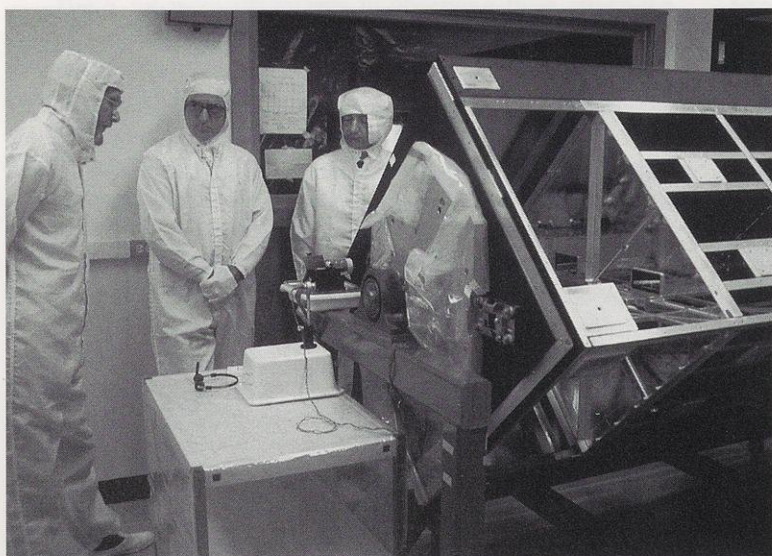
Originally the large space telescope was to be a 3-meter (120-inch) diameter telescope. As cost became more and more an issue, studies were carried out by a number of aerospace firms to examine alternative, lower-cost observatories. Among the findings was the fact that significant savings could be achieved by reducing the telescope size to 2.4 meters, but that no substantial savings resulted in a further reduction in size.

As a result, we astronomers came to the conclusion that inasmuch as the defense department spy satellites (or Big Bird) used mirrors up to that size, tooling and expertise existed in producing mirrors of that size; but a larger telescope incurred some risk, and thus a higher cost.

In May 1975 the LST project officially moved down to a 2.4-meter telescope. Shortly thereafter, James Fletcher, NASA administrator, decreed that instead of being called “large space telescope,” it would be known simply as “space telescope”—the argument being that by removing the word *large*, funding was more likely. The terminology would change once more in 1983 for a very different reason: It had become customary to name satellites, and as the original launch date approached, the task was as usual assigned to a committee. I recall being called by Nancy Roman of NASA, and being asked what I thought might be an appropriate name. I instantly replied, “Hubble.” Nancy said, “That is remarkable!” Everyone she had talked to had suggested Hubble. The reason of course, was that we all saw the space telescope as making its most exciting and important contributions to the study of the distant galaxies, which make up the expanding universe. It was the California astronomer Edwin Hubble who had opened the doors to this magnificent landscape.

Congress finally gave approval for a new start in fiscal year 1978 and gave NASA authority to go out for bids prior to the start of the fiscal year. Congress had, however, imposed a number of constraints on the program. Among these was an earlier requirement that there be substantial international participation to offset the high cost of the space telescope. This introduced yet another complex management interaction that the space telescope project would be faced with: NASA headquarters had grappled with the selection of a center to lead the program for several years. It was decided that the Marshall Space Flight Center would be the lead center for design and fabrication of the telescope up through launch, after which the Goddard Space Flight Center of Greenbelt, Maryland, would assume operational responsibility.

Also, since Goddard had always been the lead center for science, it would be responsible for the scientific instruments. Partly for reasons connected with the levels of funding Congress had provided, the space telescope system was separated into three components: the optical telescope assembly, the support system module, and the scientific instruments. The optical telescope assembly consisted of the telescope optics and the structure that held them together (see drawing); the support system module contained control electronics, power, communication, etc.;



Robert Bless in the clean room at the University of Wisconsin Space Science and Engineering Center during the time when the high-speed photometer, shown here, was being fabricated. Bless, principle investigator for this instrument, played an important role throughout the development of the Hubble Space Telescope.

and the scientific instruments were the individual science instruments that could be mounted at the focus of the telescope.

In July 1977 a contract was awarded to Perkin Elmer Corporation of Danbury, Connecticut, for the optical telescope assembly. They would make the mirror. Lockheed Missiles and Space Company in Sunnyvale, California, was selected to develop the support system module. There would be no prime contractor. Rather, Marshall would manage the entire project, a mode that was thwarted by the fact that funds did not provide for sufficient manpower to properly monitor the activities of the contractors.

As to the scientific instruments, an announcement of opportunity was issued in March of 1977 soliciting proposals for scientific instruments from the science community. The Phase B studies had yielded a set of prototype instruments that were to be a guide for proposers. At about the same time, NASA also put out an announcement for science payloads for space shuttle experiments. Bob Bless and I at the University of Wisconsin, with the able support of the space astronomy laboratory staff, decided to respond to both announcements of opportunity.

In the case of the space telescope, we proposed an instrument not specifically requested. It was to be a small auxiliary instrument called a high-speed photometer. This would take advantage of the fact that stars do not twinkle in space. The space shuttle proposal would be for an ultraviolet spectrograph instrument that would measure the polarization of star light in a spectral region never observed before. This instrument incorporated a clever device developed by Ken Nordsieck, a member of our University of Wisconsin faculty. Ken himself was involved in using his polarization device in a spectrograph being proposed for the space telescope by the University of Colorado.

Bless and I literally flipped coins to determine which of us would have his name appear first on these proposals, that is, which would be the PI (principal investigator). The result was that Bless would be PI for the space telescope high-speed photometer and I would be PI for the shuttle payload, later to be called WUPPE.

Such proposals undergo a feasibility study within NASA and then an outside review by other scientists in the field. We hardly expected it, nor were we prepared, when both proposals succeeded! Moreover, each of these instruments grew in size and complexity as we attempted to fit into the overall projects as they evolved. One of the results was that it became clear that I would not be able to devote any significant time to the high-speed photometer, nor Bless to WUPPE.

Blair Savage, another of the University of Wisconsin astronomers, was a member of the team selected to provide the high resolution spectrograph, while I was invited to be a member of the wide field/planetary camera team. (The wide field/planetary camera is the instrument that produces the pictures generally associated with the Hubble science, an example of which appears at the end of this article.) Later, University of Wisconsin Professor John Hoessel also became a member of the wide field/planetary camera team. Finally, telescope and instruments were on their way! Launch was to be in December 1983.

Making the Hubble Space Telescope:

The space telescope represented a new approach to space science for NASA in several ways. It also represented something new in astronomical instrumentation and research. First, of course, above the earth's atmosphere, we can expect to see details never seen before. To do this, the telescope optics would have to be figured and polished to much higher accuracy than it was customary to do for ground-based telescopes. Given these great optics, it would be necessary to provide a guiding system that would point and hold the telescope on the stars with unprecedented precision. This would be a technical challenge for Marshall Space Flight Center and its contractors.

The commands sent to the telescope to carry out the observing tasks and the data received from the scientific instruments and space-craft systems were to be executed in a wholly different way. In the past, data and commands were transmitted to and from ground stations with limited access time. Space telescope was to use a new communication satellite system called TDRSS (tracking and data relay satellite systems).

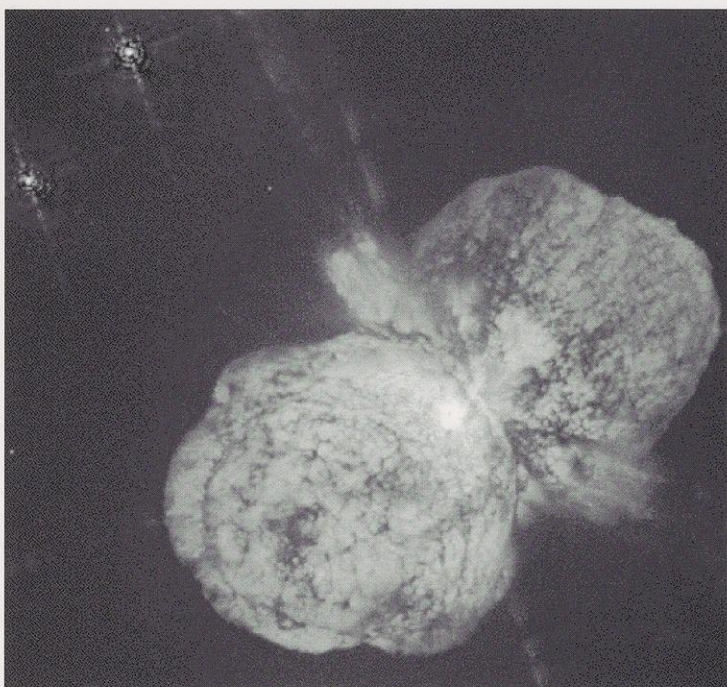
A very important change was that the space telescope would be launched using the space shuttle. It would be carried to orbit, deployed, and then checked out before leaving the telescope to be controlled from the ground. At a later time, the space telescope could be revisited to effect any required repairs and to install new scientific instruments.

The plans also called for return of the telescope to Earth every four years for a more thorough refurbishment. The planned lifetime was to be fifteen years.

Finally, the scientific operation of the space telescope was to be the responsibility of the science community. An independent Space Telescope Science Institute would be established to provide the interface with the astronomical community. While the engineering aspects of orbital operation would remain with NASA, the task of planning and executing the astronomical observations as well as the analysis of the data obtained would be done by the institute.

While creation of a better telescope, use of communication satellites, and launch and revisit by means of the manned space shuttle—none of which had been done before—were difficult technical challenges, the requirements were well defined. On the other hand, the management and operation policy could take on a variety of forms.

In the early 1970s I chaired an ad hoc committee to consider ways of contracting for the scientific instruments and ways of operating the telescope. We started by considering two limiting cases: one in which all aspects—telescope construction, instrumentation, launch, operation, and science management—were carried out by NASA; and at the other extreme, everything would be done by a non-governmental entity such as a university consortium. Neither extreme would be feasible or desirable. NASA would not have the diversity of astronomical expertise that resides in the general scientific community, nor would it have the independence from government control necessary to maintain a long-term scientific research effort. On the other



This is one of the Hubble images of the super massive star Eta Carinae taken with the widefield/planetary camera 2. The star experienced a giant outburst 150 years ago. The image shows the pair of ejected clouds of gas and dust. On images taken about a year and a half apart, the knots and fine structure show movement which allows astronomers to calculate the expansion velocities and the deceleration, which will help to understand how and why this explosion took place.

hand, an independent organization could hardly acquire the infrastructure or expertise to launch and carry out orbital maintenance of such a space telescope.

The committee concluded that the best way to procure the scientific instruments was to request proposals from the scientific community and, through the peer-review process, choose the instrument mix. They also concluded that the telescope should be operated by an observatory staff selected from outside of NASA. This, then, is what led to the consideration of the independent Space Telescope Science Institute. From this seed ultimately NASA and the outside astronomers came to accept the institute as the proper approach. Bob Bless played an important role in communicating an understanding between those astronomers not involved in the space program and NASA. I had an opportunity to play a role in each of the evolutionary steps leading to an institute. As a University of Wisconsin representative to AURA (Association of Universities for Research in Astronomy), a consortium which operates the National Optical Observatory, I supported an interest in AURA's management of such an institute. When NASA asked the National Academy of Sciences to consider the question of an institute, I was asked to be a member of the committee. Later, when NASA solicited proposals for the management of a space telescope institute, I was the chairman of the board of AURA, and as such was able to play a major role in the production of a successful proposal.

AURA's proposal involved a teaming with Computer Sciences Corporation at their Silver Springs, Maryland, site and with Johns Hopkins University, where the institute was to be located. At that time launch was only three years away, and it was vital that the institute start up quickly. For that reason, I resigned from the AURA board, and for nine months served as acting director of the institute while the recruitment of the director could be effected. As it turned out, because of launch delays, we had considerably more than three years to complete preparations. A prominent X-ray astronomer, Riccardo Giacconi of the Harvard-Smithsonian Center for Astrophysics near Boston, assumed the director's position in the fall of 1981 and remained until a Wisconsin astronomy Ph.D., Robert Williams, took over in August 1993.

The initial schedule slips were, for the most part, a result of delays in completing the 2.4-meter primary mirror. For a variety of reasons, including financial constraints, progress was slow, and the launch date changed from December 1983 to October 1984 to March 1985. Despite the stretch-out in time, the principle investigators and members of the science working group became concerned that this extra time was not being properly used. For example, important testing was being eliminated. Most of all, however, they felt isolated from the project.

NASA headquarters recognized the importance of utilizing the experience and expertise of the working group, and a space telescope observatory performance and assessment team was set up which would have license to probe into any issue and report directly to headquarters.

Because of his long experience with NASA and space astronomy, Bob Bless was chosen to chair this committee. For two years the committee played an important role in the construction of the Hubble Space Telescope. The schedule had now slipped to August 1986; but on January 28, 1986, all of NASA suffered a dramatic setback with the tragic explosion of Challenger. WUPPE was to be the next launch following Challenger, and the Hubble Space Telescope was to follow later that year.

It was not until 1990 that either telescope was to make it into space. Thus some thirteen years after the official new start for the Hubble Space Telescope, a new tool for exploring the universe came into being. When, however, the focal plane instruments were turned on, it was discovered that this most precise telescope of all was not precise enough. It was a superb mirror, just the wrong one because of a faulty test setup. It might not have caused a problem in a ground-based telescope, but it was a big problem in space. The Hubble Space Telescope could still do things that could not be done from the ground, but it was a great disappointment to astronomers everywhere. It was not until December 1993, when the first refurbishment mission was completed, that the adventure could actually begin, and images such as the one illustrated here opened up exciting new horizons. 🌌

In Part Two, I will describe the events following launch and the role played by Wisconsin scientists.

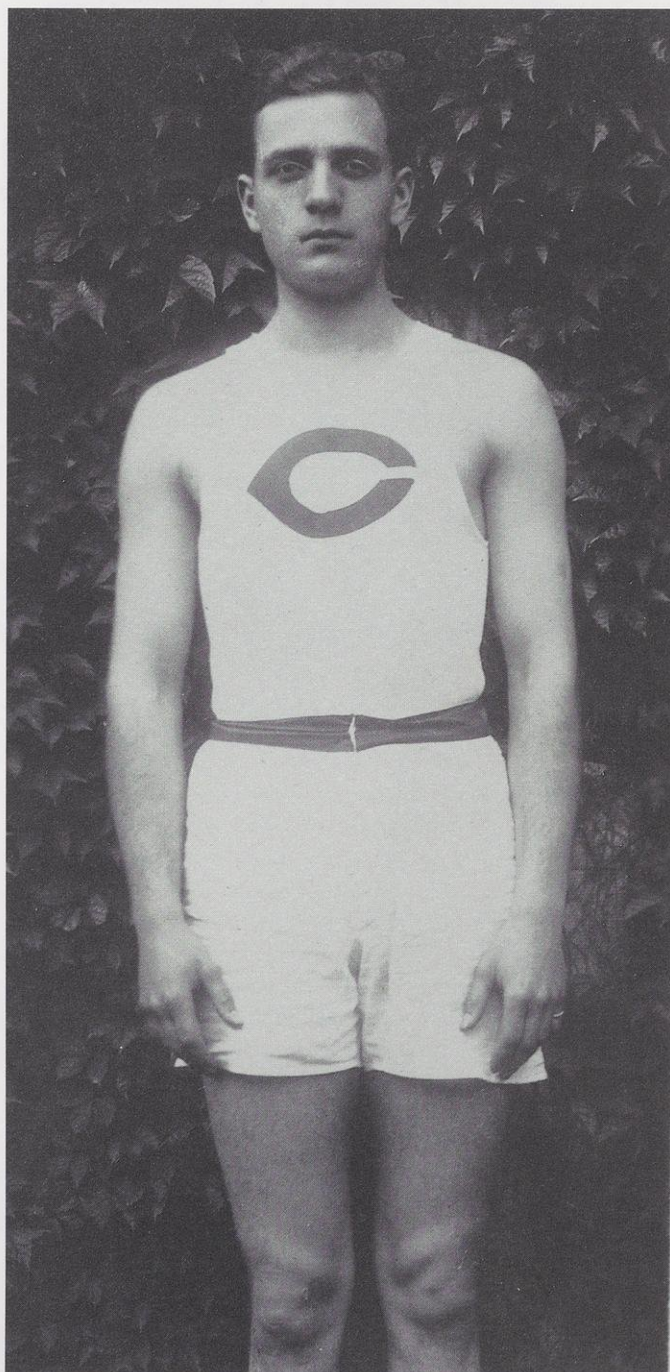
Edwin Powell Hubble at Yerkes Observatory: The Making of an Astronomer

by Gale E. Christianson

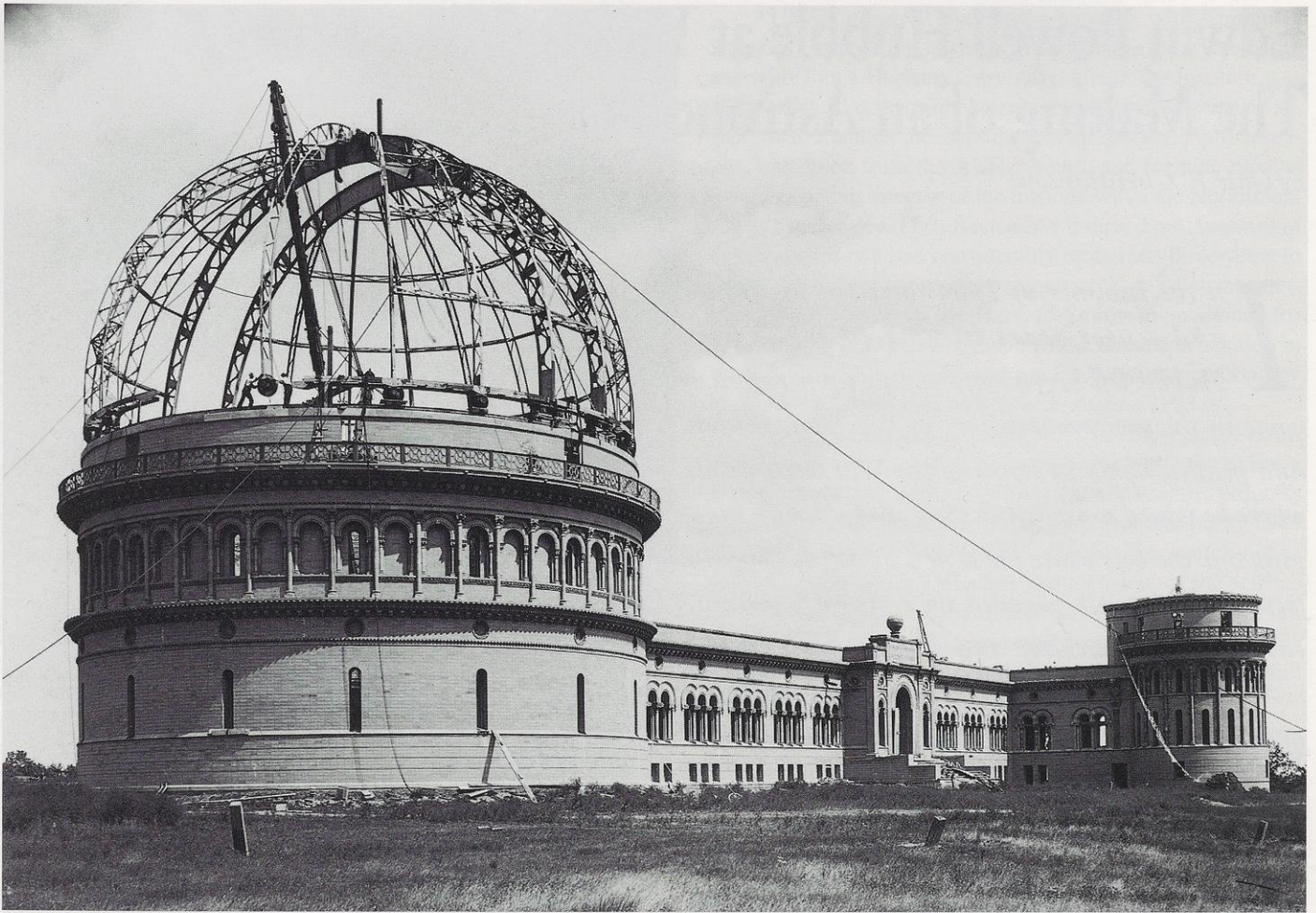
*I*n the summer of 1904, between his junior and senior years in high school, Edwin Hubble left his parents' comfortable two-story home in the prosperous village of Wheaton, Illinois, and headed north by train to the Wisconsin woods, where he joined a surveying crew charged with mapping out the best route for a new rail line. The six-foot-two-inch youth possessed the natural build and carriage of an athlete and already held enough records in track and basketball to rank him as the greatest sports hero in Wheaton High's history until the advent of the immortal Galloping Ghost, Red Grange. Hubble's brown, slightly wavy hair retained a glint of auburn from the lineage of his mother, Virginia, and was parted on the left, the same side he often turned to the camera.

When Edwin returned from his summer in the "Big Woods," he had many a tale to tell his enthralled younger sisters, Betsy and Helen, the genesis of much Hubble apocrypha. The tent he shared with two others was supposedly flattened by an uprooted tree during a violent thunderstorm, killing the man sleeping next to him. On another occasion, armed only with a pocket knife, he foiled a menacing bear by puncturing a sack of sugar whose contents distracted the animal, enabling Edwin to escape unharmed. And in one of the rough-and-tumble border towns he was set upon at dusk in the rail yard by two unsavory characters who demanded his money. When he laughed them off and turned away, a knife was plunged into his shoulder. He spun around, knocking out one of his assailants while the other took to his heels. Finally, Edwin and a co-worker missed the last construction train of the season. Lacking provisions, they trekked for three days before reaching civilization. As Betsy later remarked, "He tried to do things to prove he was capable of doing them."

Nine years later, in June of 1913, the Hubble sisters welcomed their older brother home again, this time after his absence of three years in England, during which Edwin studied



Edwin Hubble, dressed in his University of Chicago track or basketball uniform, ca. 1910.



Yerkes Observatory in Williams Bay, showing workers placing a girder with wheel in position in the great dome on August 27, 1897.

law and Spanish while a Rhodes Scholar at Oxford's Queen's College. Though he had earned a Half-Blue for his exploits in track and carried 190 pounds on a frame likened to the body of a Greek deity, his sisters were shocked. Their athletic brother, who used to carry them about on his powerful shoulders like dolls, was dressed in a cape, knickers, and sported a walking stick. A signet ring graced his little finger, and he was wearing a wristwatch he had won for high jumping, one of the first the girls had seen. "That was to us a feminism," Betsy laughingly recalled.

During his Oxford days, Hubble would occasionally slip over to the university observatory to commune with its director, the Yorkshireman Herbert Hall Turner, a leading figure in the rapidly expanding field of celestial photography. Yet he wrote nothing of this in his detailed letters home because of his father's insistence that he study law rather than pursue his childhood dream of becoming an astronomer. Then, after a painful and debilitating struggle with Bright's disease, John Powell Hubble's inflamed kidneys gave out and he died in 1913, while his son was abroad. Though Edwin loved the overbearing and censorious insurance executive and mourned the

loss of his father, he also experienced a sudden sense of release. At age twenty-four, with degrees from the University of Chicago and Oxford in hand, he was his own man at last.



The heart of a smoky industrial city, its polluted skies illuminated by expanding waves of Mr. Edison's newly patented system of electric lights, was no place for what was to be the world's greatest observatory. In the late nineteenth century, after receiving offers of free land from Illinois to California, the University of Chicago trustees finally accepted a donation of fifty-five acres on the north shore of Wisconsin's Lake Geneva, a glistening body of water some seventy-five miles by rail from Chicago. The citizens of the nearest village, Williams Bay, still lit their homes and shops with candles and kerosene lamps. One had to travel seven miles to the other end of the lake to view the nearest "incandescents," which illuminated the small resort town of Lake Geneva.

The money for the giant forty-inch refracting telescope and a fitting structure to house it was pledged by Charles Tyson Yerkes, the Chicago streetcar magnate who built the city's ele-

vated train system. University architect Henry Ives Cobb chose the Romanesque style and the configuration of a Latin cross, with three domed telescope towers and a meridian room at the extremities, after the church and monastery of Monreale in northwestern Sicily. The exterior of the secular cathedral was to be ornately decorated with intricate terra-cotta figures, including Apollo in his streaking chariot and caricatures of that lesser god, Charles Yerkes.

The brown-brick and terra-cotta structure was finally opened to the public in 1897, three years after construction began. Curious visitors headed directly for the massive tower at the western end of the main building, where the huge refractor points skyward, like a giant cannon. Its steel barrel is sixty feet long, weighs six tons, and is mounted on a cast-iron column composed of four sections, tapering from five-by-eleven feet at the base to five-by-ten feet at the junction with the head. These masterful examples of Victorian engineering are bolted together and rest on a cast-iron base fourteen-by-eighteen feet, which in turn is anchored to a massive brick pier supported on a foundation thirty-two feet long and five feet thick. Together the column and head rise to a height of forty-three feet and weigh 100,000 pounds.

Overhead, like the vault of a lesser heaven, stretches the 120-ton dome, at that time sheathed by wood and covered with roofing tin. The massive inverted bowl, ninety feet in diameter and sixty feet high, turns on twenty-six wheels activated by an electrically driven cable. Below the dome's base are thirty-two windows, arranged in three rows, designed to balance inner and outer weather so that the instrument will not further distort the faint starlight penetrating Earth's atmosphere.

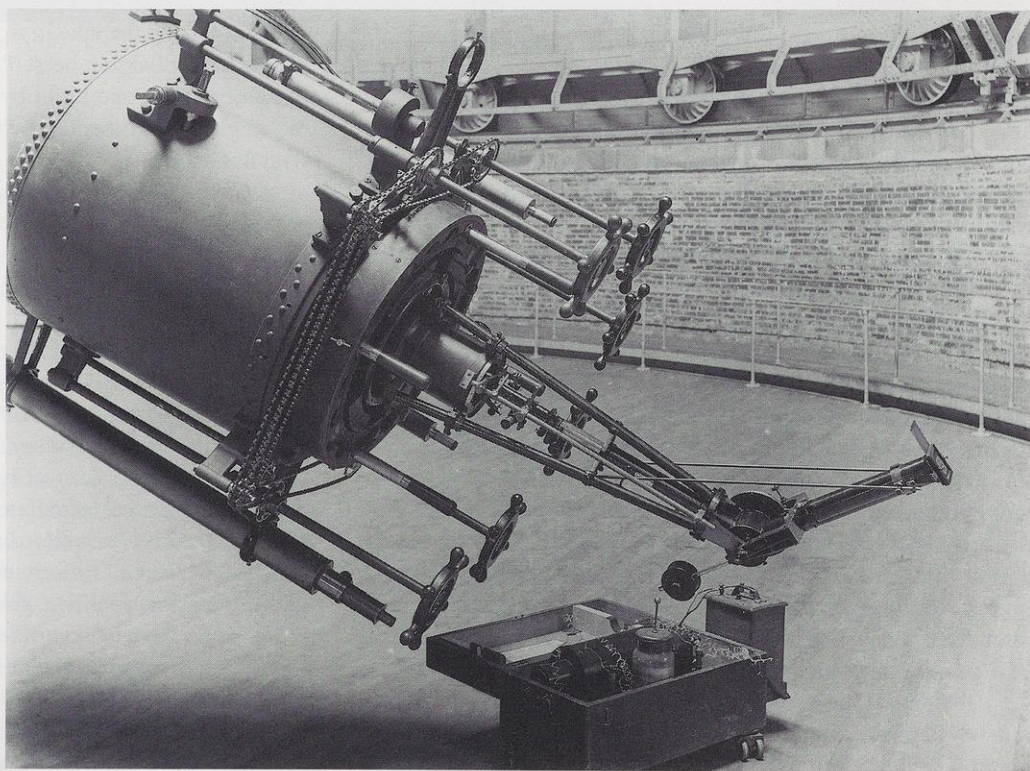
Dwarfed as he is by the dome, the Lilliputian astronomer is further engulfed by the great expanse of hardwood beneath his feet. Creaking and shuddering like the deck of a wallowing ship, the floor, seventy-three feet in diameter and weighing some thirty-seven tons, rises like an opera set at the press of a switch, the solitary astronomer in apotheosis at heaven's gate.

When Hubble, the recipient of a modest stipend, arrived in August of 1914, the keeper of the gate was forty-eight-year-old Edwin Brant Frost, the descendant of Puritan stock by way of Boston and Hanover, New Hampshire, where he had taken his degrees and previously served as professor of

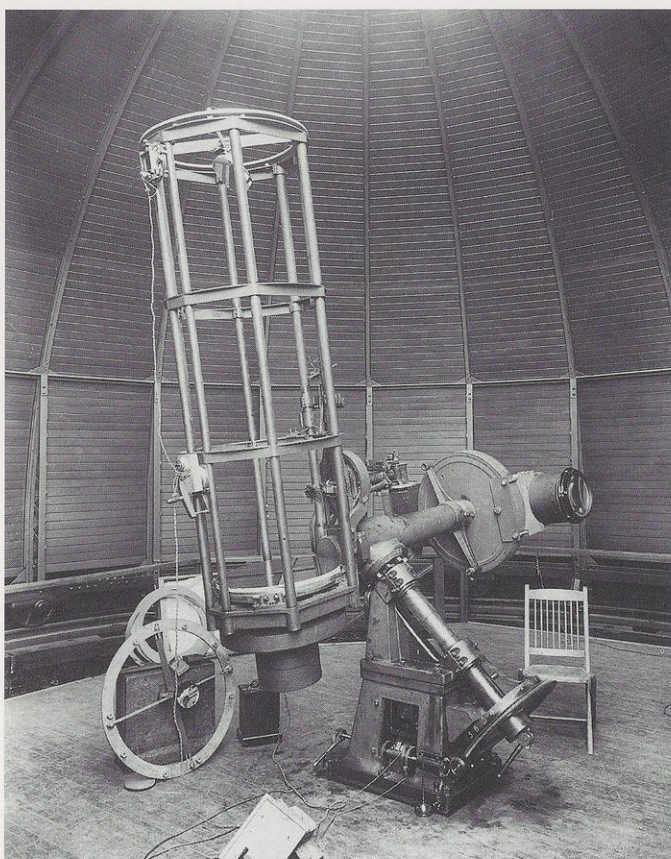
astronomy and director of Dartmouth Observatory. Signing letters and documents with an ornate hand resembling holy writ, the square-jawed director gazed imperiously at the world from behind a pair of dark-rimmed glasses, looking more like a piece of granite sculpture than living flesh and blood. Plagued by cataracts which would ultimately claim his sight, Frost could no longer use the telescope and had to call on Hubble and his fellow graduate students to read his correspondence and scientific papers aloud.

At Yerkes, as at all major observatories, the amount of "seeing time" on the premier instrument exceeded demand, and a rigid pecking order was established. Resident astronomers were given priority, followed by visiting scientists with distinguished credentials, then lowly graduate students hoping to make a name for themselves. While Hubble took his turn on the forty-inch refractor, most evenings found him alone in the room housing the twenty-four-inch reflecting telescope designed and built by George Ritchey, who, like many of Yerkes's finest observers and technicians, had lately moved west to participate in the construction of the next great observatory atop California's Mount Wilson.

Employing highly sensitive photographic plates, Hubble began taking pictures of faint nebulae, one of the most intriguing and puzzling of the celestial phenomena. Resembling scattered grains of porridge when captured on glass, the nebulae reminded some astronomers of our own Milky Way, the sprawl-



The eye-end of the forty-inch refractor and spectograph with one prism, March 12, 1898.



The twenty-four-inch Ritchey reflector, December 8, 1902.

ing river of light plied by the barges of ancient gods and goddesses. If that were so then other galaxies, countless in number and millions of light years distant, are resident occupants of the universe. To most, however, this seemed preposterous. More than likely, these ethereal wisps, which assumed various other shapes—including giant pinwheels, careening comets, and vast clouds of roiling gas—were well within the far boundaries of the Milky Way, which constituted the universe entire.

Hubble trained his telescope and camera on an object known to astronomers as NGC (for *New General Catalogue*) 2261, which he later described as “the finest example of a cometary nebula in the northern skies.” After taking fifteen plates over the course of six months, he compared his photographs with ones taken by other astronomers, including Edward E. Barnard, the resident Justice Oliver Wendell Holmes look-alike. At first, Hubble could not believe his eyes. In less than eight years the trailing edge of the nebula had bulged to display a larger convexity than before, graphic evidence that the object was small and relatively near in astronomical terms; otherwise, such a change would have gone undetected across the vastness of intervening space.

Hubble soon announced his maiden discovery to the scientific world in the prestigious *Astrophysical Journal*, donning the mantle of the cautiously conservative researcher he would always remain: “No attempt is here made to explain the phe-

nomenon of illumination, the nebula must be very near.” (Frost was so enthusiastic about his graduate student’s initial findings that he presented slides of Hubble’s work at the annual meeting of the National Academy of Sciences in Washington, D.C., in April 1917.)

After observing the night long and sleeping into the early afternoon, it was Hubble’s habit to arise and walk the sloping half-mile path between the observatory and the wooded shoreline of Lake Geneva, a sandwich, swimsuit, and towel in hand. He told of tying a long fishing line to his trunks and then swimming around the lake, as if trolling from a boat. During one such outing he added another chapter to his earlier tales of deriding-do spawned by his Bunyanesque summer in the woods. Walking out on a pier, he passed a vacationing middle-aged professor in the company of his wife. As he looked back, he saw the woman fall into the lake. He shed his coat and dove in after her. She grabbed him but continued to struggle, while her heavy, water-soaked clothing dragged them under. “I didn’t like to knock her out,” Hubble related, “so, as the water was not deep, I sat her on my shoulders, which just brought her head above the surface, and walked under water until it became shallow and I could put her down.”



In the summer of 1916, Hubble’s mother, sisters and older brother, Henry, moved into a three-bedroom house on Madison’s Chadbourne Avenue. Edwin’s younger brother, Bill, was studying animal husbandry at the University of Wisconsin, and the older girls also planned to enroll. The sisters visited Williams Bay on several occasions, where they enjoyed being paddled around the lake in a canoe by their brother’s fellow students. After pledging herself to secrecy, Betsy was slipped into the observatory one night by Edwin. There she gazed through the mighty instrument, reaching out to touch the falling stars with her hands.

Hubble passed his German and French exams in May 1916 and decided to remain at Yerkes through the summer to gather additional information for his dissertation, “Photographic Investigations of Faint Nebulae.” By the time he had begun photographing NGC 2261 as well as other nebulae, some 17,000 of the dim formations had already been catalogued by other astronomers. It was estimated that 130,000 more were within existing photographic range. “Extremely little is known of the nature of the nebulae,” he wrote, “and no significant classification [system] has yet been suggested; not even a precise definition has been formulated.” At least some of the great diffuse nebulosities, associated as they are with stars visible to the naked eye, seemed to lie within the stellar system. So, too, do the planetaries, massive gaseous clouds at even greater distances from the sun. Yet others, most particularly the giant spirals which display no visible motion, apparently lie outside our system. Beyond these ill-defined classes were numberless fainter nebulae, nothing more than scant markings on the photographic plate. “They may give gaseous spectra or continuous,” Hubble wrote, “they may be planetaries or spirals, or they may



Yerkes staff photo, taken in the summer of 1915. Edwin Hubble is in the top row, wearing a bowtie; Edward Barnard is at the far right, with hat in hand; Edwin Frost is in the second row from the top, far left, below the gryphon. Later photos often show Hubble taking a more prominent place, next to the director.

belong to a different class entirely. They may even be clusters and not nebulae at all. These questions await their answers for instruments more powerful than those we now possess.”



Though it was shaky on technical grounds and rather confused in its theoretical interpretations, “Photographic Investigations of Faint Nebulae” is prophetic of the quest that lay ahead. The mind’s eye of its self-confident author was already fixed on the 100-inch reflector, nearing completion atop Mount Wilson under the guidance of George Ellery Hale, the astronomer and scientific entrepreneur who had convinced Charles Yerkes to underwrite the country’s first great observatory on an isolated shore in southern Wisconsin. With his hands on Mount Wilson’s gentle giant, Edwin Hubble would make a series of discoveries that rank him as the premier astronomer of this century. It was Hubble who proved that many of the nebulae are at incredible distances from the Milky Way; that, indeed, they are galaxies similar to our own. In time, he would formulate a classification scheme for the nebulae that, with slight modifications,

is still employed by astronomers today. And it was Hubble who confirmed that these gigantic star clusters are racing away from the sun at speeds approaching that of light, thus laying the cornerstone of the “big bang” theory of creation. Finally, after mapping vast chunks of the cosmos with the aid of his colleagues at Mount Wilson and other observatories, Edwin Hubble was able to declare that the universe is homogeneous—the same in all directions for as far as any telescope can probe, including his namesake instrument launched from the space shuttle *Discovery* in April 1990.

The seeds of Edwin Hubble’s scientific immortality are rooted in his fledgling work at Yerkes, where he passed through heaven’s gate and nudged out into the vast, uncharted cosmic archipelago. “Amongst those who go to sea,” Gustave Flaubert observed, “are the navigators who discover new worlds, adding continents to the earth and stars to the heavens: they are the masters, the great, the eternally splendid.”²⁰

Photos courtesy Yerkes Observatory.

Excerpts from *May Sarton: A Biography*

by Margot Peters

*The cat sleeps on my desk in the pale sun
Long bands of light lie warm across the floor
I have come back into my world of no one,
This house where the long silences restore
The essence and to time its real dimension;
All I have lost or squandered I examine
Free of the wars and the long searing tension;
And I am nourished here after the famine.*

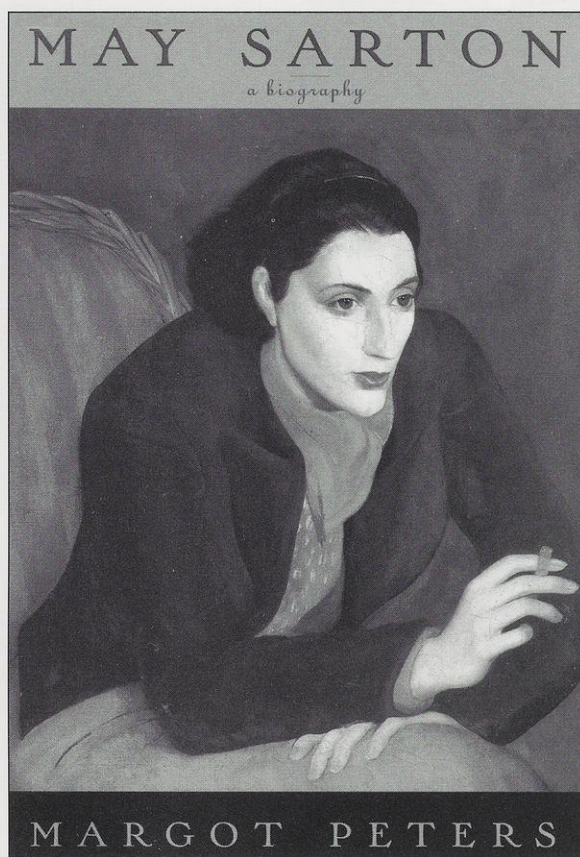
May Sarton—poet, novelist, journal writer, feminist, lesbian—is speaking on campus, any campus during the 1970s, anywhere in the United States. Electricity charges the air. For the first time since the feminist movements of the nineteenth century, women are listening to other women—not to men—talk about themselves. For her frankness and intimacy, Sarton has won more fans than perhaps any other contemporary American woman writer.

She is a striking woman in her sixties: short, curly white hair; strong, classic face; black horn-rims emphasizing the pallor of unlined skin; bright lipstick. Rather portly, but the weight is attractive. She is probably wearing a deep purple suit from Gertrude Singer, her favorite shop in Harvard Square, or, for a formal reading, an elegant black pantsuit. She favors suede flats; like Harriet Hatfield, one of her fictional characters, she is vain about her small feet.

Her voice is a strong, clear contralto; as she reminds admirers, she was trained in the theatre by Eva Le Gallienne. But it's immediately obvious that she is a performer, used to mesmerizing audiences. These audiences are, and have always been, largely female. Some are lesbians, but the majority are not—a statistic that Sarton, who hopes her writing has universal appeal, enjoys.

Novelist and Poet, 1938

She felt the responsibility of being twenty-six on May 3. "I must work terribly hard and get away from all softness, that everything be very *true*," she vowed. "It is so easy to become



literary, to become (that is my horror) a sort of perpetual lace valentine." She expanded on the subject to Elizabeth [Bowen]. "No more emotional excursions. Work. Now that I have a little confidence and think I am not merely charging at a windmill, I see how awfully long it will take before I can write anything good, rooted, secure and finished. . . . I see so clearly now in [her first novel, *The Single Hound*] its impatient and avid point of view, its superficial pretty sort of wisdom." Reviews from England had sobered her: despite all Kot's efforts, no *really* distinguished critic had championed the new American novelist.

The Single Hound was not "rooted" and "secure," but a novel of shifting moods: of emotion lost before translation into action, of words evaporating before utterance. Impermanence is

From *May Sarton: A Biography* by Margot Peters. New York: Alfred A. Knopf, March 1997. 464 pages, 97 photographs, \$30. 0-679-41521-1 Excerpts printed with permission.

the theme of this story of a poet who discovers himself through the empathy of an old poet, Jean Latour. Love affairs, like Mark's with Georgia (Elizabeth Bowen), are dreamlike, impermanent. Nothing abides but faith in oneself and one's work. Finally one understands Jean Dominique's importance to May Sarton the writer, who, like her hero Mark Taylor, felt her work irrelevant because she was not politically involved in causes like her more radical friends, was not an alienated intellectual. Be yourself, Jean Latour tells Mark: your gift is making the mind and the heart speak together. That is your personal world. Trust it.

Sarton the poet, the novelist, and the letter writer merge.

Plant Dreaming Deep, 1968

In January 1968 she sent out first copies of a work well within her talent. "That lovely, lovely book!" exclaimed Katharine Taylor. *Plant Dreaming Deep* was indeed a lovely book, an artful evocation of the discovery of Nelson [New Hampshire] woven into the deeper texture of the discovery of self, a revelation of how the poetic spirit finds truth and beauty in the everyday. Brooks Atkinson in the *New York Times* and Granville Hicks in the *Saturday Review* loved it; and Norton's president, George Brockway, was moved to congratulate her on a stunning press. More important, readers loved the book, reread it, talked about it, passed it along to friends. By mid-November 1968, *Plant Dreaming Deep* had sold 11,145 copies and was still moving nicely. Not a runaway success, but a success.

Plant Dreaming Deep brought May Sarton a new kind of attention; it brought her fans. "I have seldom heard a book speak so directly to me" . . . "I have placed it next to *Walden* on my shelf" . . . "I lived every moment with you" . . . "You have taken me to the depths of life" . . . "Oh, yes, Sister!" Most of these fans were women discovering a wonderful woman: courageous, independent, in harmony with nature, warm, loving, frank about her shortcomings. May Sarton was what they wished to be. These fans were sure they knew the author like a friend. They could easily imagine themselves sipping a martini in front of her fire as they admired the flowers, the cats, the portrait of The Ancestor, Mabel Sarton's wonderfully wrought desk. May's gift for immediate intimacy was as seductive in prose as in life.

May's lip justifiably curled over these assumptions. She had given herself away, like most autobiographers, in only the most circumspect way, far less than in *Mrs.*



May Sarton, school girl.



Lecturing on "Poetry as a Dynamic Force" in the early 1940s.



In the late 1950s.

Stevens Hears the Mermaids Singing. Or sometimes not at all. The dedication to Judy, “who believed in the adventure from the start,” is sheer audacity considering the fact that May bought the Nelson house for Cora. There are inadvertent revelations, of course. The prologue imagining her forebears Duvet de la Tour and John Elwes feeling quite at home in New Hampshire says a great deal about May the cultural orphan, an outsider even as she immortalized the village. The invoking of a “guardian angel” who oversees the finding and creating of the house is May-the-eternal-child’s longing for a protective, loving parent, as are her tales of the good ghosts that haunt it and the magical appearances of neighbors whenever she needs help. And, of course, her making a myth of Nelson is fundamentally a need to bolster a painfully insecure ego by creating a self larger than life.

Gardens and gardening are central to this myth. What lifts *Plant Dreaming Deep* out of the realm of ordinary memoir is Sarton’s genius for using nature as a metaphor for human life. Thus the stringent and cathartic task of weeding is like writing a poem. Planting a bulb in October enacts the eternal ritual of life in death. Cutting down an old maple wrenches the soul like the death of a friend. An ice storm reflects Sarton’s own rage. Drilling a well to tap water eighty feet deep is like finding an inner resource when one’s spirit has hit rock bottom.

Sarton’s metaphors are so powerful that we almost cease to question. “Is there a joy except gardening that asks so much, and gives so much?” she asks. So mythically is Sarton’s gardening associated with birth, life, death, and rebirth that both garden and gardener are sanctified. In her powers of creation, Sarton is God.

This is not to criticize. *Plant Dreaming Deep* is imaginative, not factual, truth—May’s life as she idealized it: aesthetically and spiritually rich; shored by faithful friends; charged with just enough conflict between Life and Art to make it clear she’s not one of the masses. The raw truth might have made a best-seller, but *Plant Dreaming Deep* was more important than that. Brooks Atkinson called it a “small, but tender and often poignant” book. Small it is not. *Plant Dreaming Deep* is an impressive exercise in the creation of a female cultural heroine, and as such, a book of genuine import.

Wild Knoll, 1973

By the time May moved into Wild Knoll [Maine] in late April 1973, she had made it her own. She had the north porch blocked off and the south enclosed to create a dining-sitting room, bird feeders outside the window. She had the kitchen painted mustard yellow, the floor slabbed in dark gray. She turned the formal dining room into a “cozy room” with a sunny plant window behind the sofa. The large living room looked comfortable with a thick, shaggy yellow rug, bright blue tweed sofa, recessed bookshelves, and the big Belgian bahut against the wall. A carpenter built bookcases for the second floor, and she bought a good desk—her first—for her study on the third. Next to the desk in a revolving bookcase she placed “the great influences”: Jung’s *Psychological Reflections*, Traherne’s *Centuries of Meditations*, Thoreau’s *Walden*, Florida Scott Maxwell’s *Measure of My Days*, Dinesen’s *Out of Africa*, Freya Stark’s *Journey’s End*, Louis Lavelle, Martin Buber, Simone Weil. Outdoors, Raymond Philbrook, Mary-Leigh’s gardener, was tilling a picking garden that sloped toward the graveled road.

...

That spring *Journal of a Solitude* appeared in bookstores. It was, as May intended, more intimate and honest than *Plant Dreaming Deep*—no musings about ancestors, but an immediate plunge into confession:

I feel too much, sense too much, am exhausted by the reverberations after even the simplest conversation. But the deep collision is and has been with my unregenerate, tormenting, and tormented self . . . Now I hope to break through into the rough rocky depths, to the matrix itself. There is violence there and anger never resolved. I live alone . . . for the reason that I am an impossible creature, set apart by a temperament I have never learned to use as it could be used, thrown off by a word, a glance, a rainy day, or one drink too many . . . I go up to Heaven and down to Hell in an hour, and keep alive only by imposing upon myself inexorable routines.

Bravely said at last.

Journals of a Solitude offers other themes, among them May's theory of poetry. Still haunted by Bogan's "You keep the Hell out," May answers her critic: "I have thought much about this. I have felt that the work of art (I am thinking especially of poetry), a kind of dialogue between me and God, must present resolution rather than conflict. The conflict is there, all right, but it is worked through by means of writing the poem. Angry prayers and screaming prayers are unfit for God's ears. So there is a Hell in my life but I have kept it out of the work." In other

.....
*I feel too much, sense too much,
am exhausted by the reverberations
after even the simplest conversation.*
.....

words, May purifies her writing in atonement for her sins. This alone excludes her from the "confessional school" of Roethke, Sexton, Berryman, Lowell, and Plath, for she transcends in poetry as well as prose.

Yet May did not believe in a personal God, or in personal salvation, or even, perhaps, in God's existence, since "Give me to be in Your presence, God, even though I know it only as absence," was for her the only possible prayer. The notion that poetry is resolution also conflicts with her definition of poetic power as "tension in equilibrium" in her fine 1962 essay "The School of Babylon," where poets learn "to walk into the fur-

naces/And whistle as we burn"—their anguish never resolved, only perilously balanced. Perhaps "God" in this context refers to Sarton's half-held belief in a power that granted her poems when she was in a state of grace. Then indeed she might fear to alienate this power with rage and tears.

May feared that "the insoluble problem" of reconciling her needs for people and for solitude had become "the leitmotif of this journal"—a fear well founded: the problem is the leitmotif of her life. *Journal of a Solitude* pleads for communication even as Sarton complains of intrusions. A true solitary would not publish photographs of her house so that fans could zero in with binoculars or camp on her doorstep (a not infrequent occurrence), or declare that a room without flowers throws her into deep misery, so that fans rush her flowers, for which she must thank them. A true solitary would not complain publicly about solitude, inspiring hundreds of people to relieve it. But then May was a solitary only because of her impossible temperament.

Crucial Conversations, 1975

A year of loss, of hectic activity. She lectured and read poetry at the University of New Hampshire ("pale smug profs emerged from under their stones"), New England College, Clark University, Ohio Wesleyan, Bates College, Cornell, Dartmouth, the University of Minnesota—most of the time suffering a low-grade virus infection, finally losing her voice.

Meanwhile Norton brought out *Crucial Conversations* on her sixty-third birthday. "I DON'T like it," May had told Bill [her friend, the painter William Theo Brown]. That did not mitigate her fury at Norton's apparent refusal to advertise. "Not one single ad," she wrote Eric Swenson May 12. "O.K. I'll put \$2,000 or more into small ads in the Daily Times. I am shocked: why give big advance if you intend no backing?" Eric was a patient man, but really, he told her, she shouldn't jump down his throat before she knew Norton's plans. The book had sold 10,532 copies in seven days. Ads were waiting for reviews. Yet he forgave her anger. "Hell, if you didn't care enough to cry—or to blow a gasket—you wouldn't be the creator you are."

May resented Carolyn Heilbrun's criticizing her "undue admiration for marriage" in novels like *The Bridge of Years*, *Birth of a Grandfather*, and *Kinds of Love*—not fair, she felt, from a woman with a husband and children, nor accurate, since her novels celebrated not so much marriage as the family she never had. Thus May planned *Crucial Conversations* as a middle-aged *Doll's House* with Poppy Whitelaw walking out of twenty-seven years of marriage to reclaim her stifled soul. The novel's crucial conversations debate the wisdom and morality of her act.



Receiving an honorary degree from the University of New Hampshire, May 23, 1976. It was one of eighteen such honorary degrees May Sarton received from various universities.



In her early eighties, ca. 1993.

In fact the novel takes place almost entirely at the level of debate—Sarton intellectually answering the question: “What happens when a middle-aged woman walks out of a marriage?” The *New York Times* critic disliked this detachment: “The trouble is . . . no real person was ever as uncompromising and articulate and morally self-conscious as Miss Sarton’s characters. Nobody ever acted the way they do except in daydreams of marital squabbles and plays by Eugène Scribe. No one was ever so free of the weight of history or the demons of irrationality . . .” Sarton had tried to link the Whitelaws’ story to history by having Vietnam and Watergate wake Poppy to the falsity of her marriage—“though this will seem preposterous.” It does, because the linking is perfunctory.

There is another perfunctoriness. “It’s such a dirty world we live in,” Sarton could tell Bill Brown. “I stand on the edge of some *panic* about mankind in general—man is so *cruel*,” she wrote to another. Yet Sarton loves the term “human”: “a complete human being,” “a whole human being,” “an authentic human being.” In her novels she seems unable to admit that “human” encompasses not only the virtues but the brutality of the most vicious species on Earth; that an “authentic human being” has fully as much potential for evil as for good. It is as though her right hand refuses to acknowledge the sinister.

This remains true even though Sarton often applies a specialized meaning to “whole human being.” As she wrote Morgan Mead: “The whole imposed criteria are crumbling and people are learning that to be human one has to accept the male in one if one is female and vice versa, and *not be afraid of it*. What a world we could make if men really could be gentle and

loving! And women trust themselves and be aggressive without paying the price of being called names.” To be whole in this sense, then, is to be androgynous, to cherish one’s animus and anima. It is also, crucially for Sarton, to be a lesbian and still be considered by the heterosexual world not a cripple but “an authentic human being.”

Spring 1991, in Sarton’s Eightieth Year

For my fifth biography, I thought it would be interesting to work with a living writer, much of whose work I admired. Would Sarton consider me as a biographer?

“Dear Margot Peters,” May replied on a postcard in purple ink in a minuscule hand. “You are not the first and won’t be the last to ask this question. I hope the biog will only be written after my death. There are several books of letters, a new journal still to come out. I’d rather be buried *after* the death.” Still, she gave me her phone number. “Give me a ring . . . *not* after 8 p.m. I’ve been very ill and writing is next to impossible . . .

The following September Sarton stood at the gate of Wild Knoll. “I am too old,” she said immediately. Expecting the robust Sarton of the film *World of Light*, I was surprised to find a gaunt old woman who hardly reached my shoulder and spoke in a cracked whisper. The smart pants suit, bright silk scarf, and red lipstick only emphasized the cruel diminishment. May invited me in, offered iced tea with ginger ale, “the way my mother always served it,” and waved me into a seat facing the bright sea.”

“What,” she asked, “do you think of Anais Nin?”

“A narcissist,” I said. “I distrust the diaries.”

Sarton vehemently agreed. “I have been reading a life of Piaf,” she said, passing English biscuits. “Now there is truly a *monstre sacre*.”

“Yes,” I agreed. “And surely they are the most fascinating subjects.”

Still, May had reservations. She had little strength for the inevitable interviews. She dreaded raking up the painful past. And I was, after all, an unknown quantity. Yet there were decided compensations. She might be able to control interpretation, “which is what I fear.” And a biographer sealed the success she hoped she’d at last achieved. But most of all, a biographer would satisfy her deep craving for undivided attention. After consulting with Carolyn Heilbrun, her literary executor, May took the plunge, agreeing to my stipulation that the biography appear only after her death. ♣

Editor’s note: May Sarton was born in Belgium on May 3, 1912, and died in Maine on July 16, 1995. Her published works include fifteen books of poetry, nineteen novels, and thirteen volumes of memoirs and journals.

If Asked

If he asked me why, I would tell him the truth:
Because I have almost drowned three times.

The day after breaking through thin Wisconsin lake ice,
I burned sage on the shore and wore brown,
to fool the lake spirits into thinking I belonged to the earth,
but I knew it was the last time I would resist.

And I would tell him: To feel a slow fall into a fast river,
at last, sinking through green sunlight into the depths
of dreams, the water of dreams becoming breath enough.

I would try to say it all—how, my spine arching into knowing
silver and shadow, I can hear the story of the world, sung by changing currents,
can hope to understand how a puff of silt rises, silent, then resolves itself.
How the ripple of river grasses on no particular journey is the same
as the compass of the stars to predict who will survive the future.

I would tell him: Because it's like not drowning.

Marianna Wright

Waiting For Spring

We stand on the rim of the sky, blind words
creeping towards confession.
Our tongues speak in two voices,
like wet wings uncurling, dazed.
We are moving into unfamiliar territory,
no rituals left, only experiment.
It's like driving at night
when the vast whiteness
lying on either side of the road
might be a veiled river of thin ice,
or fields buried in snow,
and we wait for the tires to slip, the rail to break away.
Hurling past in the wild dark,
we fling the words out onto the wind
like scattering seed, praying
they will find a home on earth.
We are neither ice nor fire,
but stone meeting sand, waves becoming the edge
of a single ocean. We dream we will learn how to swim
out of the darkened silence, and reach for spring,
waiting for the thaw, the flood.

Marianna Wright

Braking for Dinosaurs

for my father, the physicist

Long before Stephen Spielberg, you were braking
for dinosaurs, teaching the ways of the skeptic
through Tyrannosaurus Rex. *What did he eat?*
you asked, and the brightest kids answered: *Meat.*
How do you know? you pressed. *Because I read it*
in a book. You'd trapped your prey; you pounced.
Do you always believe what you read?

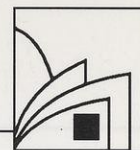
I believed you,
always. When you lent your mechanical pencil
(PROPERTY U.S. GOVERNMENT), I believed
it was essential not to waste the lead. *They measure it*
every week, you teased, so I twisted the point back in
after I used it at Sabbath School. The teacher made us
write in our Bibles, underline words, take notes
in the margins. *Writing in books is wrong,* you taught,
and I believed that, too.

You believed in
human reason affirmed by experiment. You scorned
my biology text—*No "Darwin" in this index!*—
sent me, on Saturdays, scurrying through the Hall
of Dinosaurs. I had my birthdays at Buhl Planetarium
where the Zeiss Projector rose, a giant optical ant
that illumined Heaven's mysteries on the dome
above our heads.

I was never as good at physics
as I thought I ought to be. But from you I learned
science rules, and the boys with pocket protectors
were the smartest ones in school. And you still
counter blind faith with reason. When I send you
the magazine with my verse about Chanukah prayer,
my boys who say the *borucha* by heart and willingly,
you temper your pride with concern for my "piety."
You try to make it a joke: *Maybe I'm oversensitive,*
unregenerate atheist that I am.

So when I call you
on Father's Day and you ask me to write you a poem,
I think of your bumper sticker, "I Brake For Dinosaurs."
I hunt great big material images, verifiable facts
that you can believe in. I remember your rule
for writers: *observe carefully. You can only write*
about the things you really know.

Judith Strasser



REASON, REALITY, AND SPECULATIVE PHILOSOPHY by Arthur E. Murphy. Edited, with an introduction, by Marcus G. Singer. Madison: The University of Wisconsin Press, 1996. 280 pages, \$45.00. ISBN 0-299-15040-2.

by Roland J. Teske, S.J.

Marcus Singer, emeritus professor of philosophy at the University of Wisconsin-Madison, has edited this volume on speculative philosophy that was written by Arthur E. Murphy, who was Singer's teacher and dissertation director. The book was written prior to World War II, but left unpublished, at least partially because the philosophical interests of the age shifted to newer trends from the sort of speculative philosophy that the book represents and that had dominated the American philosophical scene during the first half of the century.

Murphy, as Singer's fascinating memoir reveals, was a truly interesting man and an influential philosopher who, during his career, taught at the following universities: Chicago, Cornell, Brown, Washington, and Texas; in many cases he also chaired the departments at these schools. Among Murphy's papers at his death in 1962 was a manuscript titled "Contemporary Philosophy," which Murphy had completed by 1940—aside from various emendations which he made during the last months of illness—and which Singer has now edited for publication over a half a century later.

This work of Murphy's provides an interesting view of the principal philosophical trends of the fifty years preceding 1940. While it would certainly have been scorned as "out of date" a quarter of a century ago, it is a work that will now be, I believe, valued for offering the reader a fresh perspective on the philosophical trends of the first half of our century as seen through the eyes of a man whom Singer portrays as a truly inspiring teacher and writer, if not one of the top four or five philosophers of his era.

In addition to his biographical memoir, Singer has added an introduction, providing us with a lucid exposition of what Murphy meant by contextual analysis, objective relativism, and speculative philosophy—terms which have all but disappeared from contemporary philosophical lingo.



The heart of the volume is, of course, the text left behind by Murphy and edited by Singer. It defies any easy summary; it is not simply a history of the major figures of early twentieth-century philosophy. Rather, it presents Murphy's reaction to the thinkers who dominated the first half of this century and does so

in the disarmingly graceful style of this eloquent and witty Irishman who could capture the profound thoughts of a philosopher with clarity and sympathy and then cut even the loftiest system down to size with a few insightful lines that go to the heart of the matter.

Murphy's first chapter offers some profound reflections on the state of Anglo-American philosophy just before World War II and more generally on how any philosophy works. The next chapter deals with idealism and tries to come to some understanding of the problems and needs to which idealistic philosophies tried to respond. Here the author focuses upon the great British and American idealists, such as Bradley, Bosanquet, and Royce, along with many classical themes, such as the criterion of truth and reality, the place of mind in reality, the unreality of time, and value and existence, with the aim of showing how philosophy works. Murphy finds a good deal of value in C.S. Peirce's pragmatic method, but has little patience for the speculative metaphysics to which it led.

A chapter on realism sketches what that tag meant for a wide range of philosophers from Bertrand Russell to Samuel Alexander: namely, an appeal to the facts in a polemic move against philosophical positions allegedly without such factual bases. Two chapters on recent speculative philosophy offer a rather devastating evaluation of the philosophy of Alfred North Whitehead, especially of the metaphysics of *Process and Reality*. Samuel Alexander's *Space, Time, and Deity* comes off somewhat better than Whitehead's work, though it too is sharply criticized along with Russell's neutral monism, Roy Wood Sellars's physical realism, and McTaggart's views on existence.



Two final chapters provide a similar presentation and devastating critique of George Santayana's doctrine of animal faith and of Etienne Gilson's attempts to revive classical metaphysics.

All told, the volume is a difficult read. For a history of the philosophies of the period, there are many other volumes that one would do better to consult; but for the guidance of a brilliant and often witty mind for getting inside the thought of the principal Anglo-American philosophers of the first half of this century, one could hardly do better than this volume of Arthur Murphy's reflections on speculative philosophy. Singer has enriched us all with this work of *pietas* toward his friend and mentor.

Roland J. Teske, S.J., professor of philosophy at Marquette University, has published in the history of philosophy.



“It Was A Love Fest”: The Wisconsin Authors Speak Project In Its Second Year.

by James A. Gollata

The quote in the title neatly sums up an event on a chilly Sunday afternoon in October at the Spring Green Public Library. It refers to the reading given by poet Jean Feraca from her work *Crossing the Great Divide* and from other poems, and to the audience reaction to the reading and Feraca's answers to questions. The reading was one of ten programs funded with \$200 grants to Wisconsin writers by the Wisconsin Academy's Center for the Book through the generosity and cooperation of the Center for the Book at the Library of Congress.

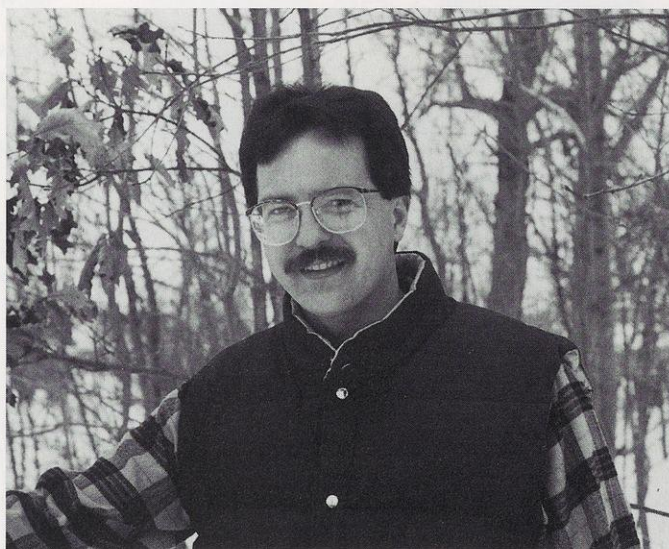
Grant applications, open to non-profit agencies, were judged on the basis of community outreach, rationale for the choice of speaker, and thoroughness of planning. The guidelines specified partnerships between requesting agencies, with good response, and eighteen applications were submitted. A simple post-event reporting form was provided, and applicants were encouraged to illustrate how they promoted the events, which all took place between September 1 and November 15, 1996. Grants were paid directly to presenting authors, and attendance at the events ranged from 35 to 314.

Selections resulted in a wide geographic range within the state; a mixture of children's and adult authors; nonfiction, poetry, and fiction represented; academic and independent authors participating; and much cooperative community involvement. In each case, the criteria established by the selection committee were met.

The line quoted above is indicative of reactions to and audience involvement in the various presentations in venues throughout the state. Reports from all quarters were positive regarding the writers who had been chosen, the programs offered by those writers, and the reception of these by persons attending. The committee was pleased with the way in which proposals had been submitted from various demographics within the state and gratified to be able to make awards for programs near and far.

Presenters (in addition to Feraca):

- Gretchen Will Mayo, whose many works include *Star Tales*, *Earthmaker's Tales*, and *Meet Tricky Coyote*, met with groups ranging from kindergarten to grade three in sessions at Fox Lake Elementary School and the Fox Lake Public Library.
- Judith Logan Lehne, author of *Coyote Girl* and other books for children, presented a workshop and discussion of her



Ron Rindo

work to children and parents at the Park Falls Public Library and the Park Falls Elementary School. Lehne received the *Highlights for Children* Outstanding Author Award in 1989.

- Agate Nesaule, who received an Outstanding Achievement Award from the Wisconsin Library Association for her 1995 book, *A Woman in Amber: Healing the Trauma of War and Exile*, was featured at a book discussion/lecture at the Hedberg Public Library in Janesville, in partnership with the University of Wisconsin Center-Rock County.
- Ron Rindo, professor of English at the University of Wisconsin-Oshkosh, and another WLA Outstanding Achievement Award winner for his 1995 book, *Secrets Men Keep*. Rindo visited English classes and presented an

evening reading in the Miller Memorial Library at the University of Wisconsin Center–Richland.

- Anne Pellowski, author of children's books and adult books on storytelling and professional storyteller, presented "The World of Storytelling" at the Marshfield Public Library, and a storytelling session at the University of Wisconsin Center–Marshfield.
- Jane Hamilton, author of *The Book of Ruth* and *A Map of the World*, read from her work and discussed "her writing life" at the Waukesha Public Library, in partnership with the Carroll College English department. The handwritten comment "Wow! What a beautiful night! Thanks!" was appended to the reporting form.
- William J. Cronon, University of Wisconsin–Madison Frederick Jackson Turner Professor and author of *Changes in the Land*, *Nature's Metropolis*, and *Uncommon Ground*, presented "Logging in the Great Lakes Region and North America" at the University of Wisconsin Center–Marinette County to an audience of 250.



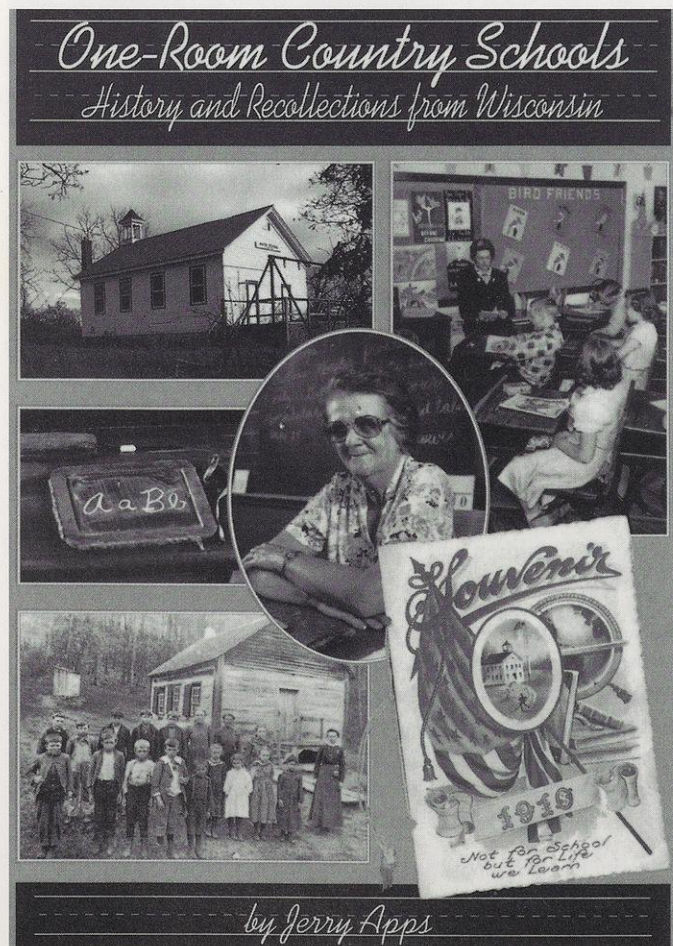
Detail from Anne Pellowski's "The World of Storytelling" poster.

- Two awards were granted to Jerry Apps, author of *The Barns of Wisconsin*, *The Mills of Wisconsin*, and *The Breweries of Wisconsin*. Apps discussed his latest book, *One-Room Country Schools*, at the Amery Public Library and the Verona Public Library. Many in Apps's audiences remembered attending one-room schools; others were reported as suddenly jealous that they had missed the experience.

Judging by the audience response documentation and the numbers of participants given on the reporting forms, the project was once again, in this second year of the program, a success. It was also satisfying once again to read of appreciative turnouts of interested and diverse groups throughout the state in both urban and rural, large and small locations.

The "Love Fest" between writers and readers has existed in Wisconsin since 1836 when the first book was published in the state, and it continues to grow. The Wisconsin Academy's Center for the Book plans to continue the Wisconsin Authors Speak program in order to ensure that this relationship endures in a mutually reinforcing and public way.

James A. Gollata served as chair of the Wisconsin Authors Speak grant committee and is president of the Wisconsin Academy's Center for the Book. He is director of the library at the University of Wisconsin Center–Richland.



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