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# NEW MEXICO QUARTERLY

MARIETTA AND THE KING OF SIAM

MABEL C. WRIGHT

MUSIC—ITS MOTIVATION & CREATION

JOHN DONALD ROBB

SOME ASPECTS OF METEORITICS

LINCOLN LA PAZ

THE NEW PHILOSOPHY NAMES ITS ENEMIES

ARCHIE J. BAHM

SHORT STORIES—POEMS—BOOK REVIEWS



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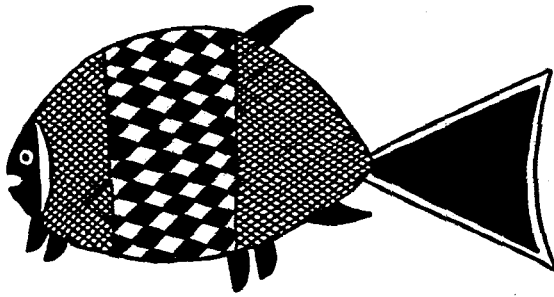
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# NEW MEXICO QUARTERLY

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AFTER FOUR hectic and hilarious years with NMQ, CAROLYN ADAIR—"Casey" to us—has resigned her post. This autumn she will be in New York, to which city her husband, John Adair, is being transferred by his employer, Cornell Medical College, after several years field work among the Navajos. Casey joined the *Quarterly* on Bastille Day, 1955, serving as Assistant Editor under Paul M. Sears, and becoming Managing Editor with the Spring-Summer 1957 issue, the now successfully out-of-print "Mimbres" number in which the magazine assumed its present format. It is appropriate that the present issue offers a second series of Mimbres designs, which she helped to select.

Equipped with an incisive mind, a broad background, a hot temper, and a magnificent sense of humor, Casey brought to her job many dividends, including wide acquaintance with—and precise appraisal of—interesting and important people. No believer in red tape, she habitually fished out of the wastebasket any paper demanded by the Editor. The arrival of the Adair children—Peter, Nancy, or Margot—who inherit their parents' intelligence and red hair, was sunshine for any afternoon.

No bouquets should be passed to Casey without including her talented sister, VIRGINIA MANNIERE, who many times helped to bring the *Quarterly* through troublous times.

JOHN ADAIR, author of *Navajo & Pueblo Silversmiths*, often served as an unpaid NMQ consultant, and his writings have several times appeared in these pages.

The University of Arizona is publishing in Tucson a new quarterly journal of history, *Arizona and the West*. It is edited by JOHN ALEXANDER CARROLL, associate professor of history, who writes, "We hope to have a journal which will be truly regional, and not limited by political boundaries and local enthusiasms."



In the Spring-Summer 1957 number, A. V. Kidder referred to HARRIET AND BURTON COSGROVE as "Mr. and Mrs. Mimbres." Mrs. Cosgrove has again provided the *Quarterly* with drawings from her important collection of Mimbres designs, which are used as decorations throughout this issue.



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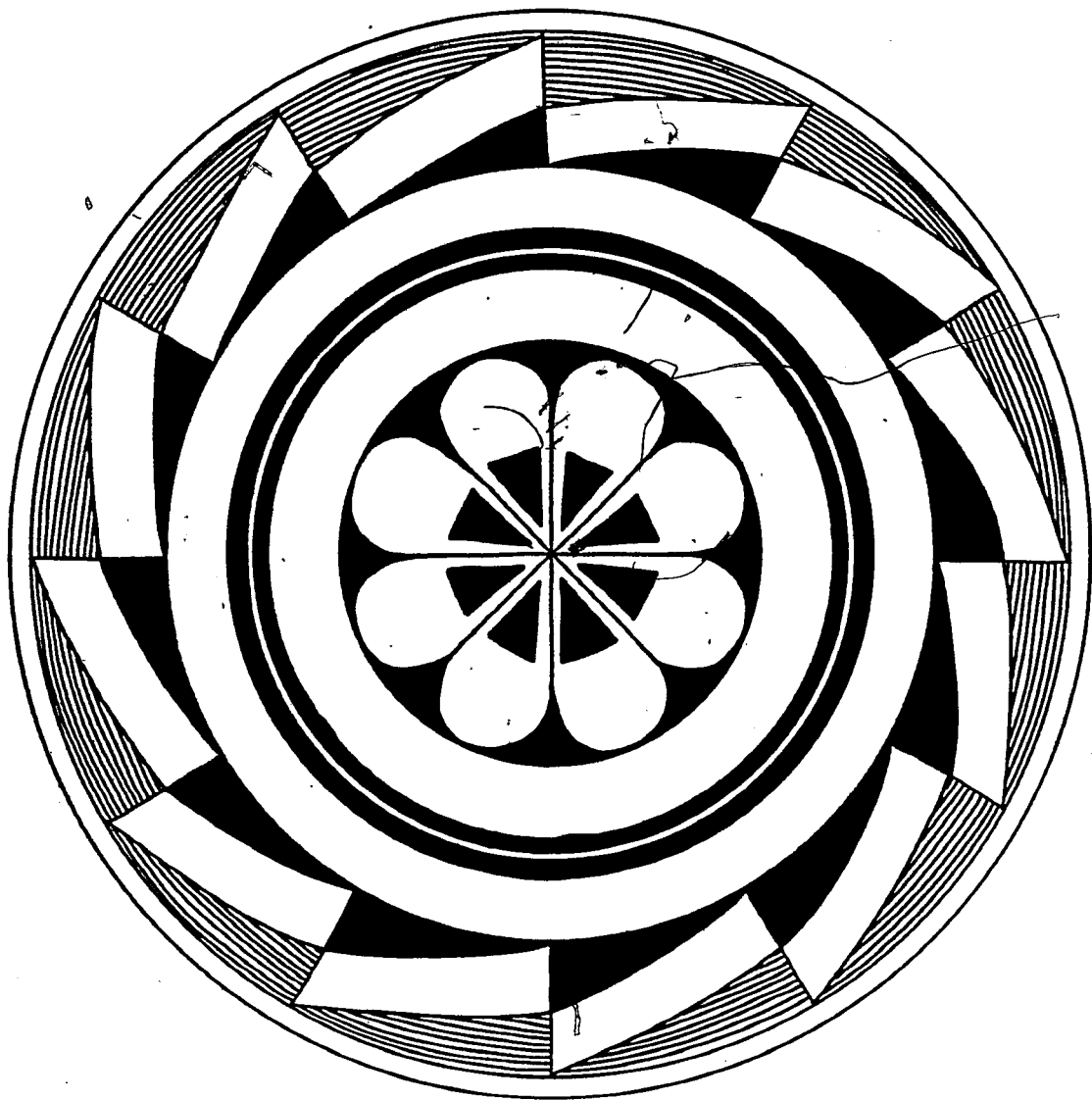
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a royal customer  
meets a Southwestern  
Indian trader

MABEL C. WRIGHT

### *Marietta and the King of Siam*

Marietta Palmer Wetherill laid the foundation for her years of trading post activities when still a young girl in the eighties and nineties. At that time she was travelling through the Southwest with her father, Sidney La Vern Palmer, and would observe carefully as, after hours of palavering, a sack of Arbuckle's coffee was exchanged for an old Navajo blanket or an Apache basket.

After she married Richard Wetherill in 1896 and they took up their lives at Pueblo Bonito in Chaco Canyon, it was Marietta who ran the trading posts that were established around the remote archeological excavations which Richard supervised.

Following his tragic death in 1910, she supported her little family by managing trading posts in various locations throughout the Southwest. Many an illustrious name appeared on the checks that passed through her hands but, only once, was there a royal signature.

The King of Siam wanted turquoise "without flaw." Across the counter from him at her Cedar City, Utah, trading post, Marietta stood ready to accommodate her unscheduled royal customer in any way possible, but she was so bold as to raise the question, when is a flaw not a flaw? Steeped in the Navajo tradition of the sacred stone and the significance of matrix running through it, she shuddered when the delicate tracery was termed a flaw.

As a matter of fact, he was still the Crown Prince, but Marietta's lovable trait of upping everyone a degree, had made him already King

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*For many years a resident of Corrales and the Albuquerque area, Mabel C. Wright has taken an active interest in New Mexico's history and traditions. A close friend of the late Marietta Wetherill, Mrs. Wright has published a number of articles about that remarkable woman and her dramatic lifetime among the Navajos and other Southwestern Indians.*



Prajadiphok of Siam. With his consort, entourage and escort from the State Department, His Royal Highness had been touring the National Parks. The rigors of sight-seeing had proved too much for Queen Ramphai, and her physician had ordered a few days' rest at Cedar City. The Hotel Escalante rolled out the red carpet and tried to act as if royalty dropped in every day, while the Mormon town-folk did a great deal of discreet peeking from behind their wooden shutters. Directly across the street from the hotel, Marietta's trading post was a natural headquarters for the distinguished party during their enforced stay.

Here was everything from mastodon bones to saddles and guns, and excited chattering Siamese ran all around. But the King stood transfixed before the cases of silver and turquoise jewelry, and it was only the turquoise he saw. The royal eye gleamed as Rising Moon, a Hopi silversmith, meticulously set a bit of blue into the silver of a squash-blossom necklace, and the King asked if he might look at unmounted stones.

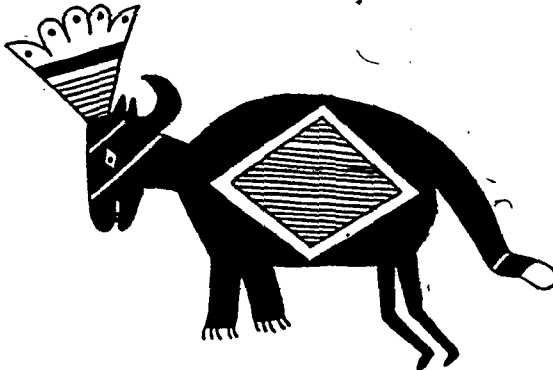
Seated at a table with a tray of turquoise before him, he examined each nugget carefully, and those he laid to one side were pure blue, with no matrix.

"Where are the mines that these came from?" he asked. Marietta told him that the trading post had its own turquoise mine near Cortland, Arizona.

"Areezona, Areezona," he exclaimed. "But that is where my good friend Governor Hunt lived. Do you know Governor Hunt?"

Marietta replied that she had known Governor Hunt for many years, and then she recalled that he had been, at one time, Ambassador to Siam. The King kissed her hand over their mutual friend, and it set the seal for a relationship above and beyond a mere commercial transaction.

Marietta sat and watched the little King examining the stones, rejecting all but those he considered without flaw, and squealing with delight when he found one to his liking, and she asked him if she might relate the Navajo legend of the turquoise, a story that was told over and over again to Navajo children to teach them the virtue of gratitude.



When the Sky Spirit made the earth and peopled it, he placed there mountains, rivers and lakes; soil, grass, trees and flowers; animals, fish and birds; so that his children would be provided with all the needs of life. Then he sent his son, the Thunderbird, to place each tribe in surroundings that best fitted them, and to teach them how to make use of the earth's bounty. The Thunderbird showed them how to weave cotton fibers into clothing, how to harvest the grasses for food, and how to make utensils out of the clays.

After many years, the Sky Spirit looked down on the Earth Children to see how they were getting along, and observed that while they had all the necessities, he had never given them a real gift. What would it be? What was there of the Spirit World that he might bestow? Then an idea came to him.

Below, there was nothing permanently blue, as is the substance of the Spirit World. True, the waters were blue, but not for long. Wind would come and ruffle them into green. True, some flowers were blue, but not for long. Sun would come and fade them into yellow. So he cut out chunks of his Spirit World floor, and threw them down to his Children for a present.

They acted like any of us would. They grabbed and pushed and shoved one another in their eagerness to pick up every last blue fragment. Some stored them away in buckskin bags, some used them as decoration, some used them for barter, but in their greed they forgot one very important thing—they failed to look up and say, "Thank you, O Father Spirit."

Centuries passed, and the Sky Spirit realized that there had never been one single prayer-offering wafted to him, not one token of appreciation for his fine gift of turquoise to the Children, and he was more grieved than angry. So he called down to Mother Earth and asked her if she would care to have the turquoise, and if so, what would she do to show her appreciation? Mother Earth answered that she had seen this strange blueness in the hands of the Children, and if she could have it, she would cherish and guard it always. Then Sky Spirit gave her power to reclaim it all, and she drew it into her and mixed it deep within her bosom, making it a part of her.

There it stayed hidden for a long, long time, and the Children did not know how or where it had gone. All they knew was that the treasure that had brought them wealth, decoration, and happiness had vanished, and they wept bitterly.

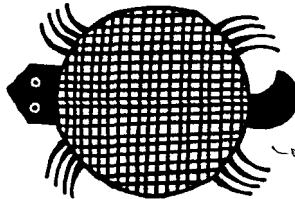
Rain, always a friend of Earth Children, came by and heard them.

"I will show you how to get the turquoise back if you will forever be grateful to Rain."

They promised, and Rain sent torrents of water, that washed gullies into the mountain sides and exposed the celestial blue stone. And so, forever after that, The People have dearly prized the turquoise, even though most of it is no longer pure blue but has minute veins of brown running through it, where it was at one time mixed in the bosom of Mother Earth.

The King of Siam had listened with more than polite attention, and even had interrupted to have his interpreter explain some phrase he had not caught, but his comment at the close was simply, "Nothing that is earthy is beautiful," and he continued his quest for turquoise "without flaw." He had retrieved a goodly pile from the unmounted stones, and then went through the mounted silver and turquoise jewelry. A find to his liking was punctuated with a childish giggle, and the piece was set aside. Unredeemed pawn was brought out of the safe, and several times he asked Marietta if they might take some unusual piece over to the hotel for the Queen to see. The procession would cross the street, and with due ceremony present themselves to Queen Ramphai, who would then make a selection for herself.

But the day of departure and the hour of reckoning came. The unmounted stones presented no difficulty as they were valued and measured carats. Waving his hand over the accumulation of mounted pieces whose turquoise settings he had fancied, the King said he would take all of these, but would Marietta kindly have her Indian boys remove the stones, as he had no use for the mountings. Marietta did not bat an eye, but she listed the jewelry at the prices marked, before sending them back to have the turquoise removed. If it had flashed through the royal mind that he could buy the stones separately, he did not know Marietta. Recalling the transaction later, she said, "Of course, I weighed the silver in the mountings and gave the King credit for it!"



## ELEVEN THOUSAND IN WHEAT SACKS

BOB DALTON

My father, Louis Dalton,  
Served honorably in the Mexican War,  
And my oldest brother died in battle with horse thieves.  
Grat and I became law officers in the Territory.  
But Louis Dalton married Adeline Younger,  
The blood running snake-crooked,  
Beautiful as streaked agate,  
Coiling back and back  
And reaching that other older time  
Which floated in my dreams.  
I could almost touch it—  
All that life had to offer.  
I said, "Is it really so beautiful  
Not to fear to take what one wants?"  
O Cole Younger, Jim Younger,  
O Frank and Jesse James,  
You ghosts who had failed,  
I reached up to you in the night,  
Crying, "I give you a tomorrow  
In which there is no fear."

I planned to rob two banks at once  
And thus outdo anything ever pulled  
By the Youngers or the James boys.  
And so Emmett and I were carrying  
Eleven thousand dollars  
In two old wheat sacks  
When hot pain blotted out the guns behind us  
And I fell dying in the alley muck  
Back of the First National Bank  
Of Coffeyville, Kansas.

## E M M E T T D A L T O N

I was younger,  
 And it always had been Bob  
 Who drew me after him  
 Up, up to his mad vision of banditry.  
 It was strange then  
 That morning in Coffeyville  
 Behind the First National Bank  
 To stretch out my hand to him  
 As he lay dying,  
 Our two hands locked,  
 The living and the other  
 That soon would be dead,  
 When I might have ridden away to freedom,  
 Ridden away even to a new life  
 Now that he could not go with me  
 And our mutual dream was shattered.  
 But I knew there was no new life.  
 O Jesus, my mind screamed,  
 Our two hands are locked  
 Like the white and marble clasp  
 That one sees on a tomb.  
Behind me
 A shotgun coughed hoarsely,  
 The hands parted,  
 And I fell from my horse.

## D I C K B R O A D W E L L

They killed Bill Powers  
 In front of the Condon Bank of Coffeyville;  
 Then Grat Dalton went down beside me,  
 Plugging the city marshall as he fell.  
 I shot two more of them and ran for it.  
 Back in the alley I got on my horse  
 Before the lead found me,  
 Heavy buckshot

And a Winchester slug,  
 Shattering one arm  
 And driving red pain  
 Through my lungs.  
 Blood gushed from my mouth  
 Like a fountain,  
 As Death and I wrestled  
 Astride my running horse.  
 It took him nearly two miles  
 To pull me from the saddle.

—GENE SHUFORD

### MINER'S WIFE

When she had swept the dirt floor of the cabin  
 And put the risen bread to bake—once more,  
 And for the thousandth time, she read  
 The years-old newspapers that lined the walls.  
 Then, when the silence grew and filled the room,  
 She tied her bonnet on, went out of doors.

Only the mountains were outside—the men  
 Were miles away, somewhere up there,  
 Looking, forever looking, for the gold.  
 She sat upon a rock and listened: to the wind  
 Touching the pines, a far-off bird, the silence.  
 Only a bird, and the wind, and her own heart beating.

The burro startled her, but he came when she called,  
 Workworn, dirty, and lost. And she put her arms  
 Around his rope-scarred neck and lay her cheek  
 On his great grey head. Only then did she weep.

—ELIZABETH SHAFER

## EARTH AND I GAVE YOU TURQUOISE

Earth and I gave you turquoise  
when you walked singing  
We lived laughing in my house  
and told old stories  
You grew ill when the owl cried  
We will meet on Black Mountain

I will bring corn for planting  
and we will make fire  
Children will come to your breast  
You will heal my heart  
I speak your name many times  
The wild cane remembers you

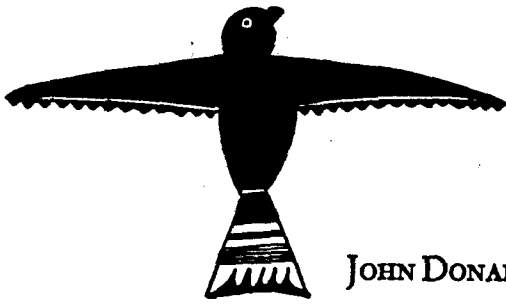
My young brother's house is filled  
I go there to sing  
We have not spoken of you  
but our songs are sad  
When Moon Woman goes to you  
I will follow her white way

Tonight they dance near Chinle  
by the seven elms  
There your loom whispered beauty  
They will eat mutton  
and drink coffee till morning  
You and I will not be there

I saw a crow by Red Rock  
standing on one leg  
It was the black of your hair  
The years are heavy  
I will ride the swiftest horse  
You will hear the drumming hooves

—N. SCOTT MOMADAY

on composers  
and composition



JOHN DONALD ROBB

## *Music—Its Motivation and Creation*

The creative process in the arts starts with a man. The results of the creative process, the works of art, inevitably reflect the whole artist who is a man and a part of humanity. He has a heart and he has a brain. He has his opinions and he has his loyalties. He probably wants to leave the world a better place for the human family to live in. His art is the core of his life. It is not a mere game in which he tries to overcome technical problems and puzzles. It is the expression of what he most truly believes and feels expressed in the way in which he is professionally most competent to express it. The artist is a human being and the great artist is first of all a great human being. It is necessary that a work of art "say something." What that something is varies with the artist. It may be abstruse or as clear as crystal. But it must communicate human experience. Perhaps that is what Thornton Wilder meant when he once said that literature is merely the orchestration of platitudes.

I should like to quote here from another non-musician. On the occasion of its seventy-fifth anniversary celebration in 1942, Rutgers University published a volume of essays entitled *The Bases of Artistic Creation*. In one of these, the playwright, Maxwell Anderson says: ". . . no audience is satisfied with a play which doesn't take an attitude toward the world . . . the story of a play must be the story of

---

*John Donald Robb, Dean Emeritus of the College of Fine Arts at the University of New Mexico, recently returned from attending the Twelfth Annual Conference of the International Folk Music Council held at Sinaia, Rumania. A collector of folk songs, Dean Robb is the author of *Hispanic Folksongs of New Mexico* (UNM Press, 1954). His own compositions include an opera, *Little Jo*, and a musical play, *Joy Comes to Deadhorse*. He was one of seventeen composers chosen to represent the Southwest at the Tenth Annual Institute of Contemporary American Music held in November 1958, at the University of Hartford, Connecticut.*



what happens within the mind or heart of a man or woman . . . must be a conflict between the forces of good and evil within a single person . . . the protagonist of a play must represent good and must win . . . the purpose of the theatre is to find, and hold up to our regard, what is admirable in the human race . . ."

This conclusion may seem strange to students, immersed in the technique of their arts, or to the practicing artist himself. A composer hearing these words might ask himself "What moral values are involved in my selection of this or that note in writing a particular musical composition?" Well, you've heard of "wrong" notes. Every note is a right or wrong note and reveals whether a composer is devoted to truth and beauty or is a poseur or even a thief. Each note selected is a reflection, of the artist's total outlook on life. In surveying the lifework of any great composer, I think it should be possible in most cases to epitomize the composer's purpose and his work in a single sentence or even a phrase. Johann Sebastian Bach labored "To the greater glory of God"; Richard Wagner's principal theme was "Redemption through love."

We can often be more specific and characterize individual works as the expression of a purpose. There can be no doubt of what Beethoven was attempting to say in the *Eroica* Symphony, the opera *Fidelio*, and the *Ninth* Symphony. He has expressed his purpose in writing and the music is appropriate to that purpose. In the *Eroica*, with its cancelled dedication to Napoleon, he was expressing his faith in the upward struggle of man to freedom; in *Fidelio*, he was saying the same thing as well as paying his wistful tribute to married love; and in the finale of the *Ninth*, he transmitted into music the mood of Schiller's great *Ode To Joy*.

Yet there are not merely individual artists, but whole generations of artists who get lost in the forest of the techniques of their art. In the volume of essays mentioned above, Joseph Sloane, speaking about the graphic artists of our own century, commented that many of them turned to the formal qualities and techniques of their craft and he added that in their preoccupation with these matters, content and meaning played a decreasingly important part, and in some instances it was omitted altogether.

A similar thought with respect to music in our century was expressed in another of these essays by the music critic Oscar Thompson. He had heard a composer speaking for the proposition that music must be an expression of life and he said that he found this very heartening because we had been through a period in which new ideas in workman-

ship, new ideas in the way of saying something whether that something got back to humanity or not, seemed to dominate our musical thought. He speculated that this might be the reason that this music never got far beyond the circle of its creators.

In my view the artist who finds technique or novelty to be an end in itself (and there seem to be plenty of these) has not graduated from the status of student. Until he goes beyond this he is not really a composer, no matter how talented he may be. Unless he is first a man with convictions about life which he expresses through his art, he can never be more than a dilettante.

You may say that is very well for the literary artist, but ask how an artist dealing with less definite means of communication like painting or music can take sides and express his convictions through his art. Let us take a relatively easy case, but one which illustrates that there is sometimes, if not always, a difficulty of communication to be overcome.

A few years ago I visited the Museum of Modern Art where one room was devoted to paintings by Rouault. The subject matter of these paintings fell into three categories, dissipated French magistrates, prostitutes, and Christ on the Cross portrayed in various agonized postures. The manner of treatment of these subjects was such that I was filled with disgust toward the painter for putting so much ugliness into his paintings. As I was leaving, a guided tour was starting through the same gallery, so I joined the group. The lecturer stated that Rouault was a deeply religious man whose paintings represented his disgust and loathing for the evil things which he saw about him in life. Subjects which he loathed especially were the corruption which was rampant in the world, moral evils symbolized by the prostitutes whom he painted, and the world's repudiation of Christ, which he represented in his portraits of the crucifixion. It is apparent that I had received the impression of disgust which he had intended, although my disgust had been directed at the artist rather than at the evils which he was attacking.

This raised a moral question for me to solve. Was my disgust at the artist based on unwillingness to face the ugly aspects of life or was it, as I felt at the time, based on the feeling that the artist by painting these things was somehow justifying them. Once the artist's motivation was clear to me, I felt a kinship for him and Rouault's paintings will always have a claim on me that they never had before. I feel in thinking of this incident that what Anderson has said about the theater applies to the other arts as well.

If you don't believe me, let the artists speak for themselves. Here is Richard Wagner: "Art is intimately connected with life." Walt Whitman said, "This is not a book. Who touches it touches a human being."

Mozart, quoted by Frederick Dorian in *The Musical Workshop* (Secker and Warburg, London, 1947), explains how an aria in one of his operas characterizes the emotional state of anxious love. He says,

It is the heartbeat of love which must be expressed . . . the breast heaves and sighs, which is expressed through a crescendo; one hears whispers and sighs which is expressed through the first violins with mutes and a flute in unison.

The things that a composer expresses in his music are not all serious. Composers have often expressed a lively sense of humor in their music. Haydn once set the Ten Commandments to music in the form of ten canons. In setting the Seventh—Thou shalt not steal—he used a melody stolen from another composer. One of Mozart's most delicious scores is *Ein Musikalischer Spass* (a musical joke) in which he pokes fun at the incompetent composers of his time and their silly tunes, labored cadenzas, anti-climaxes, and trite fugues which go nowhere. Another such work is Saint Saens' *Carnival of Animals* in which amid the lion, the jackass, the swan, and other animals, he inserts a section headed "pianists" in which two pianists play scales like students in a conservatory.

Even the personal relationships of composers sometimes enter into their music. Wagner's love for Mathilde Wesendonck found expression in the song *Traume* (dreams) and other songs composed to poems written by Mathilde and these were later incorporated in the opera *Tristan and Isolde*. And the young Mozart, at the age of twenty-one, wrote his opera, *The Abduction from the Seraglio*, under the spell of his love for his fiancée, Constanze. The abducted bride in the opera is named Constanze. Later he writes affectionately to his wife who is away on a trip that even his work gives him no pleasure, because he is accustomed to stop working now and then to exchange a few words with her.

Nature has always inspired composers to try to express in music something of what they have felt in its presence. Haydn once said, "Sometimes I copy a tree, a bird or a cloud." Smetana writes an orchestral tone poem called the *Moldau* after the river which traverses Bohemia and which represents to Bohemians something like what our own "Old Man River" means to us. Delius hears the cuckoo and writes

in 1913 his beautiful orchestral tone poem called "On Hearing the First Cuckoo in Spring." Birds, particularly the cuckoo, have inspired hosts of musical compositions. Janequin in the Sixteenth Century wrote his famous madrigal, *The Song of the Birds*. One of the first, if not first, canon which history records is the famous English canon, "Sumer is Icomen in Lud Sing Cuckoo."

Music has played perhaps a greater part than any of the other arts in expressing the feelings of men, even of entire nations, in their great historic experiences. There is hardly an important historical movement without a musical counterpart. Apart from the national anthems, let us consider a few examples. During the Italian Risorgimento, Verdi's operas came to represent the desire of Italians for independence, and Viva Verdi became a secret revolutionary slogan as the letters of his name were the initials of the words Vittorio Emanuele, Rey d'Italia. A century ago, during one of Hungary's struggles for independence, the Rakocsy march of Berlioz created wild outbursts of revolutionary feeling. The idea of Finnish independence and *The Finlandia Overture* of Sibelius have become virtually synonymous. The 1812 Overture of Tschaikowsky was written to commemorate Napoleon's defeat by the Russians. This list could be extended indefinitely, and into our own day.

Composers have created a literature almost as rich and varied as the literature of words. They have expressed meanings and shades of meanings as subtle as those of poetry, or as obvious as some of the examples I have quoted. They range from the most introspective expression, for instance, the *Pathetique Symphony* of Tschaikowsky, to the most objective kind of utterance. But, whatever the piece, there is a man behind it and it is the expression of that man, his thoughts and his emotions.

Wrong as I feel the Soviet Government to be in dictating what sort of music its composers must write, nevertheless, it is right in recognizing that music is not mere entertainment, but a serious concomitant of human life, and that content as well as form is essential to music. Unless the composer can pour a content of beauty or truth into his music, unless he can stir the human heart with it, his forms are cold and lifeless.

In fact, the depiction of man's innermost feelings is music's special field of excellence. There have been great commentaries on life in words. But even so great an utterance as Abraham Lincoln's *Gettysburg Address* has its counterparts in great works of music such as the funeral

march of Chopin and the funeral march from the *Eroica* symphony of Beethoven.

The other arts, too, are capable of expressing the deepest depths of man's feelings. Goya's great picture of the firing squad rivals anything which could be said in words or music.

I have said enough, I think, to establish that the composer is a man who, like the painter and writer, observes the world around him and has something to say about it. If what he sees is beautiful, he seeks to rescue its beauty from oblivion in the way he knows best—through his music. If he is oppressed by what he sees and turns to God for consolation, he lifts up his soul to the Lord in music, his form of prayer.

Do not misunderstand me. I am not arguing that music must tell a story. Even if there were nothing else to relate art to life, there would remain the "great and noble struggle for perfection that is inherent in every artistic endeavor," as Frederick Dorian puts it. But the great works of art have something else. It is a hard and lonely struggle to find that something else and only the best of the artists find it. But the study of great music reveals that it is there and that when it is heard it breathes its life-giving spirit into an audience.

The composition of serious music should be more than a mere striving of the composer for a kind of personal euthanasia. This viewpoint is expressed by some composers in the formula "I compose for myself." If worthy of the name, music should be capable of transmitting an exalting emotion to at least a segment of the audience. The great masterworks all achieve this. Much of contemporary music fails in this. Audiences are compelled by the vogues of today to sit through hours of music which is incapable of stirring and ennobling. It taxes one's credulity to believe that the conductors and performers who select and present it feel anything of the sort. The contemporary compositions which do have this quality are tabooed as romantic or old-fashioned. The contemporary composer is constantly tempted to join these pattern makers in order to have his music performed. Perhaps it is more than mere cynicism to suggest that some conductors assume music to be great because it is beyond them—ergo it must be profound. We need new and honest musical leadership—new musical ideals—or perhaps a return to old ideals, for essentially ideals never change. Cleverness and opportunism cannot create good music.

So much for motivation.

The creative process itself is in some respects as plain as the nose on your face. In other respects it is veiled in mystery. The first aspect is

the domain of technique. The second is the domain of inspiration.

Given a good technique an artist will produce a competent workmanlike job, like thousands of others. Most of the world's music is like that. Given technique plus inspiration a man may produce a masterpiece.

Let us consider inspiration first. I have said that it is a mystery and so in the last analysis it is. But men of genius have tried to bring it down to earth. This was perhaps what Thomas Carlyle meant when he said that genius (read inspiration) is an infinite capacity for taking pains, a remark which has been bitterly attacked by those who feel genius should be defined as synonymous with inspiration.

There are, according to Frederick Dorian, whom I have quoted earlier, two opinions as to the origins of great music. One opinion holds that inspiration occurs in a creative trance, that this is the source of music, that it is an inexplicable divine utterance, that in exalted moments of inspiration the musician . . . envisions beautiful forms—perhaps even a whole work in one single lightning flash. On the other hand, he says, the scientific composer believes that a work springs from inventive skill and technique alone. Throughout history, he says, one of the two opposing principles, inspiration or craft, has dominated the musician's pursuit of composition. But there is no pure approach, he adds. Great art never stems exclusively from either inspiration or craft alone. It is impossible without both.

Great men have ranged themselves on opposing sides of this argument, he says. In 1869, writing to Camille du Locle, Giuseppe Verdi said, "I believe in inspiration; you people believe in construction . . . my backbone isn't pliable enough for me to give way and deny my convictions, which are profound and deeply rooted in me."

But listen to a somewhat different view.

Igor Stravinsky, probably the greatest living composer, in his book, *Poetics of Music* (Harvard University Press, 1947), refers to the common belief that what sets the composer's creative imagination in motion is an emotive disturbance called inspiration.

He concedes that inspiration plays an outstanding role in the generative process but maintains that inspiration is in no way a prescribed condition of the creative act, but rather a manifestation that is chronologically secondary. His conclusion is that this emotion is merely a reaction on the part of the creator grappling with that unknown entity which is still only the object of his creating and which is to become a work of art.

Again, Aaron Copland, in his book *What to Listen for in Music* (McGraw-Hill), remarks that the composer, confronted with the question of inspiration, does not say to himself: "Do I feel inspired?" If he feels like composing, he does. After he has finished composing, he hopes that everyone will recognize the thing he has written as having been inspired. But that, he says, is really an idea tacked on at the end.

A similar opinion is expressed by Oscar Hammerstein, who, in his particular field of musical comedy librettos, has enriched our century, in his volume entitled *Lyrics* (Simon and Schuster). He says that a term like "inspiration" annoys a professional author because it implies that ideas and words are born in his brain as gifts from heaven and without effort, that all who write know that writing is very, very hard work, and that nobody waits to be inspired.

One could multiply these quotations indefinitely. The argument seems to turn on the question whether inspiration is really cause or merely an effect.

My own view is that the humblest persons may have moments of inspiration. Joan of Arc was a humble shepherdess. Inspiration is not therefore a seizure which sets men of genius apart from mankind. A moment of ecstasy, of inspiration, can happen to anyone. Falling in love is such a moment. Like other kinds of inspiration, it may be a matter of months or years rather than of moments. But inspiration may evaporate, leaving no one changed but the one who experienced it.

However, it is the artist who portrays it, "fixes" it in words, paint, notes, or a soaring building and so his inspiration may change the entire world. More than one artist has done so—as David the King did, as Michelangelo did, as Johann Sebastian Bach did.

It is my own observation that a man of genius is distinguished from other men by the capacity to work harder. He thus achieves what to other men is the impossible. By doing so, he becomes to them a magician, a genius. Now there are men who never can hope to be geniuses. In fact, true inspiration is so rare that only a handful of men out of the billions who populate the earth possess it and they only at the height of their creative successes. So the work of the world is carried on by the rest of mankind and most of its music is written by men who are not geniuses.

The French musician, Nadia Boulanger, once said that composers are not creators. God is the only creator. But God permits a few chosen men to discover wonders. Among these men are the great composers.

Some composers have created only one or a few works of genius, out

of a very large output. And history records the achievements of men who have, without being inspired, written music without which the world would be poorer. In fact, there are in the world of music today composers of all gradations of skill from that of the genius to that of the hack writer of singing commercials, the lowest form of musical prostitution. It is a lonely climb up to the heights of Parnassus, but it is there to climb and some of every generation will reach it. If one were to make a chronological chart of the history of music, it would be easy to prove that in every generation for hundreds of years there have been not one but several living composers of genius.

One point, I think, should be stressed; even to some inspired geniuses, ideas are often achieved by very hard work and do not spring immediately into being. Beethoven's sketch book demonstrates that the answers did not come to him easily. He recorded as many as twenty-five different versions of the same melody with which he experimented until one satisfied him. A friend of Stravinsky once told me that Stravinsky had been stalled for approximately six weeks over one stubborn bar but that when he eventually found a satisfactory solution it was like a burst of sunlight.

Luckily for mankind, the creative process is not exclusive property of men of genius. Even children sometimes participate in the process. The practitioners of all the arts are engaged daily in this process. Therefore, we come to the subject of technique. Technique is the magic wand by which the dreams of the artist are transmuted into reality.

Unfortunately technique is a matter that cannot be "explained" in a paper like this. It takes years of concentrated systematic study of harmony, counterpoint, form and analysis, orchestration, score reading, one or more musical instruments and composition itself to acquire a technique. Ten years of concentrated study is not too long. So I can give here only a few hints about technique and its employment.

The composer sets out to compose a piece of music. How does he go about it?

There is nothing very specific to be said about when one writes music except to say that it should be a daily practice to devote a certain period of time. An opera will take most composers not less than a year—nearer to two years, including orchestration. A symphonic work will take several months. Smaller works take less time. When the work is done, it may be performed once and then forgotten. It takes *faith* to be a composer.

Where one writes is a personal matter. Some composers thrive on



confusion. The French composer, Darius Milhaud, has his apartment on the Boulevard de Clichy in Paris and he sits at an open window composing while outside his window the traffic of one of Paris' busiest streets goes by. In addition, there is often a travelling carnival in the street. By contrast, there are others who must have privacy, like the late Jean Sibelius, who rarely left his villa in the Finnish countryside and whose wife shielded him from noise and the outside world. A composer should have a hideout where he can go and compose without interruption. Some composers compose at the piano; others do not need an instrument. The method is unimportant; it is the result which counts. Stravinsky, it is said, has in his study a whole desk full of pens, T squares, erasers, India ink, knives, etc. Others have little else but a pen and black ink and some transparent blueprint paper with music staves ruled upon it. Most of us use this kind of paper today because extra copies can be made cheaply.

How does a composer go about his task?

The planning of a composition brings us close to architecture. Composers use the word *form* to designate the *plan* of a musical composition. Those forms known as fugue, symphony, minuet, rondo, invention, and the like are clear and complete, developed in past centuries and stored away in the composer's mind. He uses ideas derived from them modified by his personal experience for his new constructions. Occasionally a new form emerges. It has been said that music is fluid architecture and architecture is frozen music, and there are indeed similarities at least between the terminologies. The composer builds his work upon horizontal lines and at the same time considers its vertical aspects. The horizontal lines he calls melody (or counterpoint, if there is more than one melody) and the vertical aspect of the music is known as harmony. The horizontal aspect of music, which is the way it appears on a score and which might be compared to what the architects call elevations, represents a succession of notes following one another in time, whereas the vertical represents tones sounded simultaneously. When a composer says I will write a symphony, he has in mind a form as definite, I suppose, as that which an architect thinks of when he says I will build a library. And into that form the composer pours what he has to say.

a story  
of a father  
and a boy

E. W. TEDLOCK, JR.

*'Twas a fond ambush'*

In the blind time between sun-bright things and dream-dark shapes, the boy and the father would play in the shaded garden. Only the sounds and lights of the house played with them, calling toward bed and the good, warm time until dawn. From the older brother's phonograph, soft tunes enchanted them home. Where the sister sat close to the radio, hits strikes and outs muttered near victory. And where the mother made things to wear against winter, the whirl of the sewing machine never stopped. Only Freckles the dog was quiet, contentedly curled like a white ball where water had cooled the great bush by the wall.

"Where is that boy? Where can he be?" the father would call after him, into the not quite dark night in the green-shaped yard.

The father would look under the cherry tree, where the birds had left seeds like fallen Christmas tree things. He would peer through the shadows of the big-fruited peach tree, where the leaves curled far down. He would search along the dim pattern of the walk, looking behind the slender curve of a chair or under the dark red wood of the picnic table.

"Where can that boy have gone now?" he would call, letting the worry climb in his voice, not knowing when the boy would jump laughing out to surprise him. For the words were magic, the "abacadabra," the "presto chango," of their game. They could do anything.

The boy and the father played until bed time, over and over, without getting tired. They always began the same way. They started off, hold-

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ing each other's hand, down the walk, away from the house and the light and the sounds, into the dark. The farther they went, the stranger it was. The walk was a road, and they were exploring the night-changed world.

"What a fine night it is," the father would say, as if nothing could happen. "Look at this apple tree. See how it has grown. What a fine tree it makes."

But as he talked of fine nights and fine trees, the boy's hand slipped out of his and vanished soundlessly into the big darkness.

At first the father pretended not to notice. "What a fine tree it is," he said. "How it has grown. We should have apples next year."

Then he was surprised that the boy was no longer beside him, looking and listening. He could see nothing but the high leaves of the apple tree, the vacant curve of the walk, the shadows of things in the night. The radio still muttered its far off game. The music rushed in the hollow house. The hum of the sewing machine stopped, and started again. But the boy had vanished.

Freckles the dog was not worried. He stirred and sighed sleepily in his cool water nest. At home in his hutch in the playhouse, Cotton the rabbit thumped twice unconcernedly. The apple tree kept on growing, toward next year's fruit. But the father was worried. He had to search, up and down, back and forth, until he found the hidden, waiting boy.

He went fearfully along the dim pattern of the walk to the big-fruited peach tree, and parted the spaces between the curled leaves. He peered under the cherry tree, but only the bird-fallen seeds glinted back. And he called, "Where is that boy? Where can he be?"

He turned toward the house, where light shone dimly out among the chairs and onto the picnic table. And as he went, he began to sound very worried, calling "Where is he? I wonder where that boy has gone to now!"

He looked behind the slender, curving chairs, and of course there was no one there. Then he turned to the dark cave under the roof of the picnic table. And as he bent down, very worried, to look in, the darkness jumped. With a sudden loud "Here I am" the boy leaped up and threw his arms around his neck and caught him tight.

That night this was the last time they played the magic game. The father was glad, not because he was tired, but because once, in the middle of the game, just after the boy had vanished, he had felt, just for a moment, as if it had really happened. The way the boy did it was magic, and you did not want to forget the magic words.

U.N.M.  
Fifth Annual  
Research Lecture

LINCOLN LAPAZ

*Some Aspects of Meteoritics*

Background for much of the material to be presented in this paper will be found in an article on meteoritics in the Southwest published in *New Mexico Quarterly* in 1950; while many additional details (especially those of a mathematical nature) that could not be included in the present paper appear in a monograph on the effects produced by meteorite falls contributed by the writer to the fourth volume of *Advances in Geophysics*.\*

In the 1950 *Quarterly* paper just referred to, it is pointed out that in spite of popular notions to the contrary, the astronomical universe does not consist solely of luminous bodies, but that a large part (quite possibly the greater part) of the matter in our universe is nonluminous. It is this dark matter that provides the material substratum of the science of meteoritics. The individual solid bodies of this substratum, ranging in size from submicroscopic particles to masses of asteroidal dimensions, comprise the meteorites, objects individually invisible until by chance they collide with the atmosphere of the earth. Then, in their swift passage through the resisting medium of our globe's protective air-shield, these masses become heated to incandescence and thus give rise to the widely varied but always strikingly beautiful luminous phenomena we call *meteors*, a term borrowed from the Greeks, who used it (as will have been evident to anyone witnessing the famous Bell Telephone documentary, "The Unchained Goddess") in a far less specialized sense than do present-day scientists.

For a century and a half, meteoritics was little more than a stepchild of the matured sciences of astronomy, chemistry, and mineralogy. Not

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\*Lincoln LaPaz, "Meteoritics in the Southwest," *New Mexico Quarterly*, vol. 20, No. 3 (Autumn 1950), 269-288; "The Effects of Meteorites upon the Earth," *Advances in Geophysics*, vol. IV (New York: Academic Press, Inc.), 1958, 217-350. Since these sources will be frequently referred to in the present paper, they will hereafter be designated simply as *NMQ* (1950) and *Geophysics IV* (1958), respectively.

until the Second World War did this subject attain the stature of an independent science, at least not in the Western world. In fact, the first non-Soviet institute devoted solely to research in meteoritics was founded at the University of New Mexico on June 17, 1944, although it first acquired quarters adequate for its purpose only with completion of the Meteoritics-Physics Building in 1951. (Plates I and II.)

Although provision by the Soviets of properly instrumented and housed facilities for research in meteoritics long antedated the construction of the Meteoritics Building on the UNM campus, nevertheless, until quite recently, our Institute has had a claim to uniqueness at least in the Western world. In 1954, however, the National Research Council of the Canadian government brought into operation in rapid succession two fine new well-equipped meteor observatories. Unlike the Institute of Meteoritics of the University of New Mexico, where the objects of prime interest are the fallen meteorites themselves and, at least up to the present, work chiefly of purely theoretical nature has been carried out on the luminous phenomena of meteors, the Canadian installations are primarily concerned with the visual, the photographic, and the radar detection and recording of meteorites of all sizes in motion through the atmosphere of the earth. The field of Canadian interest, however, extends also to the collection and study of fallen meteorites, as is attested by such interesting and valuable papers on Canadian meteorites as those published by P. M. Millman while he was Chief of the Stellar Physics Division of the Dominion Observatory.<sup>1</sup>

Such installations for research on meteorites and meteors as those at the University of New Mexico and in Canada betoken a willingness on the part of academic and governmental administrations to expend considerable sums of money for such research. The tax-conscious reader, well aware of the vigorous competition waged for every dollar of state and federal money in these tight times, may well ask why. Perhaps the most effective way in which to answer this question is to quote contemporary physicists to the effect that the plight of the earth-bound observer may be likened to that of a man imprisoned in an opaque igloo with walls and roof ten feet thick. At the time of the observer's imprisonment (i.e., of his birth into this intriguing world of ours), a small hole in the roof of the igloo (the observer's ability to see the very small part of the total radiation spectrum which we term *light*) was his only connection with the outside. After generations of labor, aided by much ingenuity, our imprisoned observer has been able to enlarge the

roof opening slightly (for example, by discovery of photographic plates coated with emulsions sensitive to infra-red or to ultra-violet radiation). Furthermore, he even has been able to open up two new holes in the walls of his igloo, one the so-called "radio" window through which radiation of long wave-length becomes observable; and the other (in what one might describe as the opposite side of his igloo), the "primary cosmic-ray particle" window, an opening through which radiation of exceptionally short wave-length can now be observed.

Except for these three openings—the optical, the radio, and the primary cosmic-ray particle windows—the opaque walls of the earth's atmosphere continue to shut him off from the radiations originating in the outside universe. Moreover, like most windows, those in our observer's igloo give at best a somewhat distorted view of the outward scene. Consider, for example, the spectral lines that can be photographed through the optical window of the igloo. These lines have been likened to fingerprints taken of the chemical elements. Actually, these "fingerprints of light" are now known to be displaced relative to one another not only by the so-called Doppler effect, an effect due to relative motion between the light source under examination and the observer, but also as a consequence of other physical laws. Again, it has been discovered that the individual lines of the "fingerprints of light" are widened and modified in other ways by extreme conditions of pressure and temperature if these are characteristic of the light source under observation. If the reader will imagine an F.B.I. agent working on fingerprints that migrate beneath his microscope while, at the same time, the individual ridges and whorls comprising the prints undergo bizarre distortions, he will gain a faint impression of the extraordinary difficulties under which the terrestrial observer confined in his atmospheric igloo is required to make valid identifications and deductions from his spectroscopic investigations.

Unlike the intangible and often almost indecipherable evidence that comes to our terrestrial observer through the three windows of his igloo, the meteorites which penetrate straight through its symbolic walls and fall literally at his feet, provide him with direct and most tangible evidence of what exists in the world outside. From the earliest days of the science of meteoritics, its devotees have stressed the extraordinary scientific value of these tangible specimens of "the world outside," which tumble almost into our collective laps if not into our individual laboratories; and, if recovered (as each one should be), can be subjected to chemical and radiometric analysis, as well as to all of

the other unambiguous investigative procedures by means of which man has gained his present extensive knowledge of his terrestrial environment, the only sample of the cosmos, other than the recovered meteorites, directly accessible to his prying eyes.

Regarded in this light, as rare and providentially provided messengers from realms unknown and inaccessible, the priceless scientific value of the meteorites should be evident to the layman as well as to the meteoriticist—so evident indeed that the reader will no doubt share the bewilderment and anger of the scientist that in the Western world and, particularly, in the United States these quite irreplaceable treasure troves of evidence about the cosmos all too often fall into the hands of commercial collectors who specialize in fabricating them into book-ends, into the bases of exceptionally stable (and expensive!) fountain pen sets, and into what has been termed “other-world jewelry.”<sup>2</sup> The articles of trade thus produced are disposed of at great financial profit to the commercial operator—but with commensurately great loss to the scientific world.

The omission of the Iron Curtain countries from the last paragraph is necessitated by the fact that within them, fallen meteorites automatically become the property of the State and are thereby immune from destruction for private profit. Even back in Czarist times, there seems to have been universal willingness on the part of the Russians to accept this “law”; so much so that in one of the rare exceptions when a peasant ground up and ate as potent medicine one of the two recovered fragments of the diamond-bearing Novo-Urei aerolite,<sup>3</sup> his act was widely commented on as less foolhardy than scandalous. The writer has neither the intent nor the desire of recommending adoption of this Russian “law” by the United States, preferring to believe that once the true scientific importance of meteorites becomes widely recognized in this country, their exploitation for private gain will cease.

The general basis for the current importance of meteoritics has now been set forth above, but it may be advisable to drive home the value of the contributions deriving from meteoritical research by giving in some detail several specific examples. First place should probably be accorded the quite invaluable information the study of meteorites has provided on both the qualitative and quantitative aspects of the composition of the cosmos. As long ago as 1917, W. D. Harkins, of the University of Chicago, in a paper<sup>4</sup> deservedly famous for containing the initial formulation by Harkins of his heuristic rule concerning the relationship between the atomic weights of the elements and their

abundances in the meteorites, first stressed the great value of these extra-terrestrial objects to those seeking to ascertain the average composition of cosmic material. As Harkins clearly pointed out, the earlier custom of placing complete dependence on geochemical data was quite indefensible since such data of necessity are derived solely from study of the thin outer layer of the earth-body alone accessible to investigation—a layer the composition of which unquestionably is strongly influenced by the processes of magmatic differentiation, weathering, solution, and redeposition. Harkins' original suggestion has led to such elaborate tables of the cosmic atomic abundances of the elements as those published, for example, by V. Goldschmidt, H. Brown, H. C. Urey, and jointly by H. E. Suess and H. C. Urey.<sup>5</sup> The direct unambiguous evidence of the meteorites and the best modern results of the spectroscopists concur in testifying that chemically—and isotopically as well, with certain probably highly significant exceptions—the world outside displays a surprisingly complete qualitative if not quantitative identity with our earth.

From the mineralogical point of view, the meteoritic samples so far examined display somewhat greater divergences from the terrestrial standard. For example, we search our mineral collections in vain for terrestrial analogs of the kamacite, the taenite, and the schreibersite that make up so large a portion of the nickel-iron meteorites; while, on the contrary, members of the populous family of terrene oxides are either wholly lacking or quite sparsely represented in the meteorites.

The case for meteoritics, however, need not rest on the importance of its contributions to cosmochemistry, mineralogy, and the other basic descriptive or quasi-mathematical sciences. Further contributions to such diversified fields as relativity, metallurgy, and ballistics may readily be cited. For example, as the writer pointed out some years ago, meteorites, large or small, may be moving about the earth in orbits much smaller than that in which the moon circles our globe. The occurrence of such rare but by no means unique events as the great Canadian fire-ball procession of February 9, 1913 supports this possibility.<sup>6</sup> But if such small, nearby terrestrial satellites exist, then, as the writer recently pointed out,<sup>7</sup> whether natural or artificial, they provide a means of verifying or discrediting one of the so-called crucial tests of Einstein's general theory of relativity of far greater practicality than determination of the advance of the perihelion of the major planet Mercury, which so far is the only object in the Solar System utilized in this connection. Since my paper appeared in 1954, both the German atomic scientist,



Winterberg,<sup>8</sup> and the Russian relativist, Ginzberg,<sup>9</sup> have suggested additional ways in which artificial earth satellites can be of use in testing Einstein's theories. Presumably, the reported failure of C. Tombaugh's well-thought-out plans for discovery of nearby *natural* satellites of the earth<sup>10</sup> has led those unfamiliar with the occurrence of such satellitory meteoritic processions as the Canadian one of 1913 to relinquish hope for discovery of meteoritic satellites of the earth.

Again, a study of the metallurgy of the almost rust-proof alloys comprising the meteoritic nickel-irons led long ago to such commercially important advances as the stainless steels we prize in cutlery. Much earlier, the British Admiralty's quite accidental discovery of the altogether amazing toughness of the nickel-iron meteorites (officials at Portsmouth had nonchalantly agreed to cut in half a large nickel-iron meteorite with metal saws adapted only to the soft metals of the early iron-clads!) was directly responsible for "crash" development (in the Victorian tempo) of battleship armor plate composed of specially synthesized and hardened nickel steel.

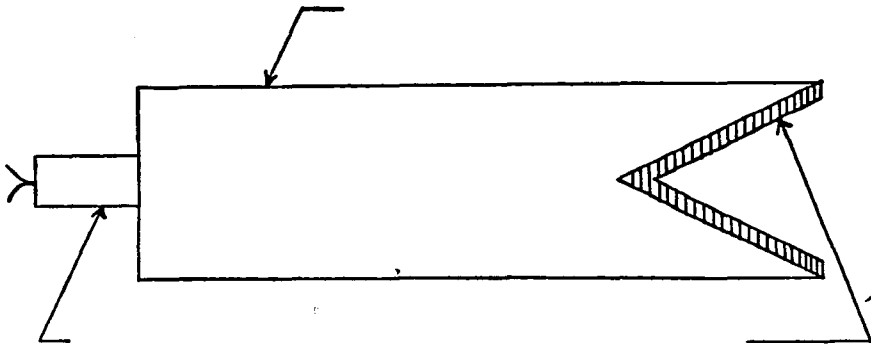


FIGURE 1. A laboratory model of a lined-shaped-charge. On detonation, the metal liner (hachured) is ejected at velocities approaching those of the slower meteorites (compare Plate III-A). The unhachured portion is high explosive.

As a final example of the fruitful interplay between meteoritical and military research, we may cite a quite recent development—that of the line-shaped-charge (see Figs. 1, 2 and Pl. III-A). Actually, the jet-effect of high-speed meteoritic impact with terrestrial targets had demonstrated the appalling penetration of such charges long before man had learned to kindle fires, let alone to develop detonating high explosives. In 1951, the writer took advantage of the theories of penetration by jets from line-shaped-charges which had been evolved during the Second

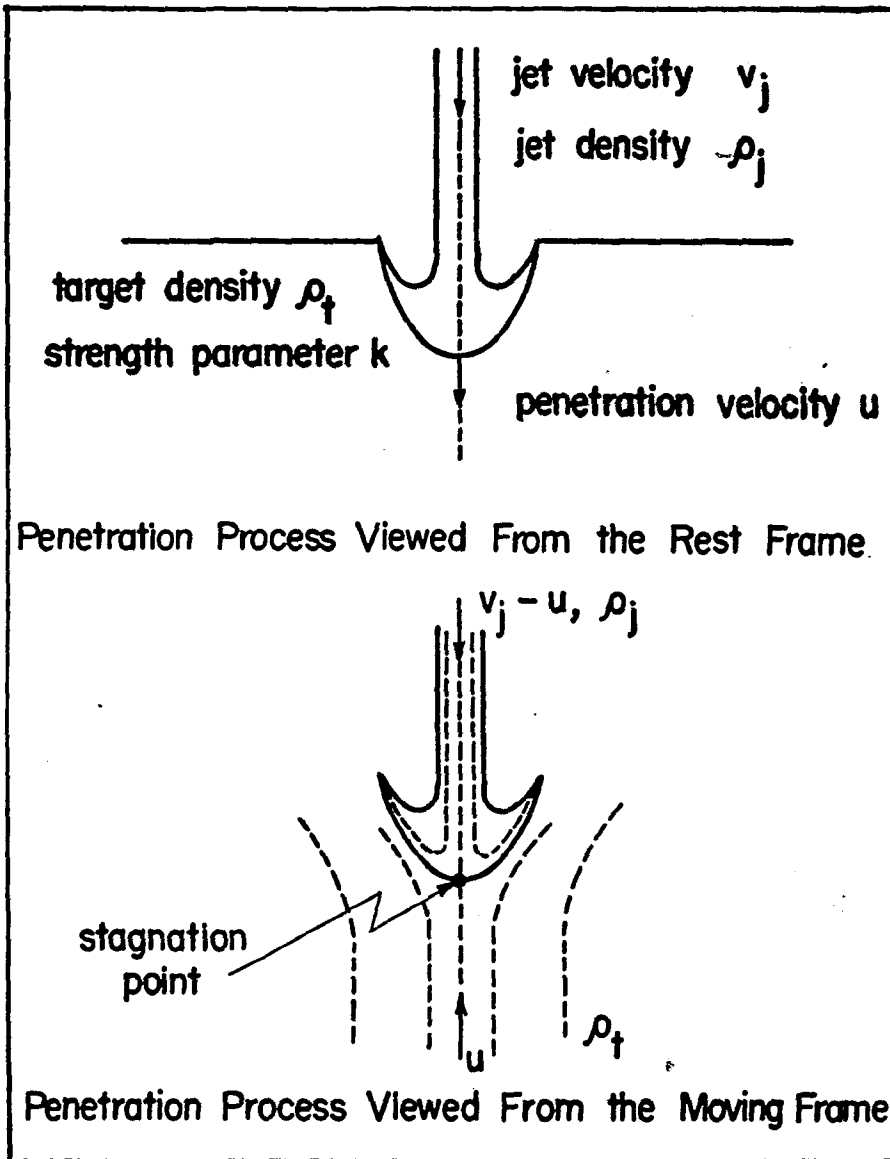


FIGURE 2. The penetration process of a metal jet from a lined-shaped-charge according to the theory of Pugh and Rostoker (1953).

World War in order to reverse the course of the argument and, from actual measurements of the extraordinary penetrations through nickel-steel and other varieties of armor plate effected by the various bazooka-type rockets, to determine a lower bound for the mass of the giant meteorite responsible for blasting out the Arizona meteorite crater, which initially was more than 1300 feet deep. After publication of the lower bound, 1,100,000 tons, found in this manner,<sup>11</sup> the writer was able to interest one of the outstanding experts in the lined-shaped-charge field, E. M. Pugh, of the Carnegie Institute of Technology, in more exactly determining the mass of the Canyon Diablo meteorite and in solving the general problem of meteorite crater formation. The first issue of the journal, *Meteoritics*, published at the University of New Mexico, was honored by papers contributed by Pugh and two of his colleagues, Norman Rostoker and R. von Heine-Geldern,<sup>12</sup> dealing with the interrelations between lined-shaped-charge theory and the theory of the formation of meteorite craters. In particular, Rostoker's paper contained very exact calculations of the mass of the Canyon Diablo meteorite carried out under two different sets of initial conditions. The values he found, 5,900,000 and 7,800,000 tons, respectively, showed that the writer's lower bound of 1,100,000 tons, an estimate once criticized as "fantastically too large," was, rather, a very conservative lower bound indeed for the mass in question. Rostoker's definitive work should once and for all discredit the "fantastically" small values of 8,500 to 12,500 tons found for the mass of the Canyon Diablo meteorite by C. C. Wylie<sup>13</sup> and J. Rinehart.<sup>14</sup>

Perhaps enough has been said above to convince the reader that the recovery and the preservation for scientific study of every meteorite that falls or has fallen upon our globe is essential for advance not only in the field of meteoritics itself, but in many related sciences. For obvious reasons, recoveries of meteorites of witnessed fall are by all odds the most important that can be made. Indeed, one need only point out that meteorites, as they move about in the almost perfect vacuum of interplanetary space, are subject to bombardment by the full flux of cosmic radiation, for the reader to be able to infer the extreme importance of the prompt recovery of witnessed falls and the immediate testing of them for cosmic-ray induced radioactivities.

Unfortunately, in spite of the intense phenomena of light and sound that accompany the fall of even a moderately large meteorite, very few of these objects are recovered from the totality of those that actually fall each year on the land surface of our globe. The meteoriticist, to be

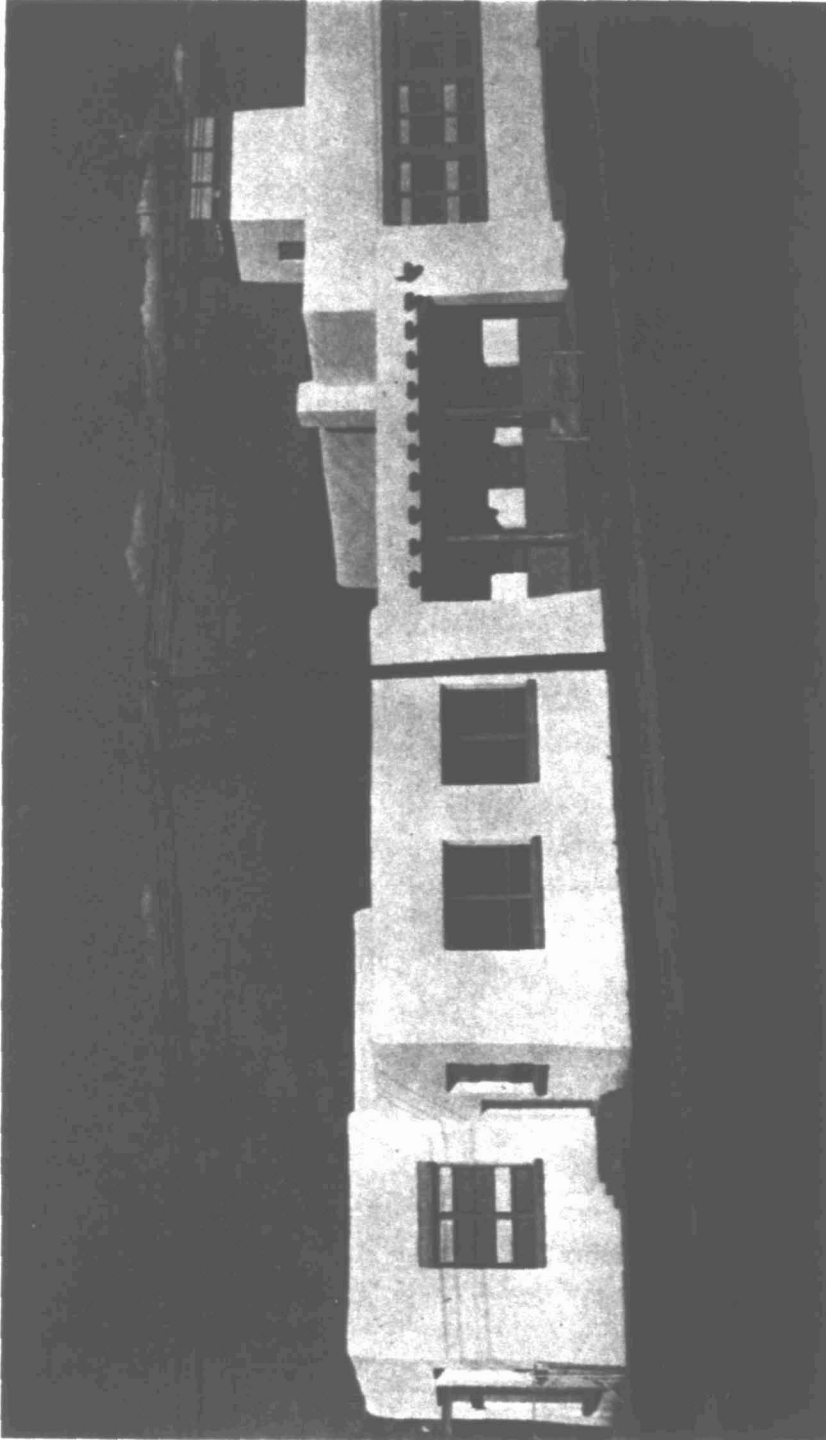


PLATE I. The Institute of Meteoritics of the University of New Mexico.

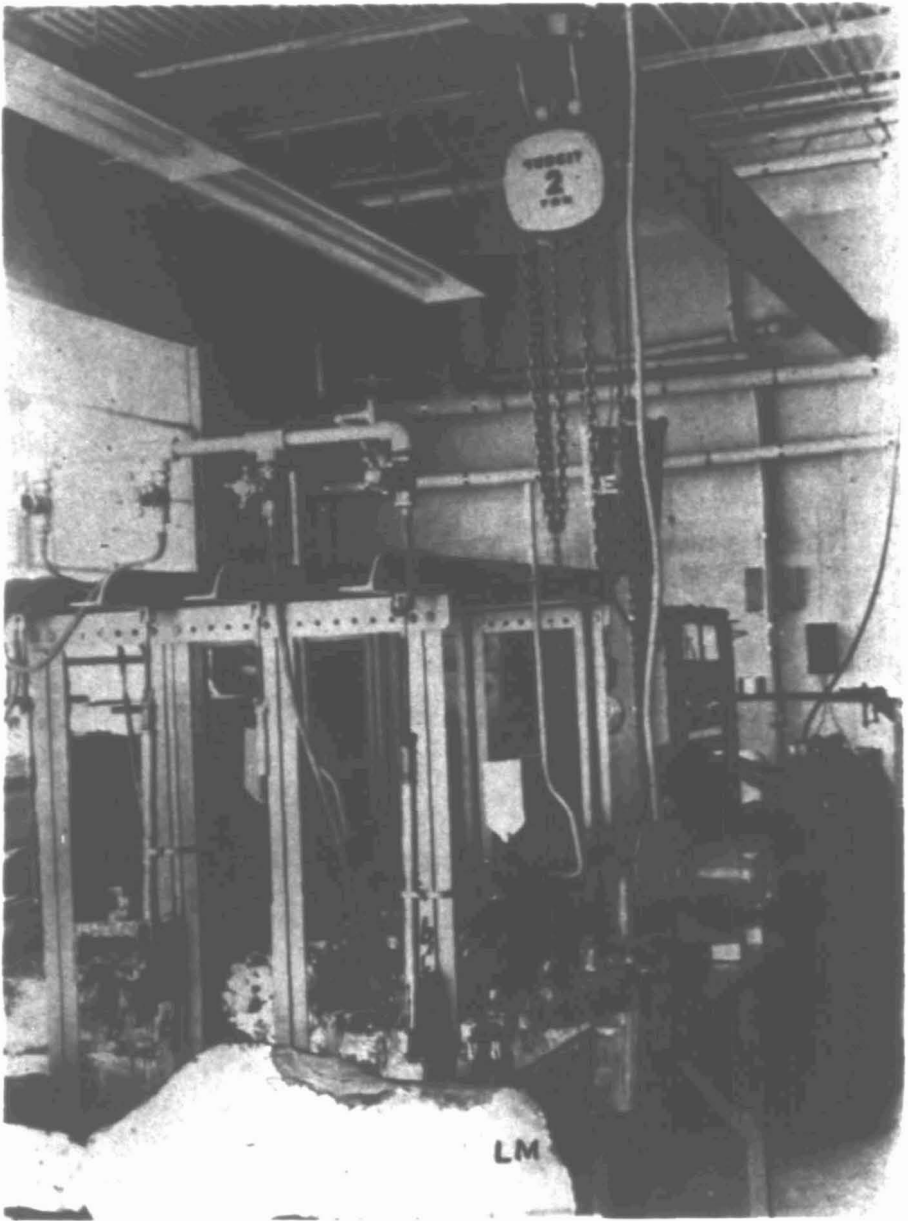


PLATE II.—Meteorite saws and chain hoist in the machine shop of the Institute of Meteoritics. The large section labeled LM is a central slice from the solid 600-pound core of the Lake Murray meteorite (see Plate IV).

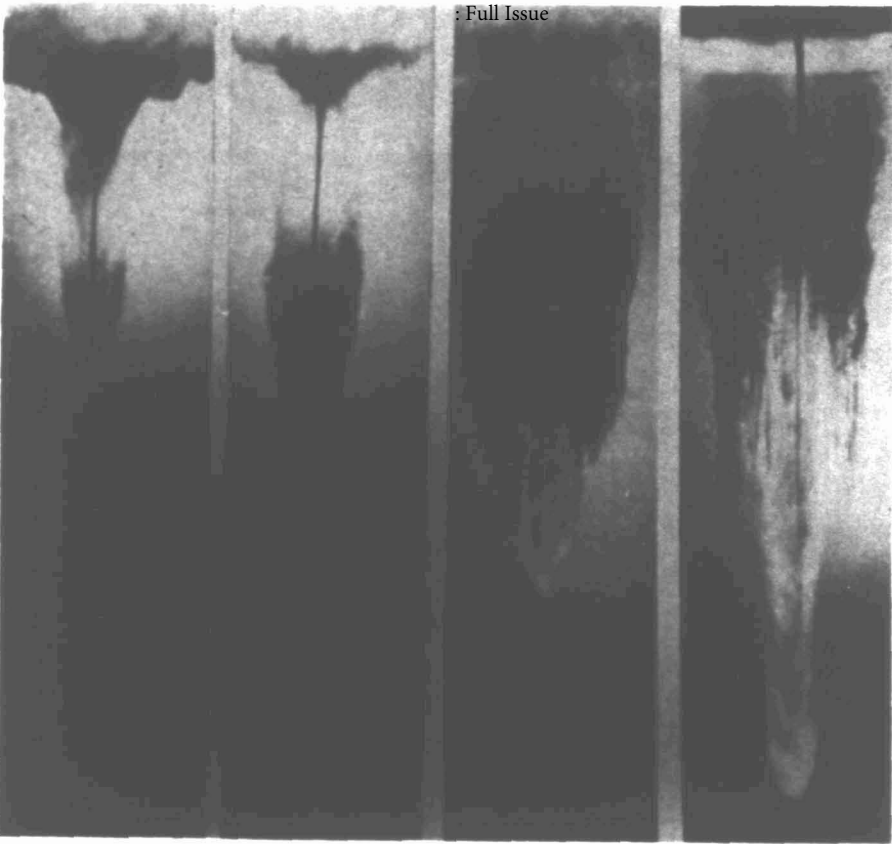


PLATE III-A. The four copper jets reading from left to right have velocities of approximately 5, 6, 7.5, and 12 km/sec (1 km = approximately 0.6 of a mile).

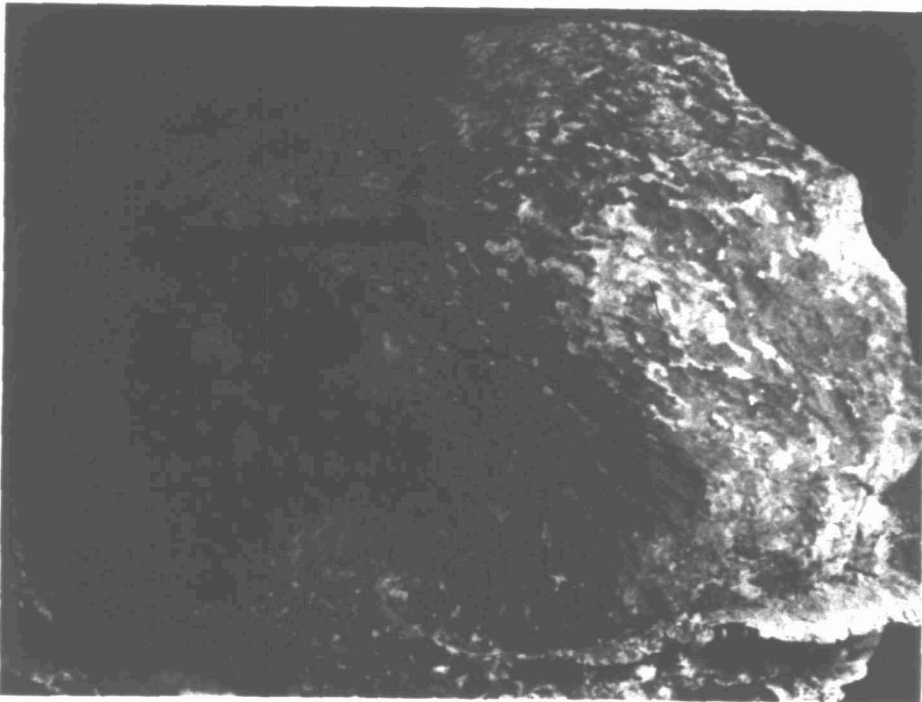


PLATE III-B. The giant main mass of the Norton-Furnas achondrite, probably the outstanding specimen in the collection of the Institute of Meteoritics of the University of New Mexico. This meteorite, weighing in excess of a ton, is the world's largest known aerolite.



PLATE IV. The Lake Murray nickel-iron meteorite hangs suspended from a truck crane kindly loaned the  
Institute by Superintendent Royce Coe of Lake Murray State Park.

assured of making recoveries from such witnessed falls, needs the wholehearted support of the general public; and it is for this reason that the Institute, soon after its organization, began a publicity campaign to bring into the ranks of its voluntary observers all inhabitants of New Mexico and adjoining states. The necessity of such a campaign should be apparent to anyone upon reflection that, unlike the chemist, who can secure the materials which he wishes to employ in his research from literally dozens of reputable chemical firms, the meteoriticist must find his specimens wherever they may chance to fall. On the basis of more than four decades of field experience, the writer can testify that generally meteorites seem to fall in the most inaccessible places, where the conditions for recovery are as unfavorable as possible!

The drive for additional observers staged by the Institute in New Mexico and neighboring states has been far more than matched by the nationwide campaign which the Russian meteoriticists long have had under way. Perhaps the relative scale of the two publicity campaigns can best be illustrated by pointing out that, whereas the Institute is accustomed to order 1000 reprints of popular tracts on meteoritics for distribution to interested persons here in the Southwest, it is the custom of the Meteorite Committee of the Academy of Sciences of the U.S.S.R. to order anywhere from 60,000 to 180,000 copies of similar articles by means of which general information and instructions for reporting meteorite falls are disseminated to potential observers in the Soviet Union and its environs.

In an earlier issue of this *Quarterly*, the writer has given in fairly complete detail the circumstances under which one of the greatest of all witnessed meteorite falls, that of the giant Norton-Furnas achondrite, was located by the staff of the Institute of Meteoritics and recovered and preserved for science through the joint efforts of the University of New Mexico and the University of Nebraska (Plate III-B). As regards this particular witnessed fall, the only supplementary details that need to be presented here relate to results obtained since publication of the earlier *Quarterly* paper from intensive studies of the specimens of the singular Nortonite material recovered by Institute field parties (specimens ranging in weight from a few thousandths of an ounce to more than 2200 pounds). First, we note that many careful studies show that the material of the Norton County meteorite (as the writer predicted in 1948<sup>15</sup>) is without a parallel among the approximately 1600 meteorites at present known to science. As a result, this meteorite serves as the type stone of a new achondritic subclass, repre-



senting as it does a second link in the chain connecting the aubrites and the enstatite-chondrites, of which the first link is the celebrated Cumberland Falls, Kentucky achondrite.<sup>16</sup>

Finally, it must be pointed out that the Norton County achondrite was not only the first meteorite subjected to search for cosmic-ray induced radioactivity, but was also the first in which such activity was actually measured. The initial tests for cosmic-ray effects, conducted in 1948 at the Institute for Nuclear Studies of the University of Chicago (now the Enrico Fermi Institute), were carried out on Nortonite specimens donated for the purpose by the Institute of Meteoritics. The results of these first attempts were negative, but it is now known that the failure to obtain positive results stemmed from use of instrumentation too insensitive to detect the low level of activity actually present in the achondrite specimens. When, in 1955, sufficiently sensitive counting devices were employed by J. D. Ludwick and W. H. Johnston on other specimens from the Norton fall donated by the Institute of Meteoritics to Purdue University, not only was the presence of tritium detected in the specimens, but measurements of the amount of this isotope present therein led Ludwick and Johnston to the striking conclusion that their results were evidence that the cosmic-ray flux outside the earth's atmosphere might be very much higher than had previously been assumed.<sup>17</sup> The implications of such a conclusion to many scientific and engineering fields, particularly those of rocketry and astronautics, can readily be appreciated. The reader will observe that the radiation hazard adumbrated by the results of Ludwick and Johnston antedates by several years the discovery of the quite distinct and much more localized danger presented by the Van Allen radiation belts, which now are of such great concern to rocketeers and astronauts.

For such reasons as those briefly summarized above, meteorites of witnessed fall are of preeminent importance; however, since the discovery of such falls has always been a most difficult problem—one which only now is beginning to yield somewhat under cooperation from the general public—it is understandable why the majority of the recovered meteorites actually represented in scientific collections are those of unwitnessed fall. (A fall, even though it may have been seen to occur, is regarded as unwitnessed unless eyewitness reports thereof are matters of written record.) In the present paper, we propose to devote attention primarily to the problem of recovering such meteorites. The first question to be answered, of course, is how are meteorites of unwitnessed fall found at all. The answer is that most of them have

been found by mere chance, chiefly by the plowman or the miner or whoever else in the course of his routine labors works over a large volume of earth under such circumstances that he is led to handle and to observe closely any unusual stony or iron masses present therein. Once the presence of meteorites in a given locality has been established by such a chance find, it may well repay the meteoriticist to carry out systematic search of the entire area in which the find was made in the hope of locating additional specimens.

In this connection, one of the most intriguing problems of theoretical meteoritics arises. "Inhuman" terrain and "all-too-human" meteorite hunter being what they are, searches, no matter how systematically organized, never result in exhaustive recovery of the meteorites put down in a given strewn field. It therefore becomes a most important problem to determine from the partial recoveries made in a field searched once or several times the probable total meteorite population actually present in the field.

At first sight, this population problem seems a difficult one; however, as the writer showed a number of years ago,<sup>18</sup> it is quite easy to deduce at least a lower bound for the probable population of a meteoritic strewn field by use of probability considerations if only the meteorite hunters searching the field observe certain rules and practice proper restraint. By this latter, we mean that they should not succumb to the universal practice of picking up and carrying away each meteorite as it is found, but rather should leave it in place and simply record its position on the master search grid for the field. In this wise, searches of the area subsequent to the first will not be conducted on a depleted strewn field and the hypotheses basic to valid application of probability considerations will be fulfilled. Unfortunately, while the members of a scientific group may be trusted to abide by the rules necessary to insure a dependable population estimate, there exists no guarantee that commercial meteorite hunters or souvenir-seeking natives of the region surrounding the meteorite fall will not intrude upon the discovery region and, by their activities, upset all calculations, as occurred indeed in the case of the Norton achondrite shower of February 18, 1948 mentioned in earlier paragraphs.

Until arrival of that Golden Age when all laymen share the scientist's respect for meteorites, the meteoriticist will probably be able to circumvent the irritating human relations problem mentioned in the last paragraph only by "going underground" for his meteorites! To explicate this apparently sinister suggestion, it is only necessary to point

out that, in spite of statements to the contrary appearing in the textbooks on astronomy, meteorites do not fall on the earth but instead penetrate into it to a depth dependent on their size and weight. Provided only that the depth of penetration is below maximum plow depth (about 10 inches), such deeply buried meteorites are protected from outside interference of the sort that has so far wrecked almost all attempts to take a scientific census of surface strewn fields. But one may well question, will the amount of meteoritic material occurring at such great depths be sufficient to warrant the expense and time required to get it out. In the case of the nickel-iron meteorites (the so-called siderites), an overwhelming affirmative is given by such considerations as those that follow.

Where several such meteorites of widely differing masses have struck equally resistant earth targets, as has frequently occurred in certain of the great iron showers, the measured depths of penetration of the various fragments suggest that, other factors being equal, meteorite penetration is proportional to the cube root of the striking mass, i.e., for spherical shape and an assigned density, to the radius of the meteorite.

In view of such evidence, one can immediately infer that, in general, really massive meteorites, and particularly the dense nickel-irons, bury themselves deeply at impact. On the other hand, it has long been recognized that the number of truly sizable meteorites that fall upon the earth is quite small in comparison to the total number of meteorites of all masses reaching the earth. Since it is not immediately apparent which one of these opposing influences will predominate in determining the vertical distribution of sideritic material in the earth, a mathematical investigation is necessary in order to decide whether the average meteoritic iron mass in a stratum situated at considerable depth is greater than or less than the average meteoritic iron mass in a layer of the same thickness near the surface of the earth. Such a mathematical investigation was carried out by the writer a number of years ago.<sup>19</sup> Omitting mathematical details which would either bore or floor the reader, the result obtained may be stated in the following fashion: Under assumptions fully consonant with the best observational data relative to the frequency of infall of iron meteorites of various sizes and the depth to which such meteorites penetrate into the earth, it is found that something of the order of 100,000 times as much nickel-iron meteoritic material lies buried below maximum plow depth as occurs above this depth.

Even though the fraction of the total number of recognized mete-

orites found by the plowman is quite large, the actual number of meteorites found in this manner is surprisingly small if account is taken of the extraordinarily large tracts of land that are under cultivation. Since the areal extent of systematic excavations carried to depths exceeding 10 inches is, and probably will long remain, vanishingly small in comparison to the extensive acreages plowed up in farming, it is obvious that mere chance recoveries have given a quite incomplete census of the buried meteorite population and that most urgent need exists for instruments designed to detect the presence of deeply buried masses of meteoritic iron. Similar conclusions hold as regards the other classes of meteorites, although here the problem is more involved because of the tendency of those meteorites which are not of solid metal to disintegrate under the excessive resistances encountered as they penetrate low into the atmosphere of the earth and to fall as a shower of relatively small masses.

Such considerations as the above led to the development of a variety of meteorite detectors as part of the program of the Meteorite Bureau at Ohio State University in the 1930's. The extraordinary effectiveness of these instruments is attested by the results obtained by the First and Second Ohio State University Meteorite Expeditions in 1939 and 1941. For example, use of one of the OSU meteorite detectors at the Odessa meteorite crater between September 15 and 17, 1939 resulted in the recovery in 12 hours of actual field work of over 400 pounds of Odessa octahedrites. These recoveries were made in a small sub-region of the extensive territory about the crater in which continued systematic search by approximately 30 W.P.A. workers over a time interval of several weeks had led to the discovery of only a single small surface specimen weighing less than one pound, although the region searched visually had more than 1000 times the area of the one searched instrumentally. In this particular case, calculations showed that the ratio of deeply buried iron to superficially embedded iron could conservatively be set at the astonishing figure of 400,000. In this connection, it may be of interest to note that a value for this ratio of the same extraordinary magnitude is clearly indicated by the weight-depth of burial data which have now become available as a result of the exhaustive explorations carried out by several successive meteorite expeditions sent by the Meteorite Committee of the Academy of Sciences of the U.S.S.R. to investigate the strewn field of the great nickel-iron shower of February 12, 1947, a crater-producing fall to be reported upon in some detail later on in this article. The 1947 Russian fall was, of course, a witnessed

fall while the Odessa crater was produced by meteoritic impact in remote prehistoric times.

Such evidence as the above clearly shows the great effectiveness of the meteorite detectors, instruments enabling the meteorite hunter systematically to search three-dimensional volumes of the ground rather than just its surface. Their very effectiveness, however, has given rise to special and in part quite unexpected difficulties. The best place to use these instruments is in the arid Southwest (for here the operator is spared false signals arising from the detectors' unwelcome ability to pick up subsurface moisture and the sap in extensive root systems). Unfortunately, this region, as J. Frank Dobie has pointed out, is inhabited by "Coronado's Children," and one characteristic of this breed is conviction that no one digs for anything but buried treasure.

A meteoriticist with a bagful of metal meteorites that ring like silver bells may not relish an encounter with a determined-looking Coronadoan who insists, "Mister, I had this spot located long ago!" If this initial challenge passes without bloodshed—as has so far always been the case—the treasure hunter's next move is to try in every conceivable way to obtain the use of instruments as obviously potent as the meteorite detectors. Sometimes the most Machiavellian tactics are employed. Once Victor Regener and the writer were inveigled into driving across the rugged terrain extending from Golden to Dolores (sites of worked-out gold placers) by a man who promised to lead us to a remarkable meteorite crater. Later developments disclosed that our guide's true Coronadoan purpose was to "size up" the meteorite detectors and to ascertain if they could be used to locate "a fortune in placer gold" cached by one of the early miners, who, of course, in line with the best Hollywood tradition, had thoughtfully "left a map."

Let us return from our Dobian interlude to the unquestioned ability of the modern detectors to locate even deeply buried meteorites almost anywhere. Many of these objects certainly rest upon or lie buried (but findable!) in any tract of land of the size of even the most modest ranch holdings in the Southwest. For understandable reasons, these objects, so important scientifically, could remain unsought for and undiscovered until the end of time as far as the preoccupied and/or uninterested landowners are concerned. Nevertheless, if a meteoriticist, either by visual search or by employment of expensive meteorite detection equipment, locates a meteorite on such privately owned land, according to the currently accepted ruling of certain American courts, he has no

equity whatever in his find unless the landowner is willing to share the meteorite with him. This judicial hurdle to progress in meteoritics came about in the following little known and (to scientists at least) almost inexplicable fashion:

After enduring countless cosmic and atmospheric vicissitudes, a number of meteorites have also had to suffer through terrestrial tribulations over and above ordinary oxidation and hydration; for they have unwittingly become the focal points of protracted and often heated legal battles. The spectacle of opposing groups of lawyers haggling over possession of a fragment of a mass from the depths of space—which only by the sheerest chance intersected the earth's orbit and only by the most improbable good luck was found at all—is surely sufficient to elicit a smile from anyone but a participant in the action; and the variety and ingenuity of the arguments advanced pro and con constitute in themselves a tribute to the extraordinary flexibility and adroitness of the legal mind.

In each case involving a meteorite, the heart of the controversy is embodied in the question: "To whom does a fallen meteorite belong? —To its finder or to the owner of the land upon which it chanced to fall?" In the United States, the state courts in several cases have seen fit to decide in favor of the owner of the land, whether or not with entire justice the reader will soon be in position to decide.

The first recorded legal action in the U. S. involving the ownership of a meteorite was that of John Goddard v. H. V. Winchell for possession of a 66-pound fragment of the Forest City, Iowa, aerolite. On May 2, 1890, this fragment fell upon Mr. Goddard's land and penetrated the soil to a depth of three feet. The following day, the meteorite was dug out of the ground in the presence of a witness by a Mr. Peter Hoagland, who took it home with him and claimed it as his own. Subsequently, Mr. Hoagland sold the meteorite to Mr. Winchell for a little over one hundred dollars. Mr. Winchell thereupon took possession of the meteorite and held it until the mass was taken from him under a writ of replevin and awarded by the Winnebago District Court to Mr. Goddard, the owner of the land on which it fell.

The proceedings of the appeal made by Mr. Winchell in an attempt to recover the aerolite make extremely interesting reading; and a brief summary will be given below of the opposing legal points of view regarding what even the not-too-easily-impressed court reporter described as a novel and intriguing legal question:<sup>20</sup>

For Mr. Winchell, the appellant and purchaser of the meteorite from its finder, Mr. Hoagland

For Mr. Goddard, the appellee and owner of the land on which the meteorite fell

1. Before the aerolite reached the earth, it was the property of no one, and therefore it properly and reasonably comes within the scope of a legal rule of great antiquity stated by Blackstone as follows: "Occupany is the taking possession of those things which before belonged to nobody."
2. According to Blackstone, "whatever movables are found upon the surface of the earth, or in the sea, and are unclaimed by any owner, are supposed to be abandoned by the last proprietor, and as such are returned into the common stock and mass of things; and therefore they belong as in a state of nature to the first occupant or finder."
3. "There is nothing in the nature of [the meteorite] which resembles soil or could in any manner ever enrich or promote the uses of the land in the slightest degree." The meteorite is not adaptable to use, enjoyment, or ornamentation of the soil; it is of scientific value only.
4. The proper principle to apply is that of original acquisition; i.e., under Roman law, a treasure found by one person on the land of another was to be shared
1. Since the meteorite was "down in and a part of the soil," it belongs *prima facie* to the fee owner, for "whatever is affixed to the soil belongs to the soil."
2. The meteorite was not "upon the surface of the earth" but buried beneath it; the mass was not "unclaimed by the owner," but claimed by the land owner; the stipulation "supposed to be abandoned by the last proprietor" does not fit the aerolite since "finder" in a legal sense presupposes a "loser" or one who abandoned it.
3. "No one has a right to go prodding and grubbing things out buried three feet deep in my land on the plea that the things are not adapted to growing crops."
4. The aerolite belongs to the appellee "because it was buried down three feet in his land, and as a physical fact, was a part and parcel of it."

equally by the finder and the owner of the land; and "in English and American law, the finder of property not claimed by an owner is entitled to the whole of it, even though it be found on the land of another."

Judge J. Granger, who heard the appeal and rendered the final decision, stated impartially at the beginning of his summary, "In determining which of these rules is to govern in this case, it will be well for us to keep in mind the controlling facts giving rise to the different rules, and note wherein, if at all, the facts of this case should distinguish it." Certain portions of his summary remarks show, however, a rather astonishing lack of appreciation of the facts and principles involved. As regards the term "movables," the judge felt that these "must not be construed to mean that which can be moved, for, if so, it would include much known to be realty; but it means such things as are not naturally parts of the earth or sea, but are on the one or in the other. . . . To take from the earth what nature has placed there in its formation, whether at the creation or through the natural processes of the acquisition and depletion of its particular parts as we witness it in our daily observations, whether it be the soil proper or some natural deposit as of mineral or vegetable matter, is to take a part of the earth, and not movables." Here, we seem to have the conclusion that a meteorite, which patently is "not naturally a part of the earth," is indeed a part of the earth!; and therefore subject to the laws governing realty.

Expanding on this point, Judge Granger further observed that the meteorite "was one of nature's deposits, with nothing in its material composition to make it foreign or unnatural to the soil." Taking into account the wide contrast between the composition of the Forest City aerolite and the Iowa soil, it would seem equally logical to assert that a steel filing embedded in an eyeball is not foreign to it. Again, Judge Granger felt that the meteorite "was not a movable thing 'on the earth.' It was in the earth, and in a very significant sense immovable; that is, it was only movable as parts of the earth are made movable by the hand of man. Except for the peculiar manner in which it came, its relation to the soil would be beyond dispute." With this last cerebation, the meteoriticists can at least agree!

After this brief review of the judge's summarizing remarks the reader



will not be surprised to learn that the decision he handed down in the Forest City case upheld the original judgment of the district court and favored the owner of the land, Mr. Goddard.

Arguments advanced by the defense during a subsequent legal action (Oregon Iron Co. v. Hughes, decided July 17, 1905) involving ownership of the famous Willamette, Oregon, iron meteorite derived, to a considerable degree, from the decision rendered in the Iowa case. The Willamette iron, unlike the Forest City aerolite, had been found by its discoverer, Mr. Ellis Hughes, on the surface of the ground rather than buried beneath it. Mr. Hughes therefore felt that he had been justified in removing the 14-ton mass from the place of find on uninhabited Oregon Iron Company land to his own property (in itself a most amazing feat to be performed by one man, one child, and one small horse! \*). The attorneys for Mr. Hughes made the fact that the meteorite had been found on the surface of the Oregon Iron Company land rather than buried in it the cornerstone of their defense; but they also attempted to demonstrate that, many years prior to Mr. Hughes' discovery, the iron had been appropriated as a shrine by the Indians of the area and, subsequently, the mass had been abandoned by them. Therefore, under the law, as interpreted in line with Blackstone's opinion (see the second point for the defense in the Forest City case), "the defendant, being the finder, became the owner, and is entitled to it, as against the owner of the realty upon which it was found." The court, however, ruled (1) that the meteorite, whether buried or not, was still

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\* "In August of 1903 . . . Mr. Hughes conceived the idea of bringing the great iron mass to his house, a distance of nearly three-fourths of a mile. This seemed an almost impossible task, he having only his son of 15 years and a small horse as motor power. But he was an old miner, full of mechanical resources, and also full of pluck and energy. With infinite pains he fashioned a simple capstan with chain to anchor it, and a long braided wire rope to roll up on it, as his horse traveled around it as a winch. Then he fashioned an ingenious car with log body-timbers and sections of tree trunks as wheels; also some heavy-double-sheaved pulleys. By wearisome blocking up and leverage he succeeded in capsizing the great mass directly upon the car and lashing it securely. Then he stretched out his hundred-foot hauling wire-rope, attached one end of it to the car and the other to his staked-down capstan, and started his horse going round. The sequence of effect to cause followed; so did the meteorite. The great mass moved slowly, for the ground was soft, and even with boards put under them and constantly changed, the wheels sank deep into the mud. Some days they moved little more than the length of the car (which was that of the mass itself); on others they passed over ten, twenty, or (one day) fifty yards of their toilsome road. At last, after three months of almost incessant toil, the giant meteorite reached Hughes' own land. . . . It was a herculean struggle between man and meteorite, and the man conquered." This quotation has been taken from Henry A. Ward's detailed and interesting article, "The Willamette Meteorite" (*Proceedings of the Rochester Academy of Science*, vol. 4 (March 24, 1904), p. 138).

a part of the realty upon which it was found, in the absence of proof of severance, and (2) that the evidence of previous "ownership" by the Indians was insufficient "to justify an inference that [they] had severed the meteorite from the realty, and thereafter abandoned it, so that the next finder became entitled to it."<sup>21</sup> The Oregon Iron Company was therefore awarded possession of the meteorite, which was promptly sold for an undisclosed but very large sum to Mrs. William E. Dodge, who, we are glad to record, at once presented Hughes' find to the American Museum of Natural History in New York, where it is still exhibited to the public.

In view of the deference of the legal mind to precedent, it may well seem that the celebrated cases briefly reviewed above establish for all time the ruling that a recovered meteorite belongs to the owner of the land on which it fell. But such a conclusion overlooks the fact that once a law has been shown to be unjust if not illogical, the courts of our land are among the first agencies to sanction and indeed to compel its revision. Moreover, since 1842, a counter-precedent (apparently almost unknown) has existed for a quite different and definitely more realistic ruling on the ownership of recovered meteorites. In that year, Judge Duranton of France handed down the decision that a fallen aerolite belonged to its finder and not to the owner of the field in which it fell. Specifically, M. Duranton ruled that "a stone fallen from the heavens cannot be an accession of the land upon which it alights; it belongs entirely by occupation to him who has found it." It is significant that in reviewing Judge Duranton's decision in the case of the first meteorite known to have been "the subject of controversy in sublunary tribunals," the authority M. Marcadé has gone on record as unable to conceive "how an advocate could have been found to entertain the contrary opinion."<sup>22</sup>

Perhaps with the Duranton counter-precedent before us, it would be well to review critically the reasons that have been cited by more modern courts as justification for ruling in favor of the landowner.<sup>23</sup> We note first that the "Law of Accretion" is one of the chief mainstays of those who defend this ruling. But "accretion" as understood in law relates to processes which increase accumulations of one kind or another in or upon a portion of the earth's surface at the expense of another portion. The falling of a meteorite upon our globe bears no resemblance at all to the ordinary processes of accretion. A meteorite fall does not transfer anything to A's land at the expense of B's land, as is the case when wind or water removes soil from one man's field and

redeposits it in the field of another. Rather, a meteorite fall enriches earth's common clay with a celestial treasure; and, as a treasure, the question of its ownership ought really to be decided on the basis of one of the oldest Roman laws, the so-called *Thesaurus Law XXX*, which, as mentioned previously, states that half of a discovered treasure should go to the finder and half to the individual on whose land it was found.

Again, it has been asserted that the relation of a meteorite to the soil onto or into which it falls is the same as that of a mineral deposit occurring in that soil. A mineral deposit, however, is "a geologic body," i.e., a body which has evolved from the earth itself.<sup>24</sup> At every stage of its development, it is of the earth, earthy. On the contrary, whatever the origin and history of a meteorite, such a body certainly has no genetic connection with the earth. It is, *par excellence*, an example of "such things as are not naturally parts of the earth or sea." Moreover, not only are mineral deposits, i.e., "local accumulations or concentrations of useful metals," derived from the rocks of the earth's crust,<sup>25</sup> and therefore quite different in origin from the meteorites, but the processes by which mineral deposits are formed—e.g., solvent action, magmatic differentiation, weathering—bear not the remotest resemblance to the process by which a meteorite becomes associated with the soil of this globe.

Finally, it must be stressed that one unfortunate outgrowth of prevailing legal opinion may all too frequently be the following: Either those fortunate enough to witness meteorite falls refrain from searching for and finding the fallen masses because they know that the law will allow them no equity in these objects; or, in case search is made and meteorites are found, the finders either conceal their discovery, thereby again depriving the science of meteoritics of information and specimens of great value, or else they falsify their accounts of the recovery of the meteorites in order to conceal the true places of find.

As time passes, the legal question reviewed in some detail above will become of increasing moment to science. The rapid growth of population, a population more and more meteorite conscious, coupled with wider and wider use of efficient meteorite detectors will insure the location of a steadily increasing proportion of the meteorites of both witnessed and unwitnessed fall. A necessary concomitant will be the need for adjudication of an ever-growing number of legal battles centering on the ownership of recovered meteorites. The exigencies of the time as regards swift promotion of meteoritical knowledge being what they are, it is not difficult to envision ultimate adoption by our federal gov-

ernment of such a "law" as regulates the ownership of meteorites in the U.S.S.R. unless the courts of the various states have the wisdom to look aside from laws that point only to the past and take cognizance of the inequities that would continue to be legalized by promulgation of such decisions as those rendered by the Iowa and Oregon courts.

Any paper on meteoritics for the general reader should strive to dispel once and for all the current widespread belief that really destructive meteorite falls (like the depredations of the giant dinosaurs) were hazards of the distant past and just "can't happen here." A step in this direction was taken in the brief summary on the Siberian fall of 1908 given in my 1950 *Quarterly* paper. In the last eight years, much new information has come to light on this earliest of the great falls of the present century; and, in addition, a wealth of factual data now has become available on the much more recent crater-producing fall near Vladivostok. We propose to devote the concluding portion of the present paper to consideration of these extraordinary Siberian meteorite falls—the occurrence of which has been one of the main factors in stimulating Russian crash programs in meteoritics and rocketry, the fruits of which have at once impressed and alarmed the world.<sup>26</sup>

Astronomers never tire of commenting upon the dearth in the Twentieth century of such memorable comets as called forth some of the most sensational entries in the astronomical record of the Nineteenth. Meteoriticists, on the contrary, have been favored in the first half of the present century with the three greatest meteorite falls of historic times: the Podkamennaya Tunguska fall of June 30, 1908; the Sikhote-Alin (or Ussuri) fall of February 12, 1947; and the Norton County, Kansas fall of February 18, 1948, which has been considered earlier in this article.

Of this trio of macro-meteorite falls, the first was by far the most remarkable. Unfortunately, circumstances of time and place delayed its investigation by meteoriticists for nearly 20 years. Even as late as 1927, however, when the unremitting efforts of Estonian meteoriticist L. A. Kulik culminated in the first expedition into the central region of fall, the surviving traces of the devastation produced by the Podkamennaya Tunguska meteorite were still most impressive. Readers of the voluminous and still expanding Russian literature concerning the fall of June 30, 1908<sup>27</sup> will never cease to regret that a combination of governmental lethargy and learned skepticism regarding the realistic but often naive eyewitness reports made by the native Tunguse reindeer

herders (who were the closest of all people to the center of impact) for so long prevented scientific investigation of the Podkamennaya Tunguska incident.

Brief mention of the many spectacular effects of the Podkamennaya Tunguska fall already has been given in this *Quarterly*<sup>28</sup>; and the reader who wishes further details on this stupendous natural event can consult the articles in Russian and English given in reference 27. For this reason, only one novel feature of the Podkamennaya Tunguska fall will be treated in the present paper; namely, the singular fact that although the energy released by the Podkamennaya Tunguska meteorite certainly exceeded and very probably dwarfed that produced by a "nominal" A-bomb, in the half century since its arrival on earth, no material unquestionably derived from the impacting mass has been recovered.

As long ago as 1941, this unprecedented fact led the writer to suggest that the Podkamennaya Tunguska meteorite was made up of contra-terrene or reversed matter, all traces of which had disappeared through its explosive annihilation on impact with the ordinary terrene matter of the earth target.<sup>29</sup>

In 1958, the science editor of *Time*, apparently unaware of any of the references just cited, devoted considerable space to what he appears to have regarded as a brand-new theory that the inexplicable absence of meteorite recoveries in the devastated Podkamennaya Tunguska area might have resulted from the collision of an "anti-meteor" with the earth.<sup>30</sup> *Time's* blunder in overlooking the fact that meteorite craters, like bullet holes, are made by material objects (i.e., meteorites) and not by mere luminous appearances (i.e., meteors or "anti-meteors") is matched by the unfamiliarity of its scientific staff with the literature of meteoritics. Similar examples of unreliable scientific reporting on the part of *Time's* staff induced C. J. Hoff and the writer to present formal critiques entitled "Desert Shrimps and *Time*" and "Meteoritics, Astronomy, and *Time*," respectively, at the 1955 meeting of the New Mexico Academy of Science at the University of New Mexico. In view of the recent incident involving Bolivia, *Time's* political reporting seems so well matched with that of its science section that our South American neighbors would do well to read *Time* with Bacon's famous admonition in mind.

Although in recent years a great deal of additional evidence<sup>31</sup> has been brought forward of the soundness not only of the suggestion originally made by the writer in 1941 with respect to the possibly contra-terrene nature of the Tunguska meteorite, but also of several other

hypotheses based on the theory of unconventional matter developed by the nuclear physicists P. A. M. Dirac and G. Gamow, nevertheless, continued opposition has been encountered from those who have denied the very possibility of the existence of such matter. Until recently, these critics could argue that while the contraterrene edition of the negatron, namely, the positron or anti-negatron, was well-known, there was no evidence of the existence of the anti-protons and anti-neutrons also necessary for the fabrication of contraterrene matter. This position is no longer tenable because both of these fundamental particles of contraterrene or "anti-matter" now have been produced by groups of physicists working under the direction of the late E. O. Lawrence in the Radiation Laboratory of the University of California.

With the removal of the last serious objection to the existence of contraterrene matter, it has become more than ever desirable to seek for evidence of those transmutation effects that would be produced in any earth target struck by a contraterrene meteorite. In 1941, I relayed to L. A. Kulik a proposal made by V. Rojansky that such transmutation effects should be searched for in the Podkamennaya Tunguska crater field. The tragic death of Kulik the next year in a prisoner-of-war camp in Spass-Demenski, Province of Smolensk, forestalled a crucial test of Rojansky's proposal.

On August 1, 1957, in a letter addressed to E. L. Krinov, the Secretary of the Meteorite Committee of the Academy of Sciences of the U.S.S.R., the writer again brought to the attention of the Russian meteoriticists the desirability of systematic search for such transmutation effects with modern ultra-sensitive instrumentation and techniques, pointing out that despite the many years that had passed since the Podkamennaya Tunguska fall, methods now available might still be used successfully in the detection of residual effects resulting from the annihilation processes believed to have been operative in that region on June 30, 1908.

Subsequent to receipt of this reminder, a new development in the Podkamennaya Tunguska problem occurred which even now may forestall search for transmutation effects. In the September 1957 issue of the mimeographed *Meteoritical Bulletin* published by the Committee on Meteorites of the Russian Academy of Sciences, a brief preliminary report is given of the discovery by A. A. Yavnel of "particles of meteoritic and meteoric [sic] dust" in "soil brought by L. A. Kulik's expeditions in the years 1929[27?]-1930 from the place [of fall] of the Tunguska meteorite."

This belated discovery in Kulik's own soil samples of material alleged to be from the Podkamennaya Tunguska meteorite cannot be regarded as conclusive for the following reasons: The same soil samples were, to the writer's knowledge, searched without success for debris from the 1908 meteorite fall by Kulik and his associates on several occasions prior to the outbreak of the Second World War. Again, although spherules of congealed nickel-iron and spicules and tiny grains from meteorites shattered on impact with the terrestrial target are well-known accompaniments of the fall to earth of large sideritic masses, the converse case of the fall of such nickel-iron debris unaccompanied by a single macroscopic meteorite (none of which, the reader is reminded, has been found at Podkamennaya Tunguska in spite of most intensive searches extending over several decades) is without a parallel in the history of macro-meteorite falls. Finally, the worldwide distribution of globules of cosmic dust, as shown by the researches of J. D. Buddhue<sup>32</sup> and others; and, especially, W. D. Crozier's most significant discovery of black magnetic spherules not only in surface deposits, but also in "a water-deposited shale of Upper Cretaceous or Lower Tertiary age,"<sup>33</sup> suggest that Yavnel's discovery pertains not to surviving microscopic remnants of the Podkamennaya Tunguska meteorite, but simply to the accretion of ubiquitous meteoritic dust. In summary, there are good grounds for urging that, before it is too late, tests for transmutation effects be carried out at Podkamennaya Tunguska by the Russian scientists who, of all the meteoriticists in the world, are apparently destined to remain the only ones fortunate enough to be allowed to enter the wide ruin that was Podkamennaya Tunguska.

Unlike the long (and still) neglected Podkamennaya Tunguska fall, the Russian macro-meteorite fall of February 12, 1947 was promptly and exhaustively investigated by personnel of several well-organized parties of meteoriticists and military field assistants sent by the Academy of Sciences of the U.S.S.R. into the impact area northeast of Vladivostok. As the reader probably will surmise, only Russians were members of these field parties. This situation came about in spite of an attempt made by the writer and his associates in the Meteoritical Society to insure a cosmopolitan character to the field groups investigating the quite unique phenomenon in the history of meteoritics represented by the fall of the Ussuri meteorite. In view of subsequent developments, some account of this attempt and its failure may be of more than purely scientific interest.

Although the Ussuri fall occurred early in 1947, such already were diplomatic relations between the West and its "iron curtained" former ally that many scientists, as well as most military authorities of my acquaintance, initially inclined to interpret the so-called "Vladivostok incident" as an atomic premature or the result of the crash of an experimental rocket vehicle rather than as a meteorite fall. A year later, similar ominous interpretations were placed on the greatest of all aerolite falls, which, by chance, occurred near the geographical center of the United States in the Norton, Kansas area, thereby initiating chilling rumors to the effect that Russia had demonstrated her ability to guide a rocket straight to the very heart of our country.

By the time of the American Astronomical Society meeting in Pasadena in June 1948, however, the true nature of the "Norton incident" had been disclosed by the numerous meteorite recoveries made as a result of the exhaustive field work of several expeditions sent out by the Institute of Meteoritics; and, furthermore, Russian scientific publications that had then only recently become available attested with reasonable certainty to the fact that a genuine meteorite fall also was responsible for the "Vladivostok incident." Furthermore, the writer, as the representative of the University of New Mexico at the 1947 UNESCO Conference in Denver, had heard Dr. Max Elias and others describe the hospitality accorded visiting Russian soil, plant, and animal experts by the University of Nebraska and other American institutions; and had listened to impassioned UNESCO pleas for a continuance and expansion of cooperative scientific ventures shared by the United States and Russia.

The Ussuri fall seemed to present an ideal case where such cooperative work in the field of meteoritics could be carried out to the great advantage of all concerned. Consequently, I was induced to transmit to the American Section of the International Astronomical Union (I.A.U.) a formal resolution containing the following paragraphs:

"Russian news releases and scientific publications indicate that a crater-producing meteorite fall occurred in the Sikhote-Alinskiy region on 1947, February 12. It therefore seems that twice within less than half a century the U.S.S.R. has been the site of such falls, the greatest historically recorded terrestrial meteoritic phenomena; and, for obvious reasons, of international as well as national interest and concern.

"The present note is written to suggest that the I.A.U. go on record at the 1948 Zürich meeting as recommending a thorough investigation



of all phases of the Sikhote-Alinskiy fall by an international committee of meteoriticists chosen from the membership of the Union. The efforts of our able Russian colleagues would thereby be supplemented by those of meteoriticists from other countries wherein are situated the major recognized meteorite craters of unwitnessed fall. The desirability of bringing into the investigation of the recent Siberian fall, scientists familiar not only with all features of the world's greatest "fossil" meteorite craters, but also with recent important and apparently little known theoretical investigations resulting from the study of such craters, by non-Russians, is obvious. Furthermore, the composition of the proposed I.A.U. committee would insure wide dissemination in many languages of information concerning the Sikhote-Alinskiy fall; whereas detailed knowledge of the remissly investigated Podkamennaya Tunguska fall of 1908, June 30, was shut off from the English speaking world until the appearance of the translations by LaPaz and Wiens of the original papers of Kulik and Astapowitsch. (See *Contrib. Soc. Res. Meteorites*, vol. 1, No. 1, 29-34, 1935; vol. 1, No. 1, 35-39, 1935; vol. 1, No. 2, 15-20, 1936; vol. 1, No. 3, 29-33, 1937; and vol. 2, No. 3, 203-226, 1940.)"

Although the writer's proposal was vigorously seconded by the senior Research Associate of the Institute of Meteoritics, Dr. Frederick C. Leonard, of the University of California at Los Angeles, and, as far as I know, was warmly supported by all members of the Meteoritical Society, nevertheless, the I.A.U. Commission on Meteors and Meteorites (No. 22), under the chairmanship of F. L. Whipple, "voted to table this resolution until the astronomers of the U.S.S.R. could be consulted."<sup>84</sup> This "table veto" proved quite as effective as any of the formal Russian vetoes in the United Nations and, consequently, all investigative work in the Ussuri fall area, as in the case of the earlier Podkamennaya Tunguska meteorite fall, has been carried out solely by Soviet scientists.

Thus, the same unfortunate language barrier surmounted at Ohio State University by G. A. Wiens and the writer in connection with the literature of the Podkamennaya Tunguska fall arose again in 1948. It was therefore necessary for the Institute of Meteoritics to take over the role of the Graduate Council at Ohio State University in sponsoring a translation program aimed at making available in English not only all of the important Russian papers on the Ussuri fall, but also other recent significant contributions to meteoritics.<sup>85</sup> The account of the unique

Ussuri "iron-rain" (or, more precisely, iron-hail) which follows is based in part on these translations of original Russian articles; in part on extensive correspondence with Soviet meteoritists, especially E. L. Krinov, Secretary of the Meteorite Committee of the Academy of Sciences of the U.S.S.R.; and in part on an exceedingly well-done 35-mm. film documentary on the 1947 iron shower, of which a copy was presented to the Institute of Meteoritics by the Russian Meteorite Committee in 1957.

Between the Sea of Japan and the Tatar Strait on the east and the Ussuri River and the lower Amur on the west lies mountain range after mountain range, extending in a roughly northeast-southwest direction. Collectively, these ranges are known as the Sikhote-Alin Mountain System. The western flank of this system slopes down into the Ussuri taiga, a relatively low-lying marshy area densely forested with trees and other plants which are encountered elsewhere on earth only in the most diverse climatic zones. Here, amid a profusion of cedars, pines, oaks, and aspens, grows not only the celebrated gin-seng, but also, in the closest association, the cork tree, the Greek nut tree, and the black birch.

The upper branches of these thickly set evergreen and deciduous trees are interwoven by an intricate network of wild grape and ivy vines and the trunks of the trees themselves rise from an almost impenetrable maze of hazel and elderberry bushes and fallen timber. Here, the forest growth is so dense that in the summertime visibility is limited to a few meters. On the other hand, in winter, when the deciduous trees are leafless, the ground is concealed by a snow-carpet a yard or more in depth; and in the early fall, the taiga is subject to violent cloudbursts and widespread flooding.

Obviously, the periods during which effective field search can be carried on for such elusive bodies as fallen meteorites are sharply limited by both the climate and the vegetative cover of the region. Only in the early spring after the snow has disappeared but before foliage has developed, and in the late fall and early winter before the ground is blanketed with snow is search for meteorites practicable. To add to the hazards and discomforts of the meteorite hunter, the taiga is so sparsely inhabited that all supplies must be laboriously packed in; and, during the spring thaw, the humid air teems with clouds of mosquitos and gnats, and the forest is alive with ticks. Indeed, except for the sea itself, there exist few areas on earth less favorable for protracted search for and recovery of fallen meteorites than the region just described. Only a fall

of such prodigious magnitude as sensibly to alter the monotonous appearance of the Ussuri taiga would stand a chance of being discovered, and probably only then in case it were located where airmen would frequently fly over the impact area of the fall.

Precisely such a macro-meteorite fall occurred in the inhospitable Ussuri region at a few minutes after 10:30 on the morning of February 12, 1947. Fortunately, its center of impact lay almost directly beneath the airline from Iman to Ulunga; therefore, the devastation in the taiga produced by the fall was clearly observable by the pilots of planes following this active air route. Since the day was one of almost blindingly bright sunshine, little is known of the very earliest aspects of the Ussuri meteor: As would be expected under these circumstances,<sup>36</sup> the meteor had attained full fireball status before its presence was detected by all but a very few of the several hundred eyewitnesses of the fall interrogated by F. K. Shipulin, Superintendent of the Geological Branch of the Far-Eastern Division of the Academy of Sciences of the U.S.S.R. at Vladivostok, and N. B. Divari and M. G. Karimov, members of the first search expedition sent into the Ussuri region by the Academy.

That portion of the real path of the Ussuri meteorite actually seen by observers coincides therefore with a relatively low-lying segment of the actual luminous path of this meteorite through the earth's atmosphere.

As a result of the rapid transformation of the vast kinetic energy of the meteorite into other forms of energy through interaction of the giant, swiftly-moving, invading mass with the resisting medium of the relatively dense air traversed by the terminal arc of the meteorite's trajectory, light and sound phenomena of extreme intensity developed during the last few seconds of the meteorite's passage through the atmosphere. Within a roughly circular area with a radius of nearly 250 miles, the Ussuri meteor was observed as a fireball brighter than the sun, terminated by a fiery red tail and followed by an extremely dark, smoke-like wake in turbulent motion. At Iman, the artist, Medvedev, personally observed the extraordinary wake following the falling meteorite and succeeded in painting it in color.\*

For several hours after the impact of the meteorite in the Ussuri taiga, a columnar cloud of black smoke with a reddish-rose hue stood

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\*His unique painting now is one of the prized possessions of the Meteorite Committee of the Academy of Sciences of the U.S.S.R.

above the point of fall. Gradually, this cloud diffused outward, became curved, and then zig-zag in appearance, finally vanishing toward evening of the day of fall. The permanency of this remarkable "meteoric train," scarcely less than the fact that the devastation wrought by the falling meteorites at impact with the earth was situated almost directly below the airline from Iman to Ulunga, insured discovery of the region of fall.

Compulsion to institute a search for the fallen body was supplied not only by the extraordinary appearance of the blindingly bright fireball it produced in its swift flight through the air, but to an even greater extent by the fearsome acoustic phenomena which developed within moments after the disappearance of the fireball above the western spurs of the Sikhote-Alin Mountains. Out to a radius of at least 60 miles from the place of fall, the inhabitants heard a powerful, long-continued roar resembling a cannonade by the heaviest artillery. In the inner portion of this circle of disturbance, the air wave was violent enough to blow snow off roof-tops and to shake the walls of houses until doors swung in and out. In many houses, window glasses were shattered or shaken out of frames, and coals and firebrands were jarred out of stoves. Deep in the earth in a mine shaft, the miners' lamps were extinguished by the strong vibrations in the air.

The few persons abroad near the point of impact, like Forester Ashlaban, who was supervising the cutting of trees in the woods only 9 miles to the west of the point of impact (and not at a distance of 50 miles, as erroneously given in one widely publicized version of the Sikhote-Alin fall published in the U. S.<sup>37</sup>), observed the phenomena of fall at their terrifying maxima. To Ashlaban, whose attention was attracted to the sky by his noticing an inexplicable second shadow rapidly rotating about the base of the tree that cast it, the blindingly bright fireball seemed twice as large as the sun and threw off sparks of all colors as it passed. Soon after the fireball plunged down out of sight into the trees, noise as of a cannonade began and a great dark cloud, which later appeared of a reddish-rose hue by transmitted light, billowed up above the point of impact with the earth. In spite of the nearness of the meteorite's trajectory to Ashlaban, he reported neither sensible airwaves nor noticeable vibration of the frozen ground on which he stood. It may seem curious that such meteoritic shock wave effects, which are invariable concomitants of the passage of meteorites of even modest size; and which, moreover, as has been pointed out above, were disturbingly evident to eyewitnesses of the Ussuri fall much less favorably placed

than Ashlaban, should have been so completely overlooked by him. The explanation of this partial sensory "anaesthesia" is, however, not difficult to find. One need only recall that at Nagasaki, for example, the very heavy rumbling explosion of the world's second A-bomb was not distinctly noted by those survivors near the center of destruction who were exposed to the maximum intensity of the light and heat emitted by the bomb.<sup>38</sup> Here again, we have clear evidence of that kinship earlier stressed by the writer<sup>39</sup> between the overpowering phenomena produced by nuclear explosions and those incident to macro-meteorite falls.

Throughout the vast area within which the fireball was visible or audible, birds and animals, as well as men, were terrified to a greater or lesser extent. Just as in northeastern New Mexico at the time of the spectacular Point of Rocks meteorite fall of March 6, 1951, chickens raced for cover; whining dogs pressed against the legs of their masters; coveys of birds were flushed into the air, screeching in alarm; herds of goats scattered in every direction; and cows lowed mournfully.

Impelled by the prodigious phenomena of light and sound detailed above, no less than by the enduring consternation they engendered throughout a vast territory, search was speedily instituted for the fallen meteorites. Two fliers of the Khabarovsk Geological Authority, Alexei Ageev and Pavel Fircikov, while in flight on February 12 from the shores of the Japanese Sea to Khabarovsk, had observed the passage of the Ussuri fireball and made note of the place where it went down. Within the next 24 hours, a pilot of the Iman Airdrome, B. Seminov, actually flew across the area devastated by the falling meteorite and called attention to its location. On February 15, fliers Ageev and Fircikov again flew over the area of devastation and confirmed Seminov's reports.

The sensational stories of widespread cratering and destruction told by the three aviators resulted in immediate organization of ground search parties at Khabarovsk and Vladivostok. The search party from the former city consisting of the following members of the Amur Branch of the Geological Society, V. A. Armoluk, V. V. Onihimovski, and D. G. Tatarinov, was flown in by Ageev and Fircikov to the village of Kharkovo, the inhabited point nearest to the area of fall. After an extremely hazardous landing, these geologists, burdened down with equipment and supplies, began the slow laborious hike into the inhospitable, trail-less taiga, wading in hip-deep snow and sleeping under arctic conditions beneath the open sky.

Almost simultaneously, F. K. Shipulin, of Vladivostok, started out from the railroad line up the Ussuri valley to search for the fallen meteorite. His search encountered difficulties even surpassing those faced by the Amur geologists. Not only was his trip from the railway much longer than the path followed by the party from Khabarovsk, but he lacked the invaluable information regarding the precise place of fall that they had obtained from aviators who had flown over it; and, as a result, he had to make his way laboriously from point to point, interrogating every eyewitness of the meteorite fall he encountered, and thus by a process of successive approximations gradually ascertaining the probable location of the point of impact.

Shipulin, however, was fortunate enough to enlist the aid of hunters P. Bergan and V. Smirnov in his search, and was thus enabled to live off the land, eating fried quail shot by his companions and drinking melted snow water. Although unburdened by packs of supplies, the members of the Shipulin party soon recognized that the felt boots they wore would constitute an almost insuperable handicap to swift progress on a long walk through the wet, snowy taiga. The three men therefore discarded their boots and swathed their feet in soft, warm grass enveloped in pieces of untanned leather tied with thongs. Aided by this novel footwear, Shipulin and his companions were able to negotiate the deep, soft snow covering the taiga with such speed that they reached the village, Kharkovo, within a day after Ageev and Fircikov had landed the airplanes there.

Shipulin's group promptly loaded a few meager supplies on a borrowed horse and started out to catch up with the Amur geologists, making such good time that within half an hour after the Khabarovsk party reached the fringe of the area of fall on February 24, Shipulin and his hunters had caught up with them. The combined group of searchers then hurried on into the central region cratered by the meteorite fall, where a scene of almost unparalleled destruction and desolation opened up before them.

In the course of the next few days, dozens of photographs were taken of masses of crushed porphyry (the country rock of the target area) hurled hundreds of yards through the air; of denuded, upturned trees; of stumps cut through as by a saw; of giant cedars splintered where they stood or torn up by the roots and thrown scores of yards; and especially of meteorite craters ranging in size from small cup-like features to one huge basin with a diameter of more than 28 yards and a depth of over 6 yards—a cavity large enough to hold a two-story house!

Bolstered by these photographs, the first persons to explore the crater field produced by the Ussuri meteorite fall, on their respective returns to Khabarovsk and Vladivostok, began to bombard the Academy of Sciences of the U.S.S.R. with reports of their extraordinary discoveries. So factual and well-documented were their reports that the Russian Academy, perhaps reminded of the remissness that had marked the handling of the Podkamennaya Tunguska incident—a remissness for decades the favorite target of attack by the great pioneer meteoriticist, L. A. Kulik—decided at once to send a special scientific expedition to investigate the Ussuri fall. This search party was placed under the direction of V. G. Fessenkow; and, after a crash program of preparation, the Moscow contingent, travelling by airplane and fast train, left for Vladivostok late in March.

On the first of April, Fessenkow arrived in Vladivostok, where he was met by E. L. Krinov, Secretary of the Meteorite Committee of the Academy of Sciences of the U.S.S.R. To the staff of nine men led by Fessenkow, the Commander of the Maritime Military District assigned 14 technicians to aid in the excavations contemplated at the site of the meteorite fall. Because of snow storms in the taiga, Fessenkow's expedition was detained for some time in Vladivostok. (It is of interest to note that almost a year to the day later, the first field expedition sent by the Institute of Meteoritics to search for the Norton County meteorite was driven out of the strewn field by a violent blizzard that blocked all highways in northwestern Kansas and adjoining parts of Nebraska.)

While awaiting a change in the weather, the members of the Russian Academy's expedition profited by examination of the meteoritic materials already collected by the two groups of local scientists who had previously visited the meteorite crater field. They also re-questioned many eyewitnesses brought to their attention by Shipulin. Intrigued by the specimens shown them and by the extraordinary reports told them by Shipulin's witnesses, the members of the Academy expedition became ever more eager to reach the site of the meteorite fall. At last, on the 22nd of April, the expedition left by train for the city of Iman, where its members were to be taken by trucks into the taiga. At Iman, they learned that soldiers of the Coastal Command of the Armed Forces of the U.S.S.R. had already been sent into the cratered area and were engaged in building a hut to house the scientific expedition.

From Iman, the Academy party proceeded into the taiga along a road paralleling the Iman river. In the course of the truck trip, the expedi-

tion picked up two of its members, Divari and Karimov, who had been sent ahead from Vladivostok for the purpose of interviewing additional eyewitnesses of the meteorite fall. On the morning of the 26th of April, reinforced by the loan of nine draft horses from a local Office of Forestry, the party pushed into the real taiga, lying just beyond Bitysuka Brook.

Here they traveled at first on a temporary logging road constructed by lumbermen during the winter of 1946-47. In places the road traversed several miles of almost impassable swamps, the members of the expedition having to ford streams flowing brimful from the spring thaw by wading up to their knees in ice water; but when the logging road terminated, even these hardships vanished from memory as the weary explorers forced their way through the remaining 9 miles of taiga separating them from the meteoritic strewn field. It was on this last leg of the trip, according to Krinov, Deputy Leader of the expedition, that the Academy party finally learned what the unique wilderness of the trackless taiga really was!

At last, in a stand of birches, the fatigued members of the expedition saw the tent of the soldiers from the Coastal Command and, next to it, the as yet unfinished hut to house the expedition. Exhausted as they were, the members of the Academy party, with a pertinacity worthy of the almost legendary Kulik, pressed on without stopping at the military camp, and hurried into the meteoritic strewn field that was to become the subject of an intense investigation not only by this first but also by three later Academy expeditions, the total time spent by the four parties in field work amounting to more than 19 months.

The scientific data secured from labors as intensive and extensive as those of the Academy expeditions are most impressive and serve to arouse the envy of meteoriticists in countries less favored by macro-meteorite falls and less conscious of the importance of meteoritics than Russia. The results obtained, vast in quantity and high in quality, have been comprehensively reviewed in an important memoir published by Krinov.<sup>40</sup> His lengthy report, supplemented by additional information kindly made available by him in personal letters to the writer, serves as a basis for the following summary on the present status of what the Russians term the Sikhote-Alin research project:

The extent and configuration of the strewn field of the Sikhote-Alin shower have been determined. This field has been shown to be of elliptical outline, the major axis of the ellipse lying nearly in the meridian and the area of the field amounting to no more than 1.6 square



kilometers. This exceedingly small area attests the low altitude of the point at which the invading mass of solid nickel-iron broke into fragments. In all, more than 20,000 meteoritic fragments and whole individual meteorites have been recovered by members of the various Academy expeditions. Many were found by visual search, but in the Sikhote-Alin strewn field, as much earlier at the Odessa, Texas meteorite crater, the use of meteorite detectors (the Russians used landmine detectors rather than such specially devised radiosopes<sup>41</sup> as those developed at Ohio State University for the Odessa search) was responsible for the largest and most important recoveries, which were almost invariably found at considerable depths. The meteoritic specimens found were distributed around, and on the internal slopes of, the large- and medium-sized craters in the southern portion of the strewn field, as well as in the smaller meteorite craters and penetration funnels. A great many of the specimens were found in the almost craterless northern portion of the strewn field.

The Russians systematically collected soil samples from the strewn field in order that a study might be made not only of droplets congealed from molten meteoritic material, but also of the very tiniest angular fragments and meteoritic dust with which the ground in the crater field was impregnated. Krinov, in particular, has published exceedingly detailed and interesting studies on the droplets and finely comminuted meteoritic material arising from the Sikhote-Alin fall.

It has been determined that the range in weight of the individual Ussuri specimens is extreme. The smallest weigh no more than a thousandth part of a gram, while the largest individual meteorite so far exhumed weighed 1,745,000 grams. The five largest specimens recovered had an integrated weight of 3745 kg. (approximately 8240 pounds). The total weight of Ussuri specimens actually recovered and transported to Moscow amounts to 23 tons. Earlier reports that these recoveries weighed between 30 and 37 tons were found to be decided over-estimates. It is still believed, however, that approximately 70 tons of nickel-iron (of which some 47 tons still remain buried in the Sikhote-Alin strewn field) reached the earth at the time of the fall; and that the total extra-atmospheric mass of the invading meteorite was of the order of several hundred tons, of which at least 200 tons ablated off in the atmosphere to form the giant long-enduring meteoritic dust clouds that were such an outstanding feature of the Ussuri fall; and are so admirably portrayed in Medvedev's famous painting.

Chemical analysis of the recovered material shows that the percent-

age of iron in it ranges from 93.25 to 93.7, and that the percentages of nickel, cobalt, phosphorus, and sulfur are 5.27, 0.47, 0.20, and 0.069, respectively. From the results of the chemical analysis and from his own study of the internal structure of the Sikhote-Alin specimens, Krinov has classified the Ussuri meteorite as a coarsest octahedrite. While the writer has objected to this classification of the Ussuri meteorite both on chemical grounds (normally, the coarsest octahedrites are found to contain a considerably higher percentage of nickel than that currently credited to the Ussuri specimens by the Russians) and also on the basis of the internal structure exhibited by the beautiful Ussuri specimens obtained from the Meteorite Committee of the U.S.S.R. in exchange for fragments of the Norton achondrite, he can only hope the Soviet identification is correct; for, if it is, the Lake Murray, Oklahoma granular hexahedrite recovered by the Institute in 1952<sup>42</sup> will remain by far the largest example of this rare and highly significant type of meteorite so far found in the world. (Plate IV.)

The various Academy expeditions determined the location of the points of impact of 383 sizable Ussuri projectiles. One hundred and twenty-two of these impacts resulted in what might properly be termed craters, and 78 in the production of small penetration funnels or holes, the remainder of the meteorites having been found scattered essentially on the surface of the ground. Krinov has published a minutely detailed subdivision, allocating each of the 383 places of impact to some one of ten different classifications.

The craters, which were principally concentrated in the southernmost half square kilometer of the strewn field, had diameters ranging from 0.5 m. to more than 28 m. Of the total of 200 craters and penetration canals, 181 were excavated. Furthermore, in the case of those craters that were excavated, subsurface effects were searched for and studied in detail. Three typical craters, with diameters of 1.0 m., 12.3 m., and 17.2 m., were left untouched in the crater field, and protective coverings were placed over them to preserve their features unchanged for posterity in the National Meteorite Crater Preserve that Russia has now established in the Ussuri area.

Aerial photographic coverage of the entire area of fall was obtained by the expeditions, and topographic mapping of the region in question was carried out. In addition, geologic and magnetometric surveys of the crater area were made. During the period of field work, more than 500 photographs and 25 pairs of stereo-photographs were taken of the meteorite craters and of shattered trees and other damage produced by

the infalling meteorites. Furthermore, more than 2000 meters of motion picture film were exposed in the crater area, from which in 1956 the judiciously edited 35-mm. film documentary on the Ussuri fall mentioned earlier was prepared.

As regards the nature of the giant missile from "outer space" whose intrusion into the mundane world created the devastated area so thoroughly investigated by the Russian expeditions, it is the present writer's opinion that the conclusions reached by the Soviet Academy's theoreticians are less well founded than those (summarized above) of its field men and laboratory technicians. The observed azimuths and altitudes of designated points on the apparent path of the Ussuri fireball, and the estimated duration of its flight across the sky, were obtained from more than 300 eyewitnesses of the event who were personally interrogated by members of the various field parties sent out by the Academy. Unquestionably, the rich mass of observational data thus acquired has been reduced with all requisite care by N. B. Divari.<sup>43</sup> Unfortunately, for reasons already alluded to, these data only suffice to determine with some precision the most luminous and therefore lowest-lying terminal portion of the path of the Ussuri iron through the atmosphere. How enormous was the head resistance met in the dense air encountered along this portion of its trajectory is clearly revealed by the pulverizing disintegration the invading mass of solid nickel-iron experienced before it ever struck the earth. To the ballistician, a necessary concomitant of this excessively violent interaction between the terrestrial air-shield and the cosmic missile is an almost inconceivably great deceleration of the latter.<sup>44</sup> (Even Colonel Stapp would not have relished a ride on Ussuri during its last few seconds in the air!) The average speed of the Ussuri meteorite insofar as it has been determined from the observations of the terminal portion of the fireball path available to Divari therefore must be only a fraction of the extra-atmospheric speed possessed by this body; and, consequently, unless the true extra-atmospheric speed of the Ussuri meteorite is determined (by addition to the small average terminal speed of a proper correction for the effect of excessive deceleration) before an orbit calculation is attempted, the computed result will present little resemblance indeed to the orbit which the great iron mass actually followed in space.

An attack on this very difficult problem has been made by V. G. Fessenkow,<sup>45</sup> but several errors, mathematical and otherwise, occur in his work; and the writer cannot accept as definitive the asteroidal-type orbit he favors for Ussuri. The interested reader is referred to my critical

analysis and reworking by new methods of the similar asteroidal-type orbit found for the Pultusk aerolite by C. C. Wylie.<sup>46</sup> The strongly hyperbolic velocities found by the writer for Pultusk and several other well-observed meteorite falls may puzzle those who uncritically accept Fessenkow's assertion that "The very first application of the exact photographic method for the registration of meteoric velocities has shown that in all cases these velocities have an elliptical character."<sup>47</sup> That the quoted assertion is in error has been pointed out in a critique of photographic meteor velocities appended to the translation of Fessenkow's otherwise valuable paper.<sup>48</sup> An even blunter appraisal of the methods by means of which hyperbolic velocities have been deliberately avoided by those in charge of one photographic meteor program is given in the writer's review of the book, *Comets and Meteor Streams*, recently published by the English authority, J. G. Porter.<sup>49</sup>

In summary, the question as to whether the earth was struck a devastating blow on February 12, 1947 by a fellow member of the Solar System or, rather, by a foreign intruder from interstellar space remains an unsettled and most intriguing problem on the docket of future meteoritical research.

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Presented here is the principal text of the University of New Mexico Fifth Annual Research Lecture, delivered by Dr. Lincoln LaPaz on May 2, 1958, under the title of "Some Aspects of Meteoritics." Dr. LaPaz prepared for his distinguished career in mathematics, astronomy and meteoritics with studies at the University of Wichita, Kansas (A.B., 1920) and at Harvard University (A.M., 1922), where he was University Scholar in Mathematics. At the University of Chicago (Ph.D., 1928) he was National Research Council Fellow in Mathematics. Progressively assistant, associate, and full professor at Ohio State University, LaPaz directed the first and second Ohio State University Meteorite Expeditions. During 1943-45, LaPaz did research on the Japanese balloon offensive, on ballistic problems connected with the B-29, and on airplane accident analysis for the Office of Scientific Research and Development. Dr. LaPaz came to the University of New Mexico in 1945 as Professor and Head of the Department of Mathematics and Astronomy and Director of the Institute of Meteoritics. He is now Director of the Division of Astronomy and of the Institute of Meteoritics.

His several books and more than one hundred research and expository papers and book reviews attest to the soundness of his scholarship, but a more unique testimonial is the bright crater, formerly known as Byrgius A, center of one of the largest ray systems on the Moon. In recognition of Lincoln LaPaz' work in establishing the theory that this and other lunar ray-craters in all probability originated from the impact of giant meteorites with the earth's satellite, the crater has been christened LaPaz.

*Democracy  
in Action  
—a story*



MARION MONTGOMERY

*Vote For Whom You Please*

It really does make a difference in the way you feel—voting I mean. I'll be seventy-three next August and I never had voted till this year and I don't suppose I ever would have except for Wanda Flemming. Out here at Sunrise we have supper and then we talk awhile on the front porch before we go to bed, and one night Wanda said she thought it was a shame the way we girls didn't take an active interest in what was going on around us the way we used to. Her husband was state representative back in the twenties, and she traveled with him some and even spoke two or three times for him, I think. Anyway, she was saying that we were like most of the rest of the citizens, just not interested enough in our government, and we ought to do something about it.

The next morning at breakfast she made the announcement that she was going to meet with any interested ladies in the study to discuss what we could do about the election that was coming up. Ada Trembleton kept pretending she didn't understand where we were going to meet, and before Wanda remembered herself she was shouting STUDY. Then we all laughed, except Wanda, because it's hard to remember that Ada can hear a pen drop without the horn she sticks up to her ear all the time. When you see that horn and her face straining like she's trying to hear, you just can't help shouting. I've seen visitors shout themselves white in the face sometimes, and if Ada didn't have that horn stuffed with cotton she really would be deaf by now. Anyway, Wanda shouted two or three times before she remembered about Ada.

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There must have been twelve or thirteen people who stopped in the study that morning. Wanda talked mostly about how we were admitting our age when we stopped taking an interest in the world around us and how one of the things we certainly ought to be interested in and set an example about was voting. Then she told some stories about the year her husband got elected and how they spent so much time and money trying to stir up the voters to do their duty, and what a lesson it had been to her and how she had voted every year, until last, and how she intended to vote from now right on.

When she got through, she asked how many of us were registered. There wasn't a single person there who was. Then she asked how many of us had ever voted, and it seems to me that only Ada raised her hand. At any rate there weren't over two or three who had. So Wanda was discouraged at that a little. She said she knew a young man from the Jaycees or Rotary or whichever one of these clubs it is that takes so much interest in elections—you know, the one that paints signs on sidewalks during elections—*VOTE FOR WHOM YOU PLEASE, BUT VOTE*. Wanda said she knew this young man, and that she thought it would be a good idea to have him out one evening to talk to us about voting.

He came. It was on a Wednesday evening, I believe. Or Thursday. I don't remember just which one. But he came out to talk to us. Wanda had put up a little notice on the bulletin board and made announcements at supper, and we really had a pretty good crowd there. I was proud of us the way we showed such interest in the whole thing. I don't think anything has done me quite as much good, except going to Church of course, in the three years I've been out here at Sunrise. There must have been twenty of us in the study that night.

And the young man was so nice. He knew what he was talking about, too, and of course he would since Wanda had asked him. We had an informal period before the talk just so we could get acquainted beforehand, and he was as pleasant and friendly as anyone you'd ever hope to meet. We were a little embarrassed because of Ada, though. Once or twice she had him shouting so that he fairly made the walls ring. I suppose it would have been the thing to do to warn him, but we were sort of embarrassed for her, and anyway it was time for his talk, so we didn't say anything at all.

His speech was short and straight to the point, and I think it really did a lot of good. What he said was pretty much what Wanda had been saying, but he was a little sadder and madder about the whole problem I think. He told about some politician who had been caught

just that week in a scandal, though he wouldn't say who it was when Ada asked him, and he said he supposed that for the most part we deserved whatever crooked politicians we got if we didn't take enough interest to really get out and vote when the chips were down. And he's right too, because really if all of us voted, there wouldn't be the scandals and bad government we have so much of now. He told us what his club does to wake up the public. It really is amazing how many signs they paint and how many ads in the papers, and the amount of money they spend is just unbelievable.

When he finished we had a question and answer period that went pretty well till Ada got to asking a question and couldn't hear the answer. The young man got to shouting again. Ada had sat down close to the end where the speaker's table is—so she could hear, she said. And then she tried to get him to say who we ought to vote for. He wouldn't say though, because he said that was something we would have to decide for ourselves. He really was a nice young man and he did a good bit about stirring Sunrise up too.

Next morning John, our gardner and driver, had to make two trips in the station wagon to carry us all down to the courthouse to register—that was the first step of course. Wanda was already registered, but she went both trips to help the rest of us since she knew so much about those things. Ada went the trip I did, and naturally she couldn't resist using the ear horn out in public that way. She had people shouting from one end of that courthouse to the other. I'll declare, I felt like pretending she wasn't even with us. But she's so good natured, even if she is a little strange.

Well, we all got registered that day, and it was only about two weeks before the election. Wanda wrote the two men who were running for office, Sam and William, and invited them to speak to us the way the young man had spoken. But neither one could get free. We got the nicest letters from both of them about how much they were counting on us and how sorry they were their schedules wouldn't allow them to spend an evening with us and how much they would appreciate our votes and all. Wanda read the letters to us. They were both running for the state legislature, it turned out, just like Wanda's husband had, and she was very anxious to get them out to Sunrise. She was very disappointed of course, but she decided the thing to do, since they couldn't come, was to tell us something about them herself.

Well, she got some information from their campaign directors and some from the newspapers and talked to us about them. They both

sounded like such good men that it really was a problem. I think that's what made so many of us lose interest. Wanda finally had to say she herself couldn't endorse either one of them, even though she knew which one she was going to vote for. She had to be fair, she said, and they were both good men—though I remember that at one time she was arguing a little on Sam's side till Ada got into the argument. And then William seemed to have certain qualities, too, and so we ended up the night before the election not knowing which one we would vote for.

The next morning when John drove us down to the courthouse, there weren't but five of us who were going. Wanda was very disappointed because she had worked so hard. I believe it really hurt her the way the rest of the girls just petered out after registering and everything. Ada came, and I was there, and Becky Thompson and Tilly Watson. We talked about Sam and William—I still can't remember their last names for the life of me—we talked about them all the way down, and by the time we got there we hadn't decided which one we were going to vote for at all. Wanda said we ought not talk about it anymore, but just vote for the one we wanted to win. But the way Ada put it—and she was right for once—we really didn't know enough about either one and we were likely to be voting for the wrong man and that wouldn't be fair because both of them had asked us for our votes. We didn't want to be unfair of course. It really would be bad if we bunched up and voted for Sam when William was the best man, or the other way around. I thought Tilly was going to cry. There we were all fussing and arguing and not knowing which one we ought to vote for.

Finally Ada said the sensible thing. "There're five of us," she said. "Let two of us vote for Sam and two for William and let Wanda vote for the best man. That way we will really cast only one vote. We'll cancel each other's vote out and Wanda will vote for us."

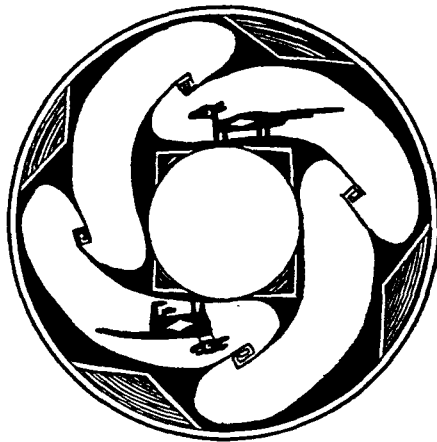
Well, it sounded like a good idea to me, because Wanda was a sort of professional. Then we started talking about which two would vote for Sam and which for William. Tilly and I were going to vote for William. I liked William, really. I always have liked William because I have a boy named William and my husband was named William, and you know how you get attached to those names. Well, that left Ada and Becky to vote for Sam and we thought everything was straight. But Ada decided that she really wanted to vote for William. So she swapped places with Tilly. She'd changed her mind again though before we got our ballots, and I thought Tilly was going to give up and

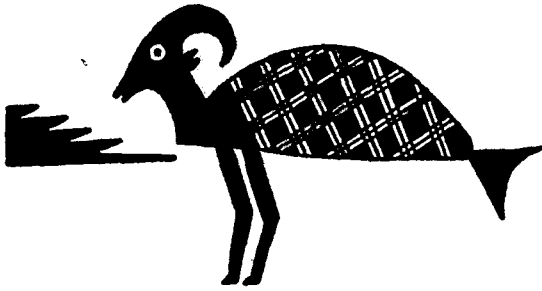
break into tears right there. Really, Ada can be exasperating sometimes, sometimes even downright cruel.

I'll say this for Wanda, when everything looked so confused and it looked like we would end up just not voting at all, she stepped in with a solution. She said that she wouldn't vote after all. You see, what was bothering Tilly was the fact that if Ada changed sides at the last minute, that would leave only one of us voting for Sam or William, and that would upset everything. Anyway, Wanda said she wouldn't vote herself, but would help each of us vote so we'd be sure to cancel out. That made Tilly feel better, and it seemed to suit Ada too, because she didn't change sides anymore.

It was quite an experience, and I wish I had been voting all these years. It's not easy of course, keeping up with everything and trying to decide which man you ought to vote for. It really tires you out. But it gives you such a good feeling when it's all over and you know you've at least done your share to try to elect good officials. I never will forget scratching Sam's name and folding the ballot and stuffing it in the box. It really was a good feeling. Even Tilly had it I could tell.

And Ada—Ada was just beside herself all the way back out to Sunrise. She tried to pick an argument with Wanda, but Wanda wouldn't argue. So Ada got up a contest to see who could count the most signs saying *Vote for Sam* and who could get the most *Vote for William* signs. She and Tilly were doing fine till I noticed that Ada was counting the *Vote for Whom You Please* signs on her side of the car. Tilly just shook her head then and wouldn't play anymore. Wanda was quiet all the way back home, and I know what was wrong too. She was thinking about all those people out at Sunrise who hadn't voted, some of them even after they'd registered. Our consciences were clear though. And you don't know what sort of thrill it was for me next morning when we opened the paper and I saw that William had won.





## DESIGNS FROM ANCIENT MIMBRES POTTERY

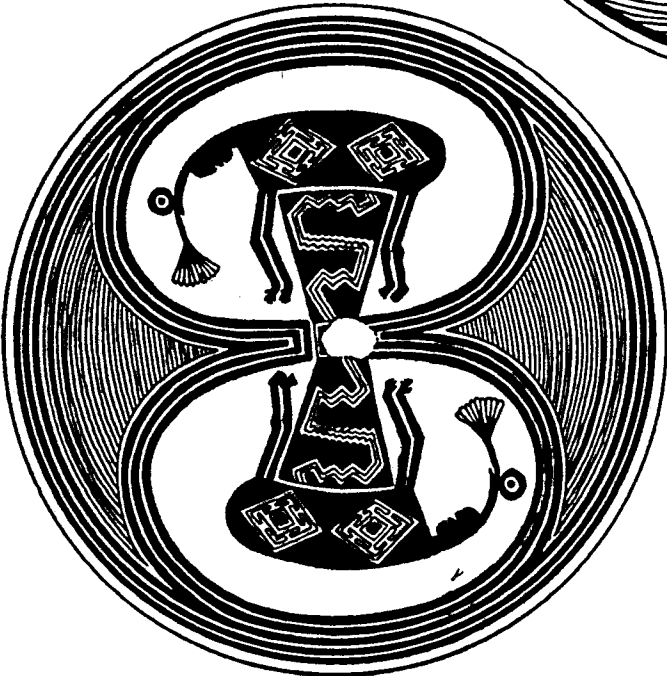
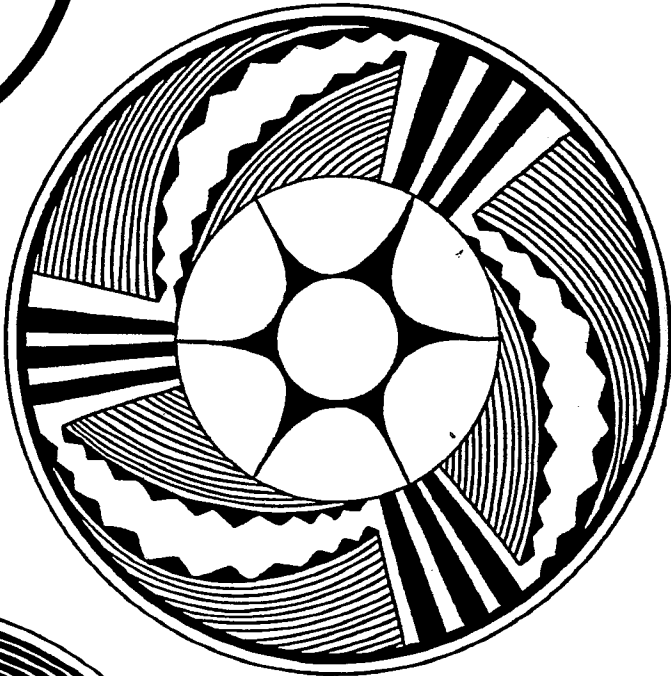
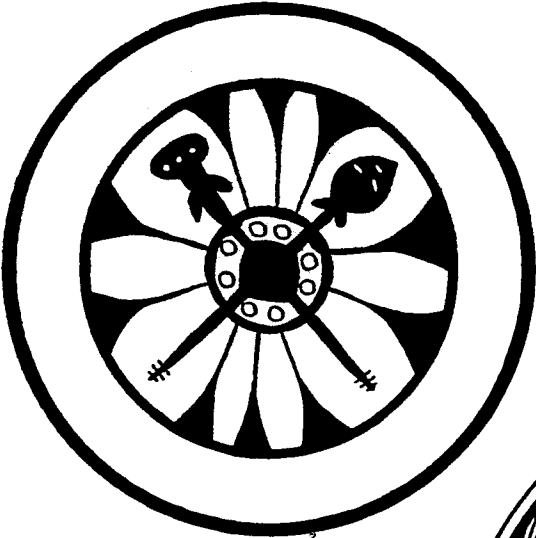
*The civilization of the Mimbres Indians came to flower and died in the Valley of the Mimbres River and adjacent areas of Southwestern New Mexico, during two centuries from about A.D. 950 to 1150.*

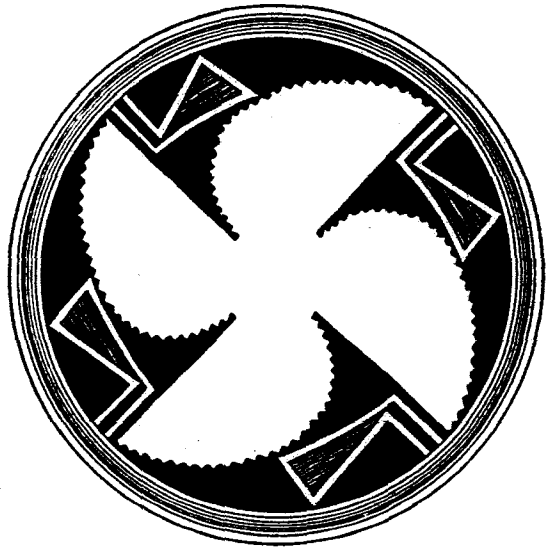
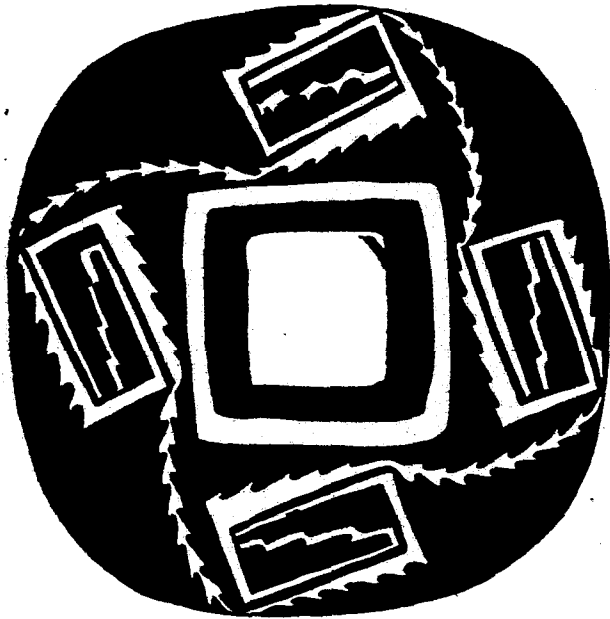
*Almost all we know about these Pueblo people of a millenium ago is reckoned from things unearthed around the sandburied walls of their houses—their bones, their shell & turquoise jewelry, and the tools and utensils of their daily lives. As artists, the Mimbres potters were without rival on the North American continent, and they left a marvelous legacy of sensitive designs and serious and humorous comments about themselves and the world in which they lived.*

*In recognition of the warm response accorded the Mimbres designs published in Spring-Summer 1957, New Mexico Quarterly presents throughout this issue a second Mimbres series.*

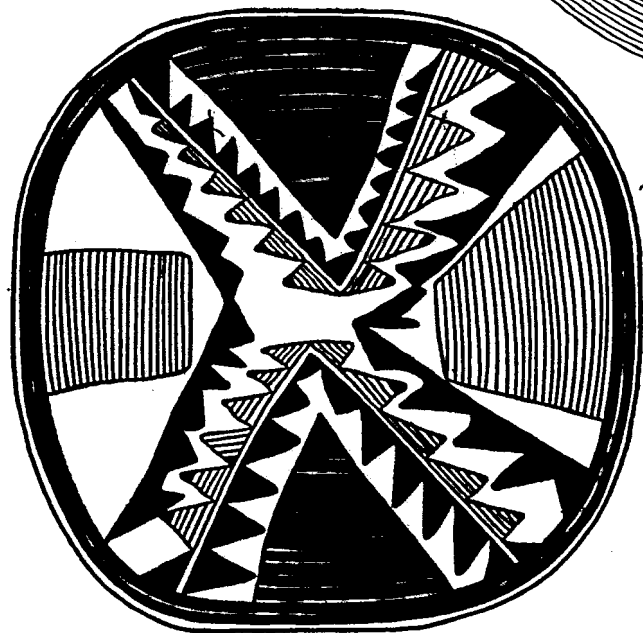
*Again we are grateful for the generous cooperation of Mrs. C. B. Cosgrove, who made drawings of designs collected during the many years she and her husband gave to the discovery and study of Mimbres culture.*

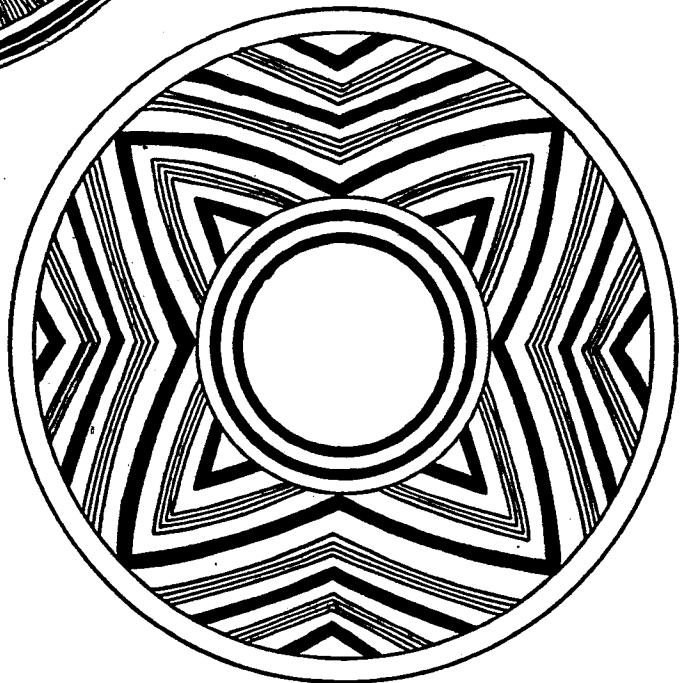
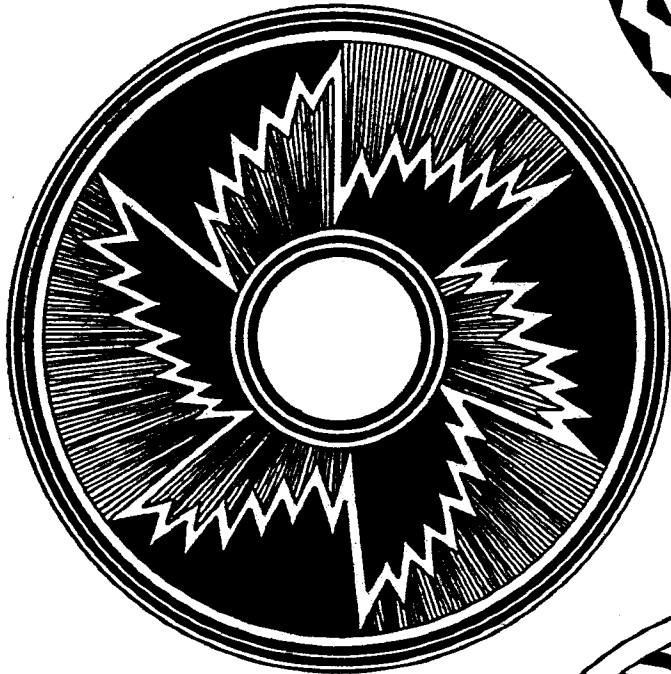


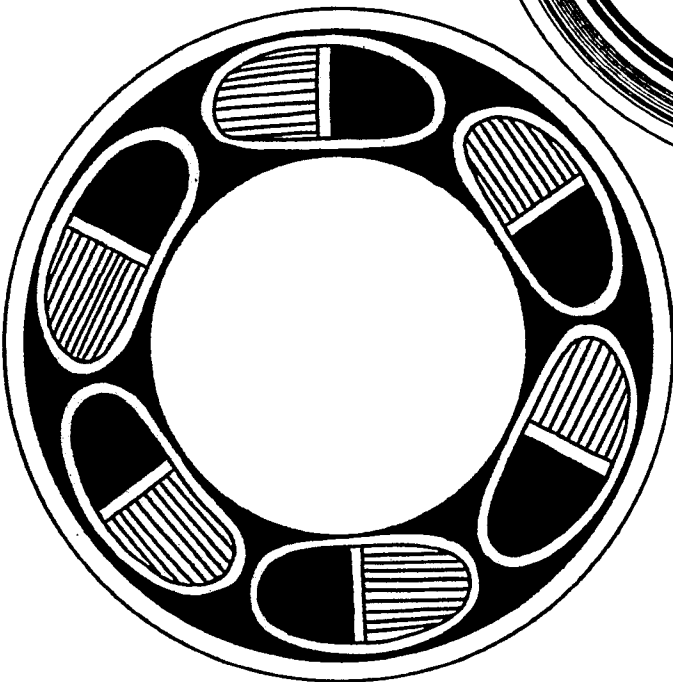


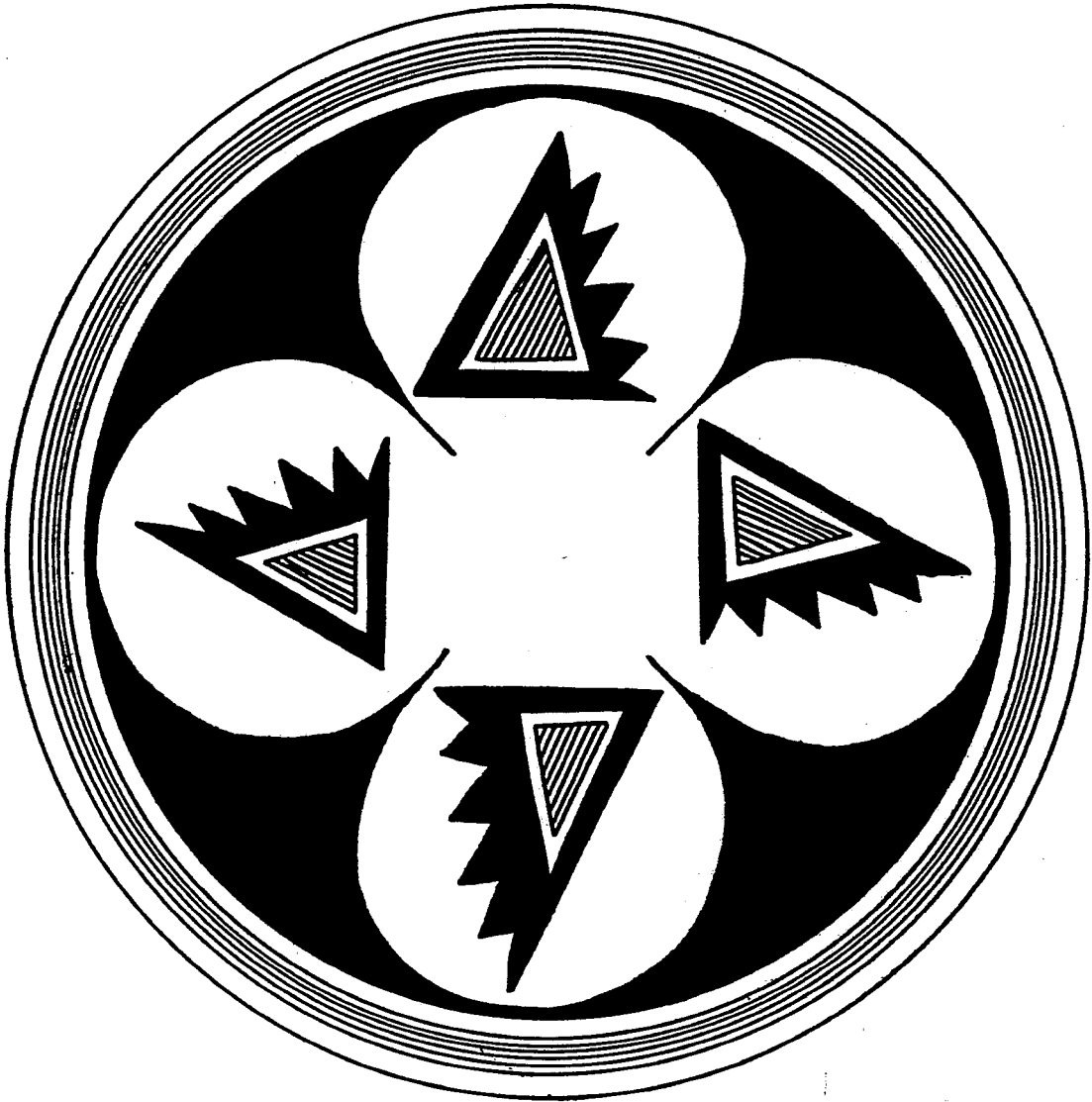














ARCHIE J. BAHM

*The New Philosophy Names Its Enemies*

When Peter Drucker sketched "The New Philosophy" in Harper's, August 1957, he contrasted it with outgrown antecedents but not with its contemporary enemies. Four types of philosophy, Logical Positivism, Existentialism, Neo-Orthodoxy, and the New Conservatism stand out among those accused by the New Philosophy of spreading an anti-human virus—a "new irresponsibilism." Of course, both "newness" and "irresponsibility" are matters of degree, since irresponsibility is, in a very fundamental sense, an essential trait of human nature obvious to all who recognize that human capacity is limited, and the novelty in current fashions in irresponsibility pertains more to a difference in locus and causal conditions than to degeneration of biological ability.

Logical Positivism claims that one may postulate as he chooses, including his rules for reasoning, without being responsible to anyone or anything. His only duty is the self-imposed one of consistency with his postulates, once he has made them. This "philosophy" (Can one be an irresponsible "lover of wisdom?") readily allied itself with the previously-developed false view that science is value-free. Disregarding the obvious inconsistency of financially profitable investments in pure research, one need merely note the vehemence with which some claim it better to be scientific than not, in order to realize that the value-free claim fronts for a desire to escape responsibility for actual or possible

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Professor of Philosophy at the University of New Mexico, Archie J. Bahm is the author of a number of books and monographs, among them *Philosophy* (1953), *Philosophy of the Buddha* (1959), *Lao Tzu's Tao Teh King* (1958), *What Makes Acts Right?* (1958), and *Types of Intuition* (UNM Publications in Philosophy, forthcoming). An accolade to *Buddha* and to Bahm was paid by Jack Kerouac who recommended *Philosophy of the Buddha*—"Any discussion 'which frees one from anguish,' and intelligently like this one, is worth its weight in gold."

evil consequences. The scientific enterprise really presupposes the omnipresence of values: a good scientist seeks to work at good (not futile or worthless) problems, seeks to formulate good (not bad) hypotheses, seeks good data, good instruments, good experiments, good evidence, good proofs, and good results. If science were completely value-free, then it would make no difference at all whether one were scientific or not. But only because it is better to be scientific than not, because it is better to "be objective" in not letting wishful thinking influence conclusions, does one put forth the efforts required. The New Philosophy rejects the value-free misconception of science in favor of belief that we are morally obligated to try to be scientific, whenever being scientific is better, because it is better.

Existentialism most excruciatingly and completely denies that one ought to accept any responsibility whatsoever. It does so, with great deceptive show, in the name of "being solely responsible for one's own choices"—but by being responsible to no one, not even to himself at another moment either past or future. Although denying "authenticity" to any system, it systematically condemns devotion to concern for either future or social values as "banal." It upholds anxiety, an evil if there ever was one, as the epitome of vitality. It interprets devotion to futile anxiety, the more futile the better, apparently, as man's reason for being. Existentialism falsely interprets man as an unwilling victim of the necessity for choosing in order to justify its own deliberate declaration that one must willingly accept the responsibility for his own unwillingness to take any other responsibility.

Neo-Orthodoxy's re-emphasis upon total depravity and consequent incompetence of man makes it kin to other philosophies advocating more human irresponsibility. Man's only real duty is to surrender his own will, hence freedom, hence responsibility, completely to God. God alone is fully able, so whoever willfully assumes more than his assigned bit of responsibility sins.

The New Conservatism, more an actual social phenomenon than a formulated philosophy, currently appears in trends toward conformity, increased church membership, and indifference to political causes. It results both from a growing awareness of man's insignificance and as a reaction against the wildly enthusiastic idealism of the Twenties.

Each man's importance diminishes, comparatively, every time the world about him expands. As astronomers extend the universe and statisticians report amassing of population and industrialists pyramid their corporations and scientists discover new dimensions of complexity

in all aspects of life, each person feels himself more completely helpless. Every new mechanical invention raising our standard of living requires the services of another battery of specialists and thus each person becomes increasingly dependent upon experts and finds his own livelihood and goal in life, in becoming a specialist. Specialization and division of labor entail divided and specialized responsibility. To go beyond one's sphere of competence is to risk error and humiliation. Hence prudence dictates restraint. The New Conservatism feels no personal responsibility for shouldering the world's burdens, for each ill has now grown so big as to require a whole battalion of experts.

The sky-is-the-limit spirit of the Twenties overlooked the fact that "bigger and better things" mean littler and less important men. Generations now facing up to realities, to the fact that not every man can become President of the United States, feel forced to reject the philosophy that you can succeed at anything if you try hard enough. The revolt of youth against parents idealizing radicalism and social reform naturally leads to repudiation of such radicalism and to espousal of conservatism. The core of the New Conservatism is to be found in its sober unwillingness to accept more responsibility than is needed to do one's limited job. To those nurtured in the unbounded confidence of the zealous Twenties, when the normal man felt himself both able to do, and responsible for doing, something to reshape a better world, the current decline in personal concern for the common welfare appears as a deteriorated philosophy of general irresponsibility.

The New Philosophy opposes each of the four philosophies just summarized: Logical Positivism, Existentialism, New-Orthodoxy, and the New Conservatism. It is called "the New Philosophy," not because it is newer than the others, but because it still does not have a common name. Its followers have not been blatant about its stages of pregnancy, the outlines of which have been discernible to some for decades, and it has as yet received no popular christening. The name for my own version of it, "Organicism," has not been widely-enough shared to warrant its use here.

What are its distinctive features? First of all we shall summarize Peter Drucker's outline and then elaborate relative to the previously-mentioned philosophies. Drucker emphasized four aspects: "evolution," "the whole is more than a sum of its parts," "internal teleology," and "a dialectic of polarity." Since Drucker's meanings of these terms may not be immediately obvious, a brief interpretation of each appears desirable.



"Evolution," although a term familiar to all in its biological and cultural meanings, is extended in the New Philosophy in two ways: with respect to the number and kinds of things which evolved and the conception of what happens when evolution takes place.

The idea of change is as old as history and the idea of progressive change increasingly has dominated Western thought since the Enlightenment. Darwin, Spencer, James and Dewey symbolize successive steps in the spread of evolutionary ideals. Yet today many who believe themselves evolutionists, extending the idea to galaxies and subatomic particles, mistakenly think they are one-hundred-percent-ists. Inheriting contributions of Emergent Evolutionists (C. Lloyd Morgan, S. Alexander, Roy Wood Sellars, Jan C. Smuts), the New Philosophy holds that the laws of nature themselves evolve and, further, that God too evolves. Whereas formerly evolutionary change was believed to occur in accordance with the "laws of evolution"—laws which did not themselves change—the New Philosophy holds, dialectically, that the laws of evolution themselves evolved. Formerly it was thought that God guides evolution. But the New Philosophy holds that evolution guides God, or at least that God is as much a product, as a producer, of evolutionary change. It would be a mistake to commit all followers of the New Philosophy to theism. Whether or not there is anything which should be called "God" is not a central issue. But the point being made is that evolution is so essentially an aspect of the New Philosophy that nothing, not even God, can escape being affected by it.

What happens when evolution occurs? Not mere change; not mere fulfillment of some pre-established plan; not mere realization of potentialities; but the emergence into existence of something genuinely new, something which did not exist before. Indebted to C. Lloyd Morgan's distinction between mechanical "resultants" and novelty-producing "emergents," the New Philosophy conceives evolution as evolving new substances with new structures, functions, properties and capacities, embodying some new laws of behavior, and acting as new agents or new sources of causation. Awareness of many levels of existence, all cooperating interactively in producing a new effect, requires a more complex conception of causation permitting both one-hundred-percent determinism in one sense and some genuine novelty in another sense—a view which old-style determinists have not yet comprehended. Involved in the idea of novel causes is freedom from both need for a single first cause and its supposed alternative, no initial causation whatsoever. The New Philosophy escapes the traditional dilemma by dis-

tributing elements of first-caused-ness throughout the continuing evolutionary processes.

By keeping an open future, the New Philosophy restores man to a place of dignity in the scheme of things. Man is a product of evolution (of course, every philosophy makes man a product of something). But he is also a partly-free causal agent, a determiner of effects, a participant in directing subsequent evolutionary processes. I refer here not merely to the obviously new genetic types nor to artificial creation of elements which may never before have existed actually, but to the fact that every intentional act of each man has existential consequences. There is something ultimate about man, and about each man, in the evolutionary order. He is both effect and partly new cause and he can find a dignity in this conception which is denied him in other philosophies. He is neither complete master of his own fate nor a mere victim of circumstances. Even though he is carried along, as on a river, he can still steer his course, if he uses his foresight and accepts upon himself responsibility for use of the opportunities and capacities which he does have.

"The whole is more than a sum of its parts" refers to actually existing things, not to mere mathematical abstractions. There is more to a man than a collection of independent cells; he is a unique, substantial, self-conscious individual—and his unique substantiality is to be found in no one of his cells nor in all of them collectively, even though he continues to depend upon them, as a whole does upon its parts. A cell is a unit, a whole composed of, but not reducible to, its constituent molecules. And there is more to a molecule than its atoms or subatomic particles. Furthermore, a nation has a nature and destiny over and above that of its individual citizens. The practical values of analytical geometry are in no way denied by the refusal to reduce life to space, existence to number, or the concrete to the abstract. Although whatever exists may, in principle, be enumerable or measurable, one mistakenly believes that existence can be reduced to, or adequately reproduced in, any symbols of measurement.

The New Philosophy joins a long series of protesters, from Lao Tzu to Sartre, against mechanizing man. But its approach is positive; man is more than a sum of his parts. This view does not require, as some will suppose, going back to a philosophy which selects one inner, subtler part, called "soul," to which man is then reduced. Man should be shrunk neither to his body nor his soul nor to both as separate substances. He is a psychophysical being, both whole and parts, with his

whole and parts functioning as interdependent and interactive. There can be no whole (or soul) of a body apart from the body and no parts of a whole can exist separately from that whole. Whole and parts are related organically. This illustrates what is meant by saying the whole is more than a sum of its parts.

"Internal teleology" pertains to having one's purpose, goal, end, or ultimate value within rather than outside himself. Traditional theism explained man and the world as created by God to serve God; hence man's ultimate purpose was to be located not in himself but in God, and his goal was to be achieved not here but elsewhere. A natural consequence of such a belief is that when one loses his belief in God he loses his purpose for living. Life then becomes "meaningless." The Materialistic Mechanism which developed during the Age of Reason and flourished in the Twenties entails the same consequence. If "all is matter" and if matter is valueless, then life has no value, no purpose and, of course, no responsibility. (Responsibility was then interpreted as "ability to respond" mechanically in a "stimulus-response" situation.)

The New Philosophy protests against both no purpose and merely external purpose, against no teleology and merely external teleology. It does not deny all external teleology, however. Men both do and want to serve each other, and they may benefit—grow in value—thereby. Although internal teleology is enough so far as the universe is concerned (it needs no external cause or purpose), internal teleology alone is insufficient to explain man's organic nature. The New Philosophy involves "organic teleology." Briefly stated, this means that different purposes are interdependent, both within each person and between persons. People find it to their own advantage ("internal purpose") to cooperate, i.e., to serve and be served by others. Those who are interdependent can improve themselves by sharing and working to achieve common purposes. These purposes may be thought of as partly outside oneself (in others whom one serves) but basically inside (since one's own interests may be more fully realized when one is served by others also).

Enemies of the New Philosophy may think it foolish or egotistical to be interested in world government and world culture as one's own. But they ignore observing that organic emergence of newer and higher purposes is present in man from birth, intuitively obvious in mother-child relationships. If not inhibited by needless fear, one need find no end to available treasures provided he is willing to recognize that, for

each new emerging purpose, he is, organically, possessed by it as well as possessor of it.

"Internal teleology" means that man's purposes are his own. His dignity is sustained as against those who view the world as purposeless or man as depraved. "Organic teleology" means that interdependent men, through mutual assistance, can magnify each other's purposes, as what is "mine" or "yours" becomes "ours," and achieve a joint, emergent, higher dignity also. As men become more interdependent, each is more important to others. Hence each has a double, or multiple dignity and, to the extent that future generations depend upon his services to them, enduring dignities with an "open future." Purposes evolve and men can help to guide this evolution to make the world more richly and wisely purposive.

"Dialectic of polarity," the fourth of Drucker's terms, obviously a technical one, will be touched upon but lightly. "Polarity" and "dialectic" may be examined separately.

Experience presents us with pairs of opposites, such as same and different, whole and parts, permanence and change, good and bad. Each of the pair is called a "pole." Two poles, together with the range between them (as between hot and cold there is a range of varying degrees of warmth), are called "a polarity." Now such polarities involve certain common characteristics, including "complementarity." Two polar opposites both oppose and supplement each other. Each depends upon the other for its meaning and existence. For example, there can be no whole of parts without such parts and no parts of a whole without the whole. The concept of polarity is inherent in any system involving interdependence, where "interdependence" means partly independent and partly dependent.

"Dialectic" refers to that functioning of dynamic opposites which results in the emergence of re-embodiments of each. For example, in a whole-part polarity, not only must each part itself be a "whole part" but each whole must itself be part of some still larger whole, except, perhaps, the universe as a whole. A cell as a part of a man as a whole must still be a whole cell and this man, though a whole, must also be part of a society as a larger whole. Thus the terms "whole" and "parts" refer not only to complementary opposites constituting a polarity but also involve dialectic in the sense that each "whole" is a whole of (parts as) wholes and each "part" is a part of a whole which in turn is a part of a whole, etc.

Although the nature of dialectic cannot be fully explored here,

enough has been said to indicate that, so far as it is dialectical, the New Philosophy differs from non-dialectical philosophies which have dominated Western thinking, including the rationalistic tradition stemming from Descartes. However, it also opposes both Hegelian Absolutism and Dialectical Materialism. Unlike Hegelianism, it knows no end, no Single Absolute and no eternal pattern of development, but retains an open future. Unlike Marxian dialectic, it is multidimensional and recognizes the interdependence of many dialectical processes, including those of art, language, religion, psychology, biology, etc., rather than an inexorable predictable pattern of political history conceived in terms of a single discipline: political economy.

What happens when we view responsibility and irresponsibility dialectically? One may be aware not only that he has responsibility but also that, to the extent that he can assume responsibility for assuming other responsibilities, he is thereby responsible for responsibilities. On the other hand, he may be aware not only that he is irresponsible to the extent that he is a product of causes beyond his control, but also that these causes were produced by other causes beyond their control, and thus that he may be said to be determined by irresponsible irresponsibilities also.

One other important characteristic, in addition to the four selected from Drucker, needs to be stressed: confidence. The New Philosophy accepts the fact that life is worth living and that one's own deliberate interest in, and faith in, its worthwhileness can improve its enjoyability. The New Philosophy, like the four contemporary philosophies it opposes, is an adaptation to, an emergent from, and an explanation of, what is happening in our time. But it refuses to run away from life's practical problems, as the first three do, and from more responsibility than is necessary to get by in practical life, as the New Conservatism does.

It believes that, added to responsibilities which come to us of necessity, there are others which we may or may not assume and that assumption of these is good, provided we do not overtax ourselves. Not only can assumption of such responsibilities produce more good results but the act of assumption itself is accompanied by a sense of agency, of power, of significance. One who assumes and bears more responsibility thereby becomes a more responsible being. This characteristic is so significant that some have considered it, if not reserved to God, at least God-like or Christ-like. The miraculous power attributed to Jesus appears to flow from his willingness, largely missing from men, to accept responsibility

for the shortcomings of others, even "for the sins of the whole world." This same miracle, if one so wishes to call an obviously natural phenomenon, is available to all men ("We can be like him"), if we deliberately and willingly assume more than just enough to get by.

The educational policy of the New Philosophy includes training not in submission merely, in anguish merely, in playful postulating merely, but in deliberate assumption of responsibility for the discovery and perpetuation of values for self and others. Furthermore, training in assumption of responsibility is not reserved for a favored few, for in an age of specialization, everyone becomes responsible, and in an age of interdependence, everyone depends upon the acceptance and successful bearing of responsibilities by others. The more complex cosmopolitan society becomes, the more we depend upon those who are willing to "go the second mile." And the more willing and able an individual thus becomes (responsibility, like a muscle, improves with exercise), the greater, more significant, more meaningful he becomes, not just as a tool, but as an intrinsic value, if he can but sense his functional dignity. The New Philosophy is not anti-individualistic, as some will try to make it out to be. It opposes isolationistic and rugged individualism as unsuited to cosmopolitan society, but it advocates heightened, sensitive, civilized individualism in which a person can increase his own dignity by his own efforts through assumption of additional responsibilities which thereby make him the locus of determination of additional consequences.

The goal of life, as conceived by the New Philosophy, is not merely to survive but to create, and the more complexly one conceives himself, the universe, and values, the greater appears his opportunity for both survival and creativity. Hence seeing himself as an emerging evolutionary process, as a whole-part polarity, as internally or organically purposeful, and as dialectical, serve to enrich his outlook.

He has confidence that evolution of himself can result in something better, just as previous evolution has produced him and his own present worths. He has confidence that believing and acting as an organic whole which cannot be reduced to its parts is truer, healthier, better than those inconsistent creeds which hold man to be a temporary collection of lifeless particles suffering from illusions of reality and value or to be an inert particle ("eternal soul") lucklessly caught in a miry whirlpool and, though indestructible, constantly threatened with destruction. He has confidence in man's intuitive apprehension of himself as a purposive being as truer and better than either reasoning himself

into a worthless status or into puppet-like subservience to some external purposer. He has confidence that dialectic is not destructive but rather a condition of his continuous re-emergence—a condition which he can and should exploit to his own profit. It is man's nature to become more than he is and yet, dialectically, to remain man—man who has more yet to become.

The New Philosophy, although essentially opposed, is not entirely opposed to the four philosophies mentioned. Ignoring common opposition to earlier materialisms and theisms, we may note that the New Philosophy accepts postulational methods as methods, the naturalness and value of anxiety when needed, the importance of recognizing man's inherent incapacity and unperfectability, and the necessity for division of responsibility and limitation of its assumption to areas where one is qualified.

Postulation, broadly interpreted, is an ever-present aspect of human life. To the extent that life is uncertain, one can act intentionally only by placing faith in the ideas upon which he acts. Such putting faith is postulation. Less broadly, science necessarily involves formulation of hypotheses each of which is a postulate subject to trial and error. Still more specifically, logic involves a study of the nature of postulation techniques and varieties of possible alternative systems. But in all of these cases interest in postulation stems from an interest in life and its values. The New Philosophy rejects postulation for the sake of postulation as in anyway superior to life. It does not object to those having surplus energy to play at chess or postulate systems if they wish, but it does object to the implicit conclusion that irresponsible postulation is somehow so all-important that all of life should submit to it.

Anxiety also is an ever-present aspect of life. The more complex our value systems become, the most tension and anxiety which is to be expected in facing decisions about them. Greater anxiety is, indeed, in store for mankind. Furthermore, as previously indicated, the New Philosophy approves and promotes assumption of responsibility, even beyond minimums needed for survival, for the sake of the increased dignity which results from self-willed assumption of agency. But anxiety merely for the sake of anxiety is an evil to be avoided if possible. Existentialism is correct in denying that man is merely a machine; but to advocate seeking devotion of oneself totally to decisions which decide nothing is a major human travesty. Justified recoiling from one extreme of the machine-will polarity does not in turn justify plunging headlong into the opposite extreme. To claim to be willing to be solely

responsible for one's choices, without the entailed willingness to accept the practical, continuing and recurrent consequences of such decisions upon oneself and others, is really running away from life.

Despite the proud claim that Existentialism is a unique philosophy (a claim which it shares with other varieties of Romanticism), it conforms to a pattern of all mistaken philosophies which reduce the whole of man to one of his parts. Here the part selected is man's power to choose, which is, indeed, essential. It follows this mistaken pattern by reasoning thus: The power to choose is essential to man; therefore it is all-important; therefore it alone is important. Such reasoning involves a typical oversight: Since men are complex, essentially complex, they embody many aspects, each equally essential; these are, hence, equally all-important; hence no one essential is important alone.

Incompleteness is another ever-present characteristic to live men. To call such incompleteness "depravity" is a mistake which flows naturally from first setting up an ideal of impossible perfection and then demanding man to measure up. Granted that man is essentially purposive and that purpose implies a goal which should be sought, it does not follow that achievement of all goals is therefore essential to man. Being dynamic and complex, man generates more aims than he can possibly fulfill. Being multi-leveled in his interests, he embodies levels of goals, levels of futurity, levels of incompleteness.

Man has already achieved some goals. And it is just as true of him that he has completed what has already been accomplished as that he remains imperfect because he still has more goals to reach. A person can complete his childhood before he becomes an adolescent, complete his adolescence before he becomes an adult, achieve adulthood before he becomes old, and achieve a ripe old age before he dies. Life is a series of successive achievements, completions, perfections; so to ignore the already-perfected aspects of each man and of mankind is to be as truly short-sighted as to overlook his imperfections. Since man is essentially forward-looking, to impose upon him the ideal of complete perfectibility, a state in which he would have nothing to look forward to, is to devitalize, dehumanize, debilitate him.

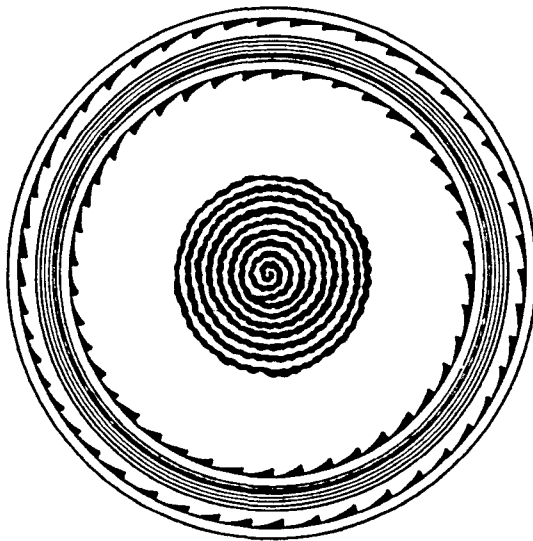
The New Philosophy prefers meliorism to Neo-Orthodoxy's pessimism. It rejects as unhealthy in philosophy and religion what has proved demoralizing, for example, in rating student papers: grading "down from 100" as against "up from 0." The down-grading spirit falsely implies that the pupil is perfect to begin with and that the grader's only function is the distasteful one of subtracting from that perfection (dis-



covering depravity). The up-grading spirit assumes no existing rating before the test and that the grader's function is the sympathetic one of discovering how much has been gained. This latter spirit serves to instill confidence which, incidentally, is a major function of religion; to the extent that traditional and Neo-Orthodox doctrines cripple man with fear, they are essentially irreligious.

The New Conservatism wisely recognizes that each man is essentially limited in his capacities. But the apparent accompanying conviction that one should, therefore, seek to bear as little responsibility as he can get by with tends to transform itself naturally into a spirit of irresponsibility. If one can get away with irresponsibilities in some areas, then perhaps he can do the same in others. The pragmatic method may be used negatively as well as positively: to see how much can be avoided rather than borne successfully. Involved are two genuinely antagonistic spirits.

In sum, the New Philosophy, while recognizing virtues in each of its four contemporary opponents, condemns each for overdoing a good thing. But especially it accuses all of them of a common fault, seeking to escape, in one way or another, from more general responsibility by making a show of courageous acceptance of responsibility of a much more limited sort.



# THREE POEMS OF TU FU

## MY FEELINGS RELIEVED

### 1

*I dismount from my horse  
in an old battlefield,  
and look around me  
at immensity.  
The wind wails;  
clouds drift away;  
yellow leaves fall  
in my path.  
Rotten bones,  
entwined with creeping weeds,  
give shelter to ants.  
This view would arouse  
a sigh from our ancestors,  
but the men of today  
still expand frontiers.  
Victory and defeat take turns  
between the Han and the Tartars;  
our vassal cannot keep  
the border marches.  
Oh, would that we had a marshal  
like Lien P'o  
to give our armies rest.*

### 2

*In clear autumn  
I climb a cold hill  
and gaze south  
at Ma-yi.  
The servile Barbarians  
attack the rebels  
in the East;  
all the young and strong  
have left home.*

The tents are scattered  
in the grass;  
clouds hang heavy.  
The old and the weak  
cry on the road;  
they would hear of  
armor and weapons laid to rest.  
Yeh is a seesaw battle-ground;  
corpses are heaped like hills.  
Generals are made idle noblemen.  
Who will plan our driving  
of war-chariots?

FAREWELL TO A FRIEND

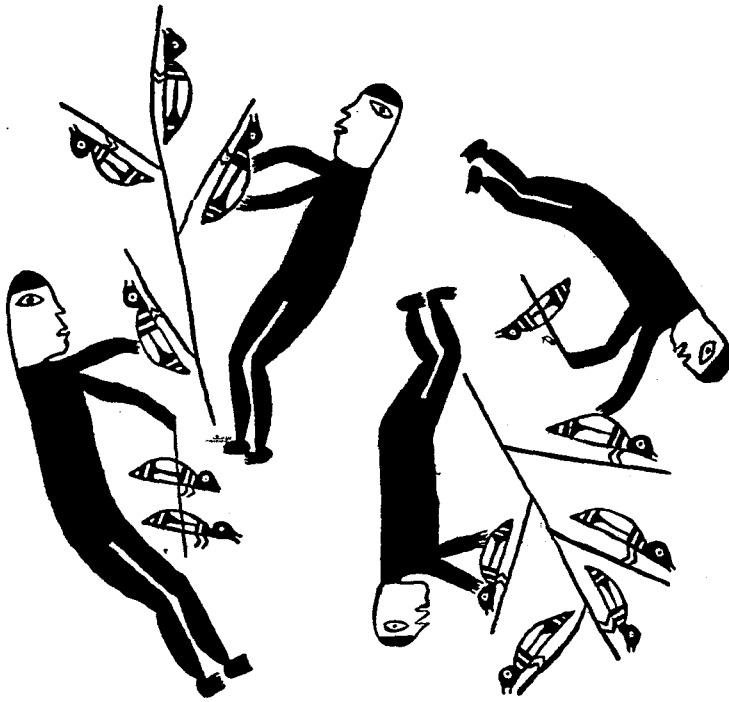
War fills earth and heaven.  
Why have you gone afar?  
Your friends and relatives wept  
When you rode from this lone town.  
The month and year wither grass and trees;  
Frost and snow cleanse the pass and rivers.  
Our parting was yesterday;  
I am sad like men of old.

LOOKING AT THE SOLDIERS

Pai-t'ing sends out soldiers  
Like leopards and tigers;  
Their valor unequalled.  
But how goes the frontier?  
Evil spirits haunt rebel steeds;  
Our Marshal awaits the Carved Spear.  
Keep no guard under the Yeh wall,  
But slay those sharks on the Liao Sea.

TRANSLATED FROM THE CHINESE

BY CHAO TZE-CHIANG



## poets in this issue

Chao Tze-chiang was born in China. He is professor of Chinese language and literature at The American Academy of Asian Studies, San Francisco. "Tu Fu (712-770 A.D.) is China's poet-sage," writes Mr. Chao. Other translations of Tu-Fu's poems by Chao Tze-chiang appeared in *Poetry* (Chicago), *Audience* and *The European*. He is the author of *A Chinese Garden of Serenity*, published by Peter Pauper Press.

This is Ernest Kroll's fifth appearance in *New Mexico Quarterly*. He is currently working on a third volume of poems.

In response to our request for autobiographical data, N. Scott Momaday replied that he is twenty-five; unmarried, unpublished, and largely unconcerned. A 1958 graduate of the University of New Mexico, he will study on a Stanford University Creative Writing Fellowship in Poetry under Yvor Winters during 1959-60.

Elizabeth Shafer's first literary effort was printed on the children's page of *The Denver Post* when she was eleven. Subsequent work has been in *Woman's Day*, *Jack and Jill*, *Calling All Girls*, and *Empire*.

"Eleven Thousand in Wheat Sacks" is part of an unpublished book of "Spoon River" portraits of western outlaws. Author Gene Shuford is director of the Department of Journalism at North Texas State College.

a story  
of a girl  
& Ben Jonson

GEORGE GARRETT

*My Picture Left in Scotland*

Professor Dudley walked from his desk to the window and looked out at the barbered green of the quadrangle, his profile outlined sharply against the glass. The student, sitting in the straight-backed chair, watched him out of the corner of his eye. The professor took a deep puff on his cigarette and blew a series of quick, handsome smoke rings. He was watching the brown squirrels on the lawn. They scurried about with plump devious energy and, somehow, reminded him of priests, the fat little priests carved in stone on the tower at Chartres. You almost had to be a mountain climber to see those priests.

"I suppose you want me to be honest with you."

The boy opened his mouth to speak, ended by merely nodding.

"There are two ways, really," Professor Dudley continued, returning to his chair behind the desk. "One can be tactfully honest, that is, virtually noncommittal. Find the virtues worthy of praise and ignore the naked faults. Even so, though, believe me, tact can be a wound. Or, on the other hand, if one mingles a little honey with the gall, one can say more or less exactly what one thinks."

"I just want you to tell me the truth," the boy said.

"Good."

The professor grinned and picked up the manuscript. The title was *The Signal Elm* which probably explained, he thought, why the student had sent it to him. He had received the manuscript, bulky and badly typed, in the mail a couple of weeks before, accompanied by a reticent, expectant note asking that, if he had the time, would he mind reading

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When we accepted his story, George Garrett was in Rome on joint American Academy, Prix de Rome, and Sewanee Review fellowships. The University of Texas Press brought out a collection of poems, *The Sleeping Gypsy*, in 1958. Garrett's first novel, *The Finished Man*, will be published by Scribner's in September.

it? The professor had sent a note in reply saying it would be a pleasure to read the novel and setting the date and hour when they could meet in his office and discuss the book. He added that it was a pleasure to look at the creative work of his students. After all, was that not one of the disguised virtues of the discipline of liberal arts?

"It's probably an admission of ignorance, Mister Grubb," Professor Dudley said, "but I don't recall you in any of my Victorian classes."

"I never took the course officially, sir," Grubb said. "But I do come every year to hear your Matthew Arnold lectures."

"You must have noticed," the professor said, smiling gently, "that once in a while I've been guilty of repeating myself."

"The way I look at it," Grubb said solemnly, "is once you've really done the job, you can't help repeating yourself."

"Well, that's one way of looking at it. Are you a senior?"

"Yes, sir."

"Isn't it odd that we've never met before now?"

The boy smiled back and shrugged.

Of all the sad and inarticulate gestures of mankind that shrug was classed among the least appealing. Grubb couldn't have offended more by picking his nose. The boy sat awkwardly attentive in the chair, still bearing after four years the definable stamp of a metropolitan high school. There was something about all of them, the professor thought, something of the clumsy ponderous solemnity of the self-educated man. It must take some doing, a vegetable tenacity, to rise to the top in classes, each of thirty or forty, in public high schools of thousands, and to be accepted finally by private colleges with the highest admission standards. At least it stirred one's admiration.

"I hope you're comfortable," the professor said. "Would you care for a cigarette?"

"Thanks just the same," Grubb said. "I don't smoke."

"I have to admit to something," the professor said. "I have a confession to make before I can say anything about your book. Years ago I wanted to be a novelist myself. After I finished here and spent a little while at Oxford, I lived for a year or so in Paris just writing. And even after that, when I was new to the treadmill of teaching, I kept at it for a while. *Mea culpa*, I have three unpublished novels in my desk at home."

"I never knew that," the boy said. "That's very interesting."

"Now I've given you fair warning," the professor said. "The point is, anything I say has to be taken with a grain of salt."

"The way I look at it," the boy said, "is you ought to be able to help me even more. I'll take my chances."

"Maybe so," the professor said. "Now then, about *The Signal Elm*."

Leafing through the pages Professor Dudley had quickly grasped the outline of the shopworn plot. It told the story of a young man's struggle to maturity and identity, starting from the strict confines of an immigrant Jewish family in Brooklyn (Was Grubb Jewish? It seemed likely, at least possible.) whose roots were in the old world, progressing until the young man was able to feel wholly of the new world, conquering it, and, as well, transcending the shadowing mediocrity of his background. At the climax the boy arose and delivered the Valedictorian Address at PHS the nth while his parents listened in gentle awe to his mastery of a language they had never really learned. The book ended in a subdued tone, the young man arriving at a green and only dreamed-of campus, possibilities ringing his head like a saint's halo of real gold. Still, the professor could tell, there were sections and occasional scenes which were beautifully written. Sometimes the young stammer into poetry almost in spite of themselves. The poor man's Scott Fitzgerald. Professor Dudley hadn't the slightest notion why the novel was called *The Signal Elm*. Doubtless something had eluded him. He confined his critique to purely technical faults, stiff dialogue, overwritten description, crude symbolism, lack of clearcut motivation for actions, absence of well-defined development of what appeared to be the dominant themes. He had to work quickly, for he had another appointment to follow. The whole thing was precisely the material for the type of vignette Professor Dudley could tell so well, with mild self-deprecating irony, at a faculty party.

"I hope I haven't been too rough with you," he said. "I'm aware this book means a lot to you."

"Yes, sir," Grubb said. "It means a good deal."

"Maybe that's the trouble. Maybe you're too close to the material at this time. Why not try some other theme, an entirely different kind of story, one that will let you keep a little aesthetic distance?"

"Don't you think I could revise? I've got notes on everything you said."

"No, Mister Grubb, to tell you the truth I don't think there's any hope for this one. You asked me for the truth. Remember though, it's only my opinion. I feel that there's nothing you nor I nor anyone else could do to salvage this book. It would take a genius of another stamp—a Dickens."

"Yes, sir," the boy said sadly.

"I can see you're very disappointed. Don't be. You're young, much younger than you realize now, and, after all, it's only your first trial run. Don't take my word as gospel, though. Show it to somebody else."

"I don't think that will be necessary," Grubb said rising to leave, the manuscript a limp and wounded thing in his hands. "There isn't anybody else in school who could handle it technically, the way you did."

"That's not quite accurate," Professor Dudley said, walking him to the door. "But I suppose it's the white lies, the happy little self-delusions, that we all live by, isn't it? I'm very glad you brought the manuscript to me. Otherwise we might not have met. Do you play squash, Mister Grubb?"

"No, sir."

"Well, something will turn up before graduation," the professor said, offering his hand. "When you go out, will you tell the young lady waiting in the hall to come right in. And Grubb, for heaven's sake, don't give up. I'd like to think I'll see the day when you'll send me a copy of your first novel."

Mister Grubb looked at him, shrugged eloquently and departed, closing the door softly behind him.

When the door closed, the professor walked over to his windows. He saw Grubb appear, ambling along the crisscross walk and, particularly, he noticed an intriguing squirrel who paused in alarm by a tree near the walk, its paws poised together in an attitude of prayer, its great soft tail cocked like a question mark. He heard the door open and shut behind him.

"Miss Palmer," he said, offering her the straight-backed chair, "I'm sorry I had to keep you waiting."

"You've always been so good about time," she said. "I can't complain about having to wait a little."

She sat easily in the chair, her legs demurely crossed, and looked at him. She was as blonde and full-bodied as a ripe pear and her eyes were as clear and cool as springwater. He gave her a light for her cigarette and moved behind the desk. Professor Dudley ruffled the papers in the top drawer and came up with a manuscript bearing the title "My Picture Left in Scotland: A Study of Ben Jonson," beneath which was typed "Submitted as Spring Term Junior Paper to the Department of English by Jenny Bell Palmer." Professor Dudley shuffled its wide-margined, beautifully typed pages, studiously frowning. He was aware



that Miss Palmer had shifted her position. She was sitting on the edge of her chair.

"With regard to your paper," he said, "I think I'd better read my comments first."

He glanced at her and she nodded.

"This is a lucidly written, close and comprehensive study of a single poem by Jonson, and, within those limitations, you have succeeded admirably. One is not entirely convinced that this eighteen-line lyric is deserving of such scrutiny or that the poem is as representative of Jonson's work as the writer seems to assume. The reader, not himself a specialist in the Renaissance period, would like to be encouraged by cogent evidence to accept the validity of the implied assumption. On the whole, however, in spite of certain minor mechanical errors, this paper is an adequate realization of its intentions. B minus."

"Thank you," Miss Palmer said.

"Really, it wasn't bad at all," he said. "You're improving all the time."

"I enjoyed doing this one," she said. "It's so much easier to write about something you really like."

"I am curious as to why this particular poem caught your fancy."

"I thought it was a very personal kind of a poem," she said. "You take something like 'Drink to Me Only With Thine Eyes.' That could be written to almost anybody in general. This poem seemed to have a particular person in mind. There he was in love with this young girl and worried because he didn't think she loved him. I thought maybe it would be interesting if I wrote about it from the feminine angle."

"That's an interesting notion," he said. "I'm not sure you made it clear in your paper though."

"That's the trouble," she said. "As soon as I start writing a paper I freeze up. A paper is, by definition I guess, an impersonal thing."

She had relaxed again, recrossed her marvelous legs, and it occurred to him that at any moment all her youth and vitality would burst the shell of the cashmere sweater and tweed skirt, leaving her nude and shining as an apple. A veritable vision by Cobean.

"Excuse me, did you say something?"

"Nothing, Miss Palmer, nothing at all. My imagination was wandering in the precincts of senility. Let's take a look at the poem and see what you were really trying to do in the paper."

He went to the bookcase, fumbled vague-handed for a moment, and returned with an anthology of Elizabethan and Jacobean verse. A quick

flipping of pages and he found the poem, presented the book to her and stood behind her close by the chair, close enough to detect the sweet fresh odor of soap. She must have showered just before coming to keep the appointment. Miss Palmer studied the poem silently.

"It's the last part especially," she said finally. "In the first part he just states the facts. He says he loved her and she didn't seem to love him."

"What about the last part?"

"Don't you see what I mean?" she said. "It's self-evident to me."

"Suppose I read it."

He leaned over her shoulder, his hands gripping the chair and in a soft voice, still haunted by the ghost of an Oxford accent, he read.

Oh, but my conscious feares,  
That flie my thoughts betweene,  
Tell me that she hath seene  
My hundreds of gray haire  
Told seven and fortie yeares.

Read so much wast, as she cannot embrace  
My mountaine belly, and my rockie face,  
And all these through her eyes, have stopt her  
cares.

"It sounds very nice when you read it like that."

"But what about the last part, Miss Palmer? It appears to me the poet is being realistic about the whole thing. He's forty-seven, gray-headed, fat and his face is, as *Time* would say, craggy."

"That's exactly my point," she exclaimed. "He doesn't say word one about what the girl thinks. He's just being sorry for himself."

"Indeed he doesn't. How could he put that in the poem? What man, since poor old Adam, has ever known for sure what the girl thinks?"

"That's the trouble with men," Miss Palmer said. "Even the intelligent ones."

"Then I'm afraid the defect is irremediable."

"No, it isn't. They just don't use common sense. Look how silly it is. There was Ben Jonson worrying about what some girl was thinking about him."

"Let's face it, he does admit a few physical characteristics that might be called impediments."

"When a girl falls in love with an older man, that doesn't even enter into it."

"That's a very sweet thought," he said. Without moving an inch he could have bitten Miss Palmer's pink exposed ear. He turned away and lit a cigarette.

"It's not just 'a very sweet thought,' " she was saying. "Look, I have perfectly ordinary normal reactions to things. Now my daddy, for example, is ugly as sin and I could easily fall in love with a man like him."

"And your supposition is that Ben Jonson was a lovable old guy."

"You might put it that way."

"Ah," he said, standing once again in strict profile by the windows, "what a good world it would be if the illusions of the young and fair . . ."

"But it is a good world," she insisted. "Don't you think?"

Professor Dudley felt his mouth relaxing into a slow smile. He returned to his desk, sprawled leisurely and unofficial on the edge of it, his long legs dangling, exposing below the creased line of his gray flannel trousers the neat loafers he wore, the subdued argyle socks and the tanned bulge of an athletic, tennis-playing calf. He looked a good deal younger than forty.

"I don't know why you do it," he said. "Every time you come to my office you arrive immaculately bursting with youth and life. You make me feel the weight of every one of my years, the burden I push around like the rock of Sisyphus. You ought to be ashamed."

"I never know how to take you," she said. "You're always either being ironic or just kidding around."

"I'm not just kidding around."

"You don't look a day over thirty and you know it."

"And today you look as if you'd just stepped out of a Renoir canvas."

"You ought to be ashamed."

"Why, what on earth's the matter with Renoir?"

"I don't know," she said. "His women are so—sensual."

"There you go. Passing judgment on the basis of pre-conceived values," he said. "How am I ever going to make a critic out of you?"

"I don't know what you mean," she said, frowning.

"Take a word like that, like sensual. The way you use it—sensual—implies that it's a naughty word. It's a perfectly respectable neutral adjective and you know it."

"All right," she said. "But you know what I mean."

"Yes," he said. "I know what you mean."

• He looked into her bright clear eyes. They were like water on a wind-

less day, unclouded by any complexity. If there was any emotion to be read from her eyes it was only a mild, a very mild anxiety. Perhaps it was simply curiosity.

"Let's pursue the point," he said. "You find Renoir sensuous in a way that has connotations of naughtiness. Why?"

"Oh I don't know," she said a little petulantly. "I just do, that's all."

"Let me tell you how I feel about Renoir," he said, suddenly exuberant, theatrical. "I find Renoir is Paris in the spring, the sweetest, ripest, greenest city of April in the world. A long time ago, quite possibly before you were born, I lived on the Left Bank, seeing everything with wide, intoxicated eyes, drinking in every impression like wine, jotting down wild, irresponsible, inspired ideas for poems and novels and plays. Renoir symbolizes all that to me, the life blood of youth, the time when every girl in Paris was a living still life compacted of the brightest fruits of the earth."

"Oh well," she said. "You were an artist. Artists are different."

"In what way?"

"You know what I mean. I used to go to the life class over at the Art Department," she said, lowering her eyes. "It was a mixed class, but once you got used to the idea of a naked woman posing up there it was all right. Everybody just concentrated on their drawings. All except a couple of football players who couldn't draw a straight line. They sat right behind me and giggled."

"There are always football players who sit in the back and giggle. We have to ignore them."

"I ignored them all right. One of them had the nerve afterwards to call up and ask me for a date. Would you believe it?"

"Your first point is well taken. Artists are different."

But she had looked away from him, smoothed her skirt and gathered up her books, and now she was standing. He thought he detected the faint stain of a blush on her cheeks.

"I still don't like Renoir," she said. "Maybe men do, though."

"I wish we had time to discover why you really don't respond to Renoir," he said. "Maybe some other time. As it is, the light is waning, it's past five o'clock, and I must totter home."

"Christ!" she gasped. "I'm late for choir practice."

She started for the door in a rush.

"Hey, Jenny Bell," he called after her. "You forgot your paper."

Collecting herself, she returned and gracefully accepted the paper from his hands.

"I hope," he said, "you'll feel free to drop in any time during the rest of the term and discuss your work."

"Don't you worry," she said. "I will."

She walked out of the door, closing it gently behind her. He could hear her feet running down the hall and, looking out of the window, he saw her racing across the quadrangle, scattering poor astounded squirrels in every which way, her skirt blowing, her white legs flashing, Diana the huntress without a thought in her head, and he, Actaeon, gnawed to pieces by his own hounds. He bit his lip until he could taste the light salt flavor of blood.

Professor Dudley walked home the back way, avoiding the main street of the town with its bustle of rush-hour traffic and last minute shopping. It was always better walking along the tree-lined residential streets with their well-kept lawns and well-painted houses. It took a little longer but it was only a few blocks either way; and he thought that walking easily in the green shade was a kind of ritual. He always felt that coming home from the college he was like a deep-sea diver rising slowly from an arena of dark, dreamy beauty into the pitiless blare of sunlight and burning air. When he opened the door, Ronnie stood formidably barring his way, arms akimbo.

"Susie broke my bicycle," he said. "And Mamma is sick and we're hungry."

"Well, now," Professor Dudley said, "we'll have to see about all these things, one at a time."

"I should hope so," Ronnie cried over his shoulder, fleeing.

He set down his briefcase and looked at himself in the hall mirror. Not quite like Dorian Gray, he thought, but somehow remarkably lucky, remarkably free from the lines of either his years or his sins. He adjusted his necktie and climbed the stairs to his wife's room. He knocked and entered, finding Vivian in bed, her thin troubled face buoyed by pillows, etched with the pains of a headache.

"You know," she said, "it's not much help even if you know it's psychosomatic."

"No," he said. "I guess it hurts just as much."

"A regular soap-opera day here," she said. "First the dishwasher broke down after breakfast and then I couldn't start the car. I don't know what's the matter with it. It just won't seem to work for me. One goddamn thing after another and then to top it all Susie cut an awful gash in her head trying to ride Ronnie's bicycle down the flight of steps at the park."

"That's how she busted it."

"What?"

"The bicycle."

"Oh, I suppose so."

He sat down on the edge of the bed and stroked her hand. Such pale slender hands with such exquisite, useless fingers, he used to call her his Rossetti girl.

"So how do you feel now?"

"Lousy," she said. "Just plain lousy. I can't budge. It feels like the top of my head is coming off any minute."

"Call the doctor?"

"What's the use? It's all in my mind."

He felt suddenly like shrugging his shoulders, just like Mister Grubb.

"How was your day?"

"Same old rot," he said. "Another day, another dollar."

"Pearls before swine?"

"So to speak," he said. "Have the kids had supper?"

"God no," she said. "The very thought of the kitchen appalls me."

"Well, I'll warm something up."

The kitchen was, as he anticipated, a shambles. He took a long swallow from a bottle of scotch and got busy clearing things so that he could at least have the sink and the stove free. The main thing, he thought, the real distinguished advice I have for you this morning, gentlemen, is two-fold. Point one: never, under no circumstances, no never marry an intellectual woman. If you must marry at all, which is debatable, search for a plump ripe stupid peasant woman. Keep her barefoot and pregnant and full of good solid food like meat and potatoes. If you can't locate such a delectable mountain, such a promised land for the sowing and the reaping, let this be your guide. Never marry a woman who is smarter than you are. Now for point two. Let's see, what was point two? Ah yes, I have it right here and I shan't detain you a moment. Mark this well. Keep your grubby, and I use the word advisedly, keep your grubby, cotton-picking fingers out of the arts, lest, bitten by a bug or burned by a gemlike flame, as the metaphor may go, so to speak, lest you become infected with ambition and struggle yourself gray-headed and black in the face trying to be what you most patently are not. Most patently.

"All right, kids," he shouted. "Let's eat."

They ate canned Spanish rice with milk and bread and butter. They seemed perfectly happy, Susie triumphantly bandaged and Ronnie

eagerly pursuing the prospect of a new bicycle. As a matter of fact, he thought, it might even be an adventure to be a child in a high disorganized family. He dabbled at the rice with his fork, but wasn't really hungry.

"What's at the movies, Susie?"

"We're going to watch TV tonight."

After they appeared sufficiently stuffed, he shoosed them into the living room to watch TV and retired to his small study with the bottle of scotch. He poured a drink and listened to the gunfire and forlorn battle cries coming from the living room. He picked up a copy of Matthew Arnold from the desk and read through "Dover Beach" in about thirty seconds.

"You old fraud," he said, tossing the book aside. "You, Matthew Arnold, like the rest of us. The truth is we all tried to sign up with the ignorant armies but they classified us 4-F and the only thing left to do is sit on the fence with the railbirds and holler when they go by. You too, T. S. Eliot. And you too, Renoir, turning sweaty female flesh into apples and bonbons. And, ah yes, you too, Ben Jonson, *mon frere*."

He took a detective story off the shelf and began to read, hoping that before he got really involved in the damn thing the phone would ring. The odds were perfectly good that somebody would call. It would not, of course, be Jenny Bell Palmer. It would not, he trusted, be Mister Grubb or F. Scott Fitzgerald on the line. Somebody would call. Life is like that. Full of little surprises, don't you know?

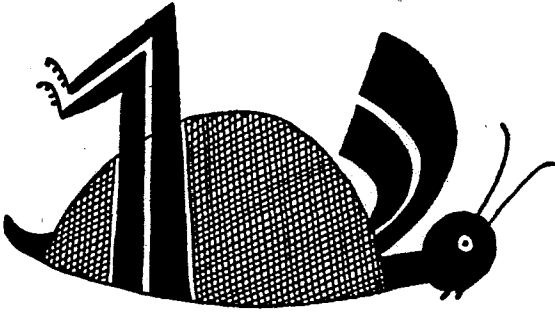
## SNOW IN SICILY

"All the snow that falls on Mt. Etna  
belongs to the Archbishop of Catania  
. . . Etna snow ice cream has a better  
flavor."  
—News item.

*All the snow that falls on Etna,  
Being his by right alone,  
Nets the bishop a pure profit.  
Erupting, it's the jet of Tophet;  
Quiet, it's his ice cream cone.*

—ERNEST KROLL

# BOOK REVIEWS



## Paperbound Books

PAPERBOUND BOOKS have come a long way from the Five Cent Wide Awake Library (so-called despite the fact that the books cost a dime) or Beadle and Adam's Half-Dime Library.

Undoubtedly some of the razzle-dazzle has vanished from newsstand racks with the disappearance of Street & Smith's Diamond Dick Library which carried such titles as *Pawnee Bill at Work for Uncle Sam*, or *On the Trail with Spotted Tail*, or the Log Cabin Library titles like *The Pinery Dens Detective*, which brandished the swashbuckling sub-title of *Or, Among the White Slaves of Wisconsin*.

"For the first time," says Quentin Reynolds in his survey, *The Fiction Factory*, "readers who could only afford a dime for a full-length book learned of the western wilderness, of the buffalo-studded plains, of the trapper, the Indian guide and the white scout. They learned of the deadly accuracy of the American-made rifle and they learned of the lusty vitality of a part of their country which, to them, had hitherto been as remote as Tangier or Constantinople. They learned of the battle of men against the sea and of pirates off the Barbary Coast, and they learned of man's search for gold and occasionally they were given a dish of nicely sugar-coated romance."

Well, the robust Westerns have remained and gone on. The titles take themselves seriously; the authors do sounder research to produce the "deadly accuracy." Crime pays the paperback publishers well, and so does literature. Prices have gone up, but for a quarter, the reader can choose from New American Library's *DAMARON'S GUN*, by Wesley Ray; *THE BLONDE* by Carter Brown; or, for thirty-five cents, Tennessee Williams' *CAT ON A HOT TIN ROOF*. Fifty cents will buy *THE POCKET BOOK OF MODERN VERSE*, ed. by Oscar Williams (Pocket Books, Inc., 1958), *BUFFALO BILL AND THE WILD WEST*, by Henry Blackman Sell and Victor Weybright (a real bargain) published by the New American Library.



There are "prestige" paperback publishers too. Grove Press has issued such evergreens of academe as Sherwood Anderson's meandering, impressionistic, not wholly satisfying memoir, *A STORY TELLER'S STORY* (\$1.95); E. E. Cummings' journal *EIMI*, an occasionally shrewd, occasionally exasperating, always personal account of a trip to Russia in the early thirties (for a whopping \$2.45); Henry James' *THE REVERBERATOR* (\$1.45) and his *LITERARY REVIEWS AND ESSAYS* (\$2.45) which gives us not only the critical notions of his formative years but also the attractive signs, in the style of the writing itself, of his already fine sensibility and shining mind. Grove Press is also the publisher of *A WALKER IN THE CITY*, Alfred Kazin's sensitive, subjective and often nostalgic recollections of his coming-of-age in the homey slums of Brownsville, New York—the slums to which he and his Russian-Jewish immigrant family were held by bonds of culture and of poverty. (\$1.45).

Perhaps the most contemporary-minded of the paperback publishers, Grove Press issued Jack Kerouac's *THE SUBTERRANEANS* and *DOCTOR SAX*; translations of *THE VOYEUER* (\$1.75), by Alain Robbe-Grillet, and *THE GIRL BENEATH THE LION* (\$1.45), by André Pieyre de Mandiargues. In *EVERGREEN REVIEW*, No. 5, ed. by Barney Rosset and Donald Allen, there is still the pervasive influence of the beatniks. Jack Kerouac has an item on "Essentials of Spontaneous Prose," and a young El Paso boy, John Rechy, tells about a real gone time he had at the Mardi Gras. But these cats move in fast company. Germany's leading existentialist, Karl Jaspers, writes on the atom bomb, Samuel Beckett pens a short monodrama of despair, Charles Olson philosophizes on the universe and the Maya. Among the other pieces are an article on James Dean, stories by Amos Tutuola and Michael Rumaker, and poems by Denise Levertov, H. D., Kenneth Koch and Robert Creeley. Possibly the best in the book is William Eastlake's native-soil study of the environs of Cuba, New Mexico: "Portrait of an Artist with Twenty-Six Horses." In remarkable prose he tells what it really means to be a Navaho among whites, a father who fears he's alienated his son, an artist in a world of conspicuous consumers. (\$1.00).

*THE JAZZ MAKERS* (\$1.95), edited by Nat Shapiro and Nat Henthoff contains twenty-one profiles of jazz musicians from Jelly Roll Morton to Dizzy Gillespie turned out in a lively and authoritative fashion by nine old hands at essaying jazz and jazzmen. Although the essays sentimentalize their subjects through personal anecdotes and recollections of glory within the brotherhood of jazz, it is just these qualities which animate the portraits and recommend the collection to the initiated.

University presses also have a share in the crop. University of Michigan's Ann Arbor gives us Sir James Jeans' *PHYSICS AND PHILOSOPHY* (\$1.75), which

discusses the philosophical implications of modern physical theory; and Ernest Barker's *CHURCH, STATE, AND EDUCATION* (\$1.35), an erudite dissection of the relation between authority and individual freedom, and the place of education in this conflict.

Morris Bishop's *RONSARD: PRINCE OF POETS* (\$1.85) reads like a poem of the Renaissance. Several of the celebrated sonnets to Helene by Pierre de Ronsard are included, together with details of a poet's life, rich in the "illumination of reality with beauty."



THE INSRIPTION circling the imprint of University of California Press is a line from Aeschylus' tragedy, *Agamemnon*; Clytemnestra speaks: "Victor is he who ran both first and last." Richard Lattimore translates the line: "The first and last sprinters have the victory." The reference is, of course, to the torch-bearing messengers who

ran in relays; the allusion is to the beacon lights on Mt. Ida and on Mt. Arachnaeus. The mark was designed about 1916 by Perham William Nahl, member of the Art Department of the University of California.

University of California Press publications are distinguished by exquisite art work. Robert Bruce Inverarity's illustrations and jacket design for *INDIAN LEGENDS OF THE PACIFIC NORTHWEST* by Ella E. Clark (\$1.95), for example, refresh the eye. The book itself contains folktales of the Indians of Washington and Oregon gleaned from personal contacts, ethnological reports, and early reports of travelers, missionaries, etc., in the area. (\$1.95).

*HERMAN MELVILLE*, by Leon Howard, is a superb, solid, well-written biography of one of the world's most enigmatic writers. The life and the writings are studied in close relation to each other, and the biographical method is surely justified here, for the final illumination is of the literature, not merely of the literary hero. (\$1.95).

Paper books from Indiana University Press are called Midland Books. Prices range from \$1.25 up, and the reader may choose from a study of *GEOFFREY CHAUCER*, by John Livingston Lowes (\$1.50); Rolfe Humphries' attempt to up-date Ovid into modern-day English, *THE ART OF LOVE* (\$1.45); Albert Schweitzer's version of his experiences in Lambarene, *AFRICAN NOTEBOOK* (\$1.25). The book opens with a history of the Lambarene area, with special attention paid to some of the more illustrious early characters of that region. The more interesting part of the book is a group of essays devoted to Schweitzer's experiences with the natives, with such titles as "Differences Between White People and Black People," "Taboos and

Magic," "Hospital Stories and Scenes," and "Boys in Europe." The book is greatly enhanced by an abundance of photographs by Erika Anderson.

**THE DOUBLE**, A Poem of St. Petersburg, by F. M. Dostoyevsky as translated by George Bird, with an introduction by Mark Spilka and a Rorschach cover design is also on the Midland roster (\$1.50). "The Double contains the first open pronouncement of that 'serious idea,' the divided personality, which informs the whole of Dostoyevsky's achievement," Spilka tells us. The story deals with "a civil servant, Golyadkin, who comes home . . . to see another man—his double—slipping into the room in front of him. . . . The other self, after entreating Golyadkin's friendship and learning his secrets, turns ultimately into a formidable enemy." This was only Dostoyevsky's second novel, and the "pioneer of modern psychological fantasy" shows himself alternately brilliant and dull, lucid and fathomless.

Like the Walrus, Bernard Berenson speaks of many things in his **SKETCH FOR A SELF-PORTRAIT** (Midland, \$1.25). Surprisingly enough, his comments on nearly everything—his career, home, self-doubts, history, people, and the world in general—make interesting reading. Also on the well-rounded reading list from Indiana are **IN THE SPIRIT OF WILLIAM JAMES**, by Ralph Barton Perry (\$1.50) and William York Tindall's **THE LITERARY SYMBOL** (\$1.75), a study of the place and uses of the symbol as a characteristic of and a force in literature.

Throughout **PAUL GAUGUIN'S INTIMATE JOURNALS** (translated by Van Wyck Brooks, A Midland Book, \$1.95), Paul Gauguin repeatedly states, "This is not a book"—and indeed it is not. Rather, it is an unrelated series of bawdy anecdotes and blasts at civilization and respectability in general. Originally written in 1903, the journal offers an unusual glimpse of Gauguin, the bohemian, and is, even today, quite capable of shocking one with its intentional lewdness. More rewarding than the text are the fifty-two reproductions of Gauguin's paintings and drawings.

University of Chicago Press issues in paperback a number of the books which it has available in hardbound editions, under the imprint of Phoenix Books. David M. Potter's **PEOPLE OF PLENTY** (\$1.35) is a demonstration of the effects of economic abundance on the American character. An elaborate



A GATE marks the entrance and the colophon of Princeton University Press. It was designed and cut on boxwood by Thomas Nason, in 1942.

study of *THE HISTORY OF NATURE* by C. F. von Weizsäcker (\$1.25) coordinates physics, the nature of the universe, and philosophy. The Greece of the heroes and of the sacred games was celebrated by Pindar in his odes. Richard Lattimore has given us in *THE ODES OF PINDAR* (Phoenix, \$1.25) pithy translations like:

And the winner the rest of his lifetime  
keeps happiness beside him sweeter than honey  
  
as far as the games go; but the good that stays by day and  
abides with him  
is best that can come to a man.

Marjorie Grene's *INTRODUCTION TO EXISTENTIALISM* (\$1.25) is no timorous approach to the much-maligned subject of existentialism. For the existentialist, "man makes himself." And every man's tragedy, like Hamlet's lies in the odds against him and in the action he takes to right them. Exposing inadequacies in the thought of its five leading thinkers—Sartre, Heidegger, Kierkegaard, Marcel, and Jaspers, Miss Grene sees in existentialism's values only the new expression of an old despair. Very persuasively, she argues that "Once we have faced our freedom and have seen the absurd necessity of our claim to be more than things, once we have granted that 'man is unjustifiable,' we cannot consciously and willingly turn to self-deception for our escape."

*ALFRED THE GREAT: THE KING AND HIS ENGLAND*, by Eleanor Shipley Duckett (Phoenix, \$1.35) is the latest work of a noted scholar of the early Middle Ages and is impeccable history as well as good literature. There are no imagined conversations or events, and no guesses, surmises, or myths that are not called by their right names. Professor Duckett's style has the clean, strong flavor of a good translation from the Anglo-Saxon, yet this is not contrived, but seems to flow naturally from her immersion in the literature of the period. She clearly shows that this king, who has been called "too good to be true," indeed deserves his Victorian embellishment, "The Great." A word should be said for Sue Allen's handsome design for the cover, as well as for the four splendid and useful maps, and for the excellent typographical design.

Princeton University Press paperbacks come not addressed to the "Book Review Editor" but to the "Literary Editor," an indication of the contents. Harley Granville-Barker's erudite study of the broody Moor in *PREFACE TO OTHELLO* (\$1.50) is an excursion into the motives of the playwright and his protagonist, into dramaturgy. This is aimed for the liturgical literary audi-

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NEW YORK, MAY 18, 1928.

**[PRICE  
3 CENTS]**

**Vol. II**

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**Pawnee Bill's Double:** or, **THE GREAT SCOUT'S  
Best Trail.**  
**By PAUL BRADDON.**



Illustration from *Pawnee Bill, a Biography of Major Gordon W. Lillie*, by Glenn Shirley. University of New Mexico Press, 1958.

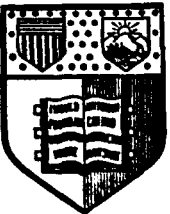
ence, a jealous confirmation that the critic may decide such matters as "Was Othello Black?" and "Was He a Christian?"

**FEARFUL SYMMETRY** by Northrop Frye (\$2.95) is a study of that crystallized genius, William Blake. Six of William Blake's own engravings make possible a visualization of Blake's apocalyptic view of the universe while Frye discusses Blake's theory of knowledge, religion, life and art; the complicated symbolism of his verse; his relation to the English literature of his day; the riddles and the responses Blake wrote in his "Prophecies."

**Galaxy Books** are the prudent paperbounds issued by Oxford University Press. They are comprised of "standard" works, such as C. S. Lewis' **THE ALLEGORY OF LOVE** (\$2.25), which discusses the code of courtly love and the rise of the allegorical method in literature. Lewis pays special tribute to *The Romance of the Rose* and *The Faerie Queene*, and to Chaucer, Gower, and Thomas Usk.

There are three recent paperback items which deal with the coalescence of the United States. These include **THE AMERICAN REVOLUTION: A CONSTITUTIONAL INTERPRETATION**, by Charles Howard McIlwain, published by Great Seal Books, a division of Cornell University Press, (\$1.75). A reissue of the 1923 Pulitzer Prizewinner (the last fact curiously goes unmentioned), this book is an original and scholarly argument intended to show that "there was a bona fide constitutional issue which preceded the American Revolution, and from which it in part resulted. . . ." Professor McIlwain argues, with considerable skill and logic, that the trouble between England and her American colonies began as a struggle between two conflicting views of the British Constitution, and then became a civil war, well before it could lay claim to the title of Revolution. Certainly it is true that the Revolution was preceded by a disagreement, not economic or social, but strictly of principle and theory, between certain advanced colonial leaders and the British Parliament, "the result of two varying and inconsistent interpretations of the same set of precedents."

**THE FEDERAL CONVENTION AND THE FORMATION OF THE UNION OF THE AMERICAN STATES**, edited by Winton U. Solberg, is from Liberal Arts Press as No. 19 in the American Heritage Series (\$1.75). Narrowly, the editor's



UNDER A SHIELD AND A SUN, an open book proclaims the motto of the founder of Cornell University: "I would found an institution where any person can find instruction in any study." This has been adopted by the Cornell University Press as its coat of arms.

purpose has been to make available the heart of Madison's Notes of Debate, thereby illustrating the role of the Federal Convention of 1787 in the formation of the American Constitution. But more broadly, he has, in his lengthy introduction, given a perspective into Western constitutional history, of which the Convention was one key event. This book is intelligently and logically put together, and is basic to any serious study of the Constitution.

**POLITICAL IDEAS OF THE AMERICAN REVOLUTION**, by Randolph G. Adams, with a New Commentary by Merrill Jensen, published in a third edition by Barnes & Noble, Inc. (\$1.50) is the first book ever devoted to this subject, and is in some ways still unique. Although it is something of a companion volume to McIlwain, Adams' approach and theme make for very different general results. In the author's view, this work is "first of all . . . a contribution to international law, . . . secondly it is a chapter in British imperial history, and . . . lastly it is a fragment of the history of the United States." The original edition of 1922 was the first publication of the Trinity College Press (later Duke University Press).

Doubleday and Company's series of paperback items (mainly religious and philosophical) is known as Image Books. We've seen them on serve-yourself racks in Catholic churches. Hilaire Belloc's **CHARACTERS OF THE REFORMATION** (\$.85) is one of the more valuable titles. In a series of biographical sketches of some of the major historical figures of the sixteenth and seventeenth centuries, Mr. Belloc develops his thesis that the Protestant Reformation was the greatest disaster that befell mankind. Perhaps the most stunning argument of the book has to do with Anne Boleyn, who combines in the author's mind the dubious talents of Rahab, Svengali, and the Whore of Babylon. Mr. Belloc's reasoning goes something like this: If Anne had not tantalized Henry VIII, the latter would not have broken with Rome; if Henry had not broken with Rome, England would have remained Catholic; if England had remained Catholic, the Protestant Reformation would have failed; if the Protestant Reformation had failed, civilization would have been saved.

Voyages Press, of New York, is one of the most distinguished publishers of poetry in paperback format. In **HERODIAS**, by Stéphane Mallarmé (\$1.50), Mallarmé's French text is interleaved with Clark Mills' straightforward free verse translation of the poetic dialogue between an old servant and an introspective girl, Herodias. An elegant decadence, where "old lions drag like tawny centuries," and Herodias' mirror is a "Cold pool, frozen with ennui in the frame." The effective Voyages format utilizes Gauguin's portrait of Mallarmé as a frontis.

In the bargain category is Houghton Mifflin Company's series of paperbounds for college use. They sent us Stephen E. Whicher's edition of *SELECTIONS FROM RALPH WALDO EMERSON* (\$1.15). As Whicher cogently points out in his introduction, "Emerson is one of America's best known authors and one of the least known." Difficult as it is to really get to know Emerson, however, Whicher has produced an admirable approximation to the essential Emerson. Not all of his works are represented: "English Traits" and "Representative Men" are omitted, for example. But, Whicher has done justice to the Journals and the Letters, so that his Emerson is seen in bolder relief and as more of a developing personality than is the Emerson of most other anthologists. The stimulating Introduction deals with Emerson's method, thought, and reputation. The bulk of the volume contains a chronological survey of significant journal entries, letters, and essays, categorized into "periods," each period introduced by means of relevant biographical data. A brief selection of verse and copious critical notes completes this fine, sensitively edited book.

Rinehart & Company's series of paperbounds for college use are distinguished by solid colors—watermelon red, blue, lime green, or yellow—with the titles in a flowing black script. Each is usually edited or has an introduction by an outstanding contemporary scholar. *SIR GAWAIN AND THE GREEN KNIGHT* (\$.95), Jonathan Swift's *SELECTED PROSE AND POETRY* (\$.95), James Fenimore Cooper's *THE PIONEERS*, intr. by Leon Howard (\$1.25); and *VICTORIAN POETRY: CLOUGH TO KIPLING*, are recent titles.

An anthology of *SELECTED AMERICAN PROSE, 1841-1900* (\$.95) presents prose of Howells, James, and others, and an introduction by Wallace Stegner which gives one definition of realism and makes a useful distinction between a writer's "realism of method" and his "realism of intention."

Also from Rinehart's library is *MASTERPIECES OF THE SPANISH GOLDEN AGE*, edited by Angel Flores (\$1.45). Professor Flores' excellent introduction to the history and culture of sixteenth- and seventeenth-century Spain prepares the reader for a fine sampling of Spanish "Golden Age" literature: the anonymous "Abencerraje" and "Lazarillo de Tormes," Quevedo's "Don Pablos the Sharper," Lope de Vega's "Fuente Ovejuna," Tirso de Molina's "The Trickster of Seville," and Calderon's "The Great Theater of the World." Cervantes and Gongora are missing, but otherwise there seems little to complain about. The anthology succeeds in evoking the grandeur, tragedy, disillusionment and compensatory mechanisms of the Spanish Empire in its period of decline. The emphasis is on the story of the *pícaro*, but there are overtones of medieval chivalry and theology, all working well to produce a startling image of an ancient outpost of Old World culture.



A Rinehart revision of a 1952 Rinehart Edition is Samuel Johnson's *RASSELAS, POEMS AND SELECTED PROSE*, ed. by Bertrand H. Bronson (\$1.25). It becomes the most nearly complete inexpensive collection of his works with the addition of *Rasselas* to representative samples of his other writings: *Letters, Prayers and Meditations, Poetry*, essays from the *Rambler*, the *Adventurer*, and the *Idler*, Shakespearian criticism, and *Lives of the Poets*. The brief introduction presents Johnson as a man "who, in a time (like our own) of rapidly shifting values, strove never to lose sight of fundamentals." Although this is not a "scholarly" edition, there are a chronological table of Johnson's life, a selective bibliography, and notes.

Beacon Press is issuing a number of eclectic scholarly items, including such works as Otto Gierke's *POLITICAL THEORIES OF THE MIDDLE AGES* (\$1.95) translated by Frederic William Maitland. With Germanic tread, Geirke sets forth the evolution of political theory, the ideas of monarchy, popular sovereignty, the personality of the Church and State, the relation of the State to Law, and the Beginnings of the Modern State. Broken letters—of which there are many since the original plates apparently were used—hamper the reading.

Melville J. Herskovits' *THE MYTH OF THE NEGRO PAST* is another Beacon reprint, updated by a new preface. African carry-overs are traced in American slavery through acculturation, into contemporary secular and religious life, into manifestations of language and art, proving the tenacity of a determinist culture. Gray worn-out type, again from original plates, diminishes the attractiveness of this volume.

A well-known scholar in the field of Hebraic literature, Theodore H. Gaster, has assembled in *THE OLDEST STORIES IN THE WORLD* (Beacon, \$1.95) a series of recently deciphered Anaanite, Assyrian, Hittite and Babylonian folk tales and legends which predate the works of Homer, the Bible and Indian epic poems. A foreword acquaints the reader with the manner in which the cunieform tablets bearing the stories were recovered, deciphered, and interpreted.

E. P. Dutton & Co. has a line of Dutton Everyman Paperbooks, which range in price from \$.95 up. Such pontifical books as Cardinal Newman's *THE SCOPE AND NATURE OF UNIVERSITY EDUCATION* (\$1.25) which conceives of the ideal university as the place where the undergraduate should come to possess a mind both thoroughly educated and thoroughly religious, are balanced by such selections as *CONVERSATIONS WITH CASALS* (J. Ma. Corredor, \$1.35), the incomparable Pablo's opinions on music and politics, his memories of his Catalan childhood and the awakening and development of his musical spirit. A hilarious travesty on the tapestry of English history

is 1066 AND ALL THAT by W. C. Sellar & R. J. Yeatman (\$.95). Immensely quotable are passages like "Henry (II) died of despair on receiving news that his sons were all revolting" and "Williamammary for some reason was known as The Orange in their own country of Holland, and were popular as King of England because the people naturally believed it was descended from Nell Glyn."

MEMOIRS OF THE CRUSADES (DEP, \$1.35) by Villehardouin De Joinville, as translated by Sir Frank T. Marzials, chronicles the Fourth and Seventh Crusades. The writing is stilted, as might be expected from the pen of an old soldier stiff in the joints, but something of the saturnine grace of the twelfth and thirteenth centuries shines through.

YEATS—THE MAN AND THE MASKS by Richard Ellmann is another Dutton book well worth its \$1.55. The fear of senile decay, the love for Maud Gonne (the world's most "beautiful ruin"), the arrogance, the Celtic, the occult, and the Byzantine, are managed beautifully by the author.

Marchette Chute's GEOFFREY CHAUCER OF ENGLAND (DEP, \$1.55) is perhaps the most lively account of the author of *Canterbury Tales*. Arthur Symons' THE SYMBOLIST MOVEMENT IN LITERATURE, first published in 1899, was the first book in English to analyze the theory and practice of the French symbolists—Mallarmé, de Nerval, Verlaine, Rimbaud, Laforgue—and served to introduce these writers to English and American readers.

THE MANILA GALLEON by William Lytle Schurz (\$1.75) is the "romantic history of the Spanish galleons trading between Manila and Acapulco." I first read chapters in early issues of the *Southwestern Historical Quarterly*, where they gleamed like silver ingots. Solidly written, there are still romantic and shivering promises of shipwrecks and cannibalism and buccaneers.

The Everyman edition of INDIAN SUMMER by William Dean Howells (\$1.35) includes the perceptive introduction by William M. Gibson that appeared in the 1951 hard-cover edition. Gibson successfully deals with the problems of the novel and considers the book and its author in their relationship to the main stream of American literature at the end of the nineteenth century. Also included in this edition is an introductory bibliography of Howells that lists selected separate works and representative secondary material.

Meridian Books are usually mammoth things—in keeping with the subject matter. THE ORIGINS OF TOTALITARIANISM, by Hannah Arendt (\$1.95) synthesizes revolution, anti-Semitism, ideology and terror, and the recent Hungarian Revolution. THE PHILOSOPHY OF SPINOZA, by Harry Austryn Wolfson (\$1.95) applies the historic-critical method to Spinoza's Ethics. GODS AND HEROES OF THE GREEKS, by H. J. Rose (\$1.35) is an abbreviated

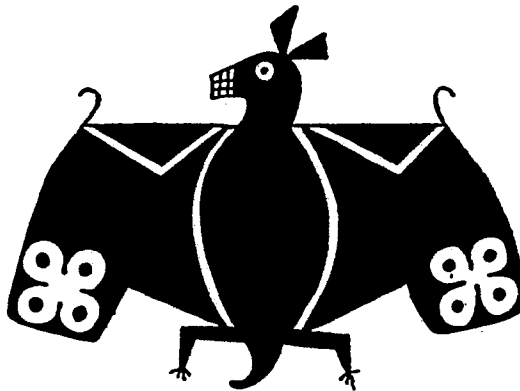
version of the *HANDBOOK OF GREEK MYTHOLOGY*, forming a compact, readable introduction to the tales of ancient Greece intended for students, for those only casually interested in the subject, or for those who do not wish to wade through a welter of scholarly material. Rose divides his subject matter into myths, sagas, and märchen or folk tales, concluding with a discussion of their subsequent developments in later Classical times.

Travelers to New York City should certainly take along Kate Simon's uncommon guidebook to *NEW YORK PLACES AND PLEASURES* (Meridian, \$1.95), which is an explicit Circe voice to the Big City.

Charles Williams' study of *WITCHCRAFT* (\$1.45) is the background of that "original and helpless corruption" which lent gloom to the Dark Ages and sulphur to Salem. "No one will derive any knowledge of initiation from this book," says the author, "if he wishes to meet 'the tall, black man' or to find the proper method of using the Reversed Pentagram, he must rely on his own heart, which will, no doubt, be one way or other sufficient."

Books of cultural and literary importance, candid examinations of the American way of life, comprise the publishing province of Doubleday Anchor Books. Henry A. Kissinger's *NUCLEAR WEAPONS AND FOREIGN POLICY* (\$.95) presents the interrelationships between force and diplomacy, the interlocking of nuclear technology and military strategy with political questions. Dissecting such terms as "massive retaliation," "thermonuclear devastation," Kissinger reluctantly smashes the myth that someday "peace will break out," and establishes a need for doctrine—subscribe or (probably) be clobbered. *THE NATURE OF PREJUDICE*, by Gordon W. Allport (\$1.45) is an analysis of factors which imprison the "scapegoat," with a summation of "What is the Problem" and "What Is Normal" and "Ought There To Be a Law?"

Lewis Galantière has edited, translated, and written an introduction to *THE GONCOURT JOURNALS, 1851-1870*, (\$1.25) notes by those perceptive dilettantes of the nineteenth century in Paris, Edmond and Jules de Gon-



court. Delicious hors d'oeuvres of gossip concerning Flaubert, Daudet, Balzac, Hugo, Maupassant, Zola, and a host of others, for the gourmets of literature who delight in epigrams and epithetical opinions.

D. B. Wyndham Lewis has given us a documented survey of FRANÇOIS VILLON, robber and lyric poet, his life and work (\$1.45). Walter Jackson Bate's PREFACES TO CRITICISM (\$.95) summarizes the Classical tradition and the development of modern criticism. It is a trip through the theories of such critics as Aristotle, Dryden, Johnson, Coleridge, Arnold and Eliot, based on the premise that "the first justification of criticism is to bring into focus and emphasize the function of the arts and of the humanities in general."

The recent spurt of interest in George Washington Cable accounts for the reissue of his CREOLES AND CAJUNS, Stories of Old Louisiana (Double-day Anchor Original, \$1.45), edited by Arlin Turner. The section on Creole Slave Songs, complete with music and patois, is valuable in its own terms as folk literature.

From the New American Library of World Literature we have the Signet books and Mentor books. On the Signet racks are James Baldwin's controversial novel of homosexuality, GIOVANNI'S ROOM (\$.35); GRANDFATHER STORIES, by Samuel Hopkins Adams (\$.50), twenty-four amusing tales dealing chiefly with the New York Erie Canal in its heyday; REMEMBER ME TO GOD, by Myron S. Kaufman (\$.75), a powerful novel of Jewish life, filled with the "comedy, cruelty, yearning and ecstasy of youth"; A DICTIONARY OF AMERICAN-ENGLISH USAGE, by Margaret Nicholson (\$.75), based on Fowler's great original, *Modern English Usage*. This retains the practical good sense and wise learning of the original but dispenses with Fowler's crustiness and occasionally with his pithiness. There is an amusing error on the title page, which states that the edition is "Bared on Fowler's *Modern English Usage*." Those who would like to read James Jones' SOME CAME RUNNING but who lacked patience to read all 1266 pages of the original will be adequately served by this abridgement which cuts out half the book (\$.75). This is a profoundly perceptive, although bitter, story about the intellectual and emotional struggles of an adult amateur writer, and other people in a small midwestern town. The abridgement removes mostly expendable material and improves unity. But the personalities of the characters are altered and several excellent scenes in the original novel are weakened.

The Mentor items include Marchette Chute's STORIES FROM SHAKESPEARE (\$.75). For those who desire a "pony" to Shakespeare, Miss Chute's bookful of summaries may be worth the money. But why ride a burro when you can

fly on Pegasus for the same price? In *THE AZTEC: MAN AND TRIBE*, Victor W. Von Hagen presents an archaeological history of the Aztecs, examining all phases of their culture and reducing it into well-defined and descriptive accounts. (\$.50).

*BERTRAND RUSSELL'S BEST* (Mentor, \$.50) presents a popular collection of short quotations from the philosopher's works, arranged under "Psychology," "Religion," "Sex and Marriage," "Education," "Politics," and "Ethics." The collection, edited by a competent scholar (Robert E. Egner) and read and corrected by Russell himself, emphasizes Russell's wit.

Among the best of the Mentor Books was the recently discontinued series of fifteen anthologies under the title *NEW WORLD WRITING* (recent numbers, \$.75), which presented fresh and original contemporary stories, poetry, essays, drama, and some drawings. Eminently successful bedside and commuter reading, these fat paperbacks gave us new and old literary faces from here and abroad. *N.W.R. No. 14*, for instance, offers 96 pages of "New Writing from Latin America," introduced by Jose Vázques-Amaral and Francisco Aguilera. Several of the poems are effectively translated by William Carlos Williams. None of the *N.W.R.* selections may be called "typical," but among the engaging potpourri are Kenneth Rexroth's "Some Thoughts on Jazz as Music," and Robert Graves guest-editing for "Seven Poets," whom he says "all are primarily concerned with the theme of love." The entire shelf of *New World Writing* is worth owning for its basic content, author biographies, and useful and pleasant editorial paraphernalia.

The whole New American Library line deserves scrutiny for one's own interests, ranging from Rachel Carson's *EDGE OF THE SEA*, through *THE RELIGIONS OF MAN*, Mentor classics like *THE OEDIPUS PLAYS OF SOPHOCLES*, Henry Taylor's "blueprint for Success"—*THE STATESMAN*, and such Signet books as *THE BROTHERS KARAMAZOV*, edited by Manuel Komroff, and *SILENT GROW THE GUNS*, MacKinlay Kantor's surprising stories of the Civil War.

G. P. Putnam's Sons recently entered the quality paperback publishing field with the "Capricorn" imprint featuring book titles culled from questionnaires in which college teachers suggested needed reprints. Among the first titles to be issued are *THE NOTEBOOKS OF MALTE LAURIDS BRIGGE*, by Rainer Maria Rilke, translated by M. D. Herter Norton; *MODES OF THOUGHT*, by Alfred North Whitehead; *ART AS EXPERIENCE* by John Dewey, *ART* by Bloomsburian Clive Bell, *WHAT LIFE SHOULD MEAN TO YOU* by Alfred Adler, and *THE DEGRADATION OF THE DEMOCRATIC DOGMA* by an educated Henry Adams.

We suggest the *Diaries of Marie Bashkirtseff* to the Capricorn editors,

the journals of a young Polish painter and the growth of her creativity from the age of thirteen. Bashkirtseff influenced Katherine Mansfield and others.

Washington Square Press, Inc., seems to be a newcomer to the paperback field. Their venture of issuing Edna St. Vincent Millay's *COLLECTED LYRICS* (\$.50) and the *COLLECTED SONNETS* (\$.50) is to be commended.

Compass Books' *THE WILDER SHORES OF LOVE* by Lesley Blanch (\$1.45) presents four women who went East ". . . to gain liberation from the grayness of Europe." Aimée Dubucq de Rivery, Isabelle Everhardt, Jane Digby and Isabel Burton are studied in winsome essays as women who "used love as a means of individual expression, of liberation and fulfillment within that radiant periphery."

Alfred A. Knopf, Inc., issues Vintage Books. Recent titles include Paul H. Buck's *THE ROAD TO REUNION* (\$1.25), an account of the way the Civil War brought an end to Southern dreams of independence; *THE FOLDED LEAF* by William Maxwell (\$1.25), a novel of adolescents and adolescence with something of the realism of the Italian writers, and *THE MENTALITY OF APES* by Wolfgang Köhler (\$1.25) which has a fascinating index. Typical entries clue the contents—"Mouse: chimpanzee's dislike of." Arthur Mize-ner's *THE FAR SIDE OF PARADISE* is the biography of F. Scott Fitzgerald, the playboy "beat" writer of the frazzled twenties, whose disintegration is painfully told, so the reader is moved to echo Dorothy Parker's quote from *The Great Gatsby*, "The poor son of a bitch."

Vintage Books have a flare for ferreting out high-caliber items like D. H. Lawrence's *ST. MAWR AND THE MAN WHO DIED* (\$.95), which came out in 1925, and Igor Stravinsky's *POETICS OF MUSIC*.

Dozens of publishers, small and large, have plunged into the paperback market and have opened opportunities for non-bestselling authors besides classic reprints. Each publisher seeks a particular breed of literature, and the variety of voices being heard is enormous. Hawk's Well Press, New York, has a small list, under a dollar, printed in Barcelona, including the collection of Jewish folklore—*TALES OF SPIRITS & DEMONS*, by Martin Buber; Seymour Faust's poems, *THE LOVELY QUARRY*, with a charming cover drawing by Phillis Cohen; William Eastlake's play, *OUTHOUSE ON THE MOON*; and *FIGHTING TERMS*, poems by Thom Gunn, an Englishman converted to America.

Jonathan Williams, Publisher, of Asheville, North Carolina, is a young man with a fine sense of typographic design, and a penchant for the more avant-garde writers. *WILL WEST* (\$2.75), by Paul C. Metcalf, "great-grandson of Herman Melville," is a personal narrative in a variety of literary patterns, from poetry through rhythmic prose. Golden Mountain Press, San

Francisco, has issued *WHY I LIVE ON THE MOUNTAIN* (\$.25), thirty Chinese poems translated by C. H. Kwôck and Vincent McHugh, "the first of a series intended to range through the broad and various landscape of Chinese poetry."

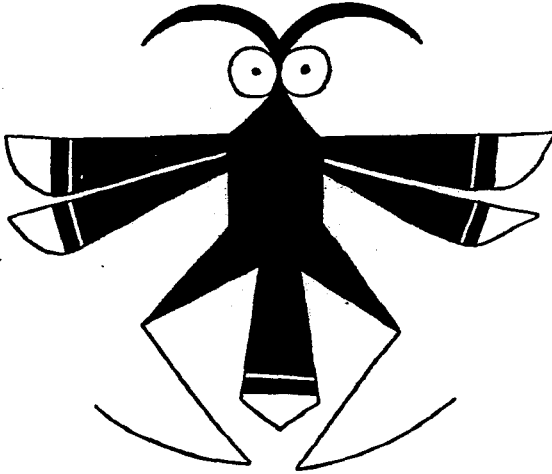
Students, teachers, and re-readers are grateful for the flood of Bantam Classics (Bantam Books, New York), at thirty-five to seventy-five cents, which place the seal of the proud rooster on "the whole span of living literature." From such social portraits as Anthony Trollope's *BARCHESTER TOWERS* ("the crack in the Victorian facade"), and Jane Austen's *EMMA*, through *CRIME AND PUNISHMENT*, *GREEN MANSIONS*, *PENGUIN ISLAND*, and Balzac's *EUGÉNIE GRANDET*, the Bantams range through adventure novels—*TYPEE*, *LORD JIM*, and *TWO YEARS BEFORE THE MAST*, and on to *SISTER CARRIE*, *THE OCTOPUS*, and Nathaneal West's *THE DAY OF THE LOCUST* ("the cracked mirror of Hollywood"). There are two by Aldous Huxley—*CROME YELLOW* and *BRAVE NEW WORLD*, and a couple by Steinbeck—*CANNERY ROW* and *OF MICE AND MEN*, to name a few. In other fields we find Bertrand Russell's *MARRIAGE AND MORALS*, Frederick Lewis Allen on the 'Twenties of *ONLY YESTERDAY*, and Arthur Miller's exploration of conformity, *THE CRUCIBLE*. In biography are Francis Hackett's *HENRY THE EIGHTH* and Ludwig's *CLEOPATRA*. Drama themes are collected in four: *FOUR GREAT PLAYS BY CHEKOV*, and the like for *IBSEN*, plus *FOUR GREAT COMEDIES* of the Restoration and 18th Century, two by Congreve and two by Sheridan. There is room only for the nose of *CYRANO DE BERGERAC* in one volume.

A special prize in the Bantam nest is *THE COMPLETE SHORT STORIES OF MARK TWAIN*, sixty items, none of them inclement, from "A Horse's Tale," with bars of military music, to "The Diary of Adam and Eve," which makes interesting comparison with John Erskine's novel on the same theme. *FIFTY GREAT SHORT STORIES* is a splendid selection by Milton Crane, who says that short stories convey "the sudden unforgettable revelation of character; the vision of the world through another's eyes; the glimpse of truth; the capture of a moment of time."

Most paperback publishers are to be congratulated on the uniformly attractive handling of uniform cover themes. Good exterior design, good color, and good color printing make the paperback bookstore as tantalizing as a box of assorted chocolates. But few publishers—with notable exceptions—give the same consideration to the interior of the book, and as these eyes grow older and wearier, it seems increasingly true that "People don't talk as loud as they used to," and books are being printed in smaller and smaller type.

In compiling this section of reviews of paperbound books, I had the assistance of the following readers: Blair Boyd, Roland Dickey, Morris Freedman, R. E. Amacher, Samuel Bellman, Edward Lueders, Margaret Weinrod, James Mealy, Alice Westreich, John Longhurst, Marjorie Ryan, Tim Weeks, Marvin Roswadowsky.

—RAMONA MAHER MARTINEZ



## HARDBOUND BOOKS

**SMOLLETT AND THE SCOTTISH SCHOOL:** *Studies in Eighteenth-Century Thought*, by M. A. Goldberg. Albuquerque: University of New Mexico Press, 1959. 205 pp. \$3.00.

Professor Goldberg's *Smollett and the Scottish School* is a lucidly-written, fresh, and entirely original analysis of Smollett's five novels in the light of certain social and political ideas dominant in eighteenth-century intellectual development. As David Daiches pointed out in his critical study of Robert Burns (1950), in the eighteenth century Scotland experienced a renaissance that constituted the high point of her whole

cultural history, for then she possessed first-rate men in such areas as history, philosophy, logic, rhetoric, theology, economics, and literature. The Scottish Common-Sense School, a major factor in the renaissance, included among its more than forty distinguished thinkers and writers such men as Lord Kames, Francis Hutcheson, David Hume, Hugh Blair, Adam Ferguson, William Robertson, Alexander Carlyle, and Adam Smith. Though it would not be accurate to consider Smollett a member of this school, he was closely in touch with it and was even associated with it. After his eighteenth year he lived in England, except for occasional visits home to Scotland and



his travels on the Continent, but he corresponded with his good friend Alexander Carlyle and had dealings with others of the School. Dr. Goldberg demonstrates convincingly that Smollett's novels can be better read and better understood with such pairs of apparent opposites in mind as reason and passion in *Roderick Random*, imagination and judgment in *Peregrine Pickle*, art and nature in *Ferdinand Count Fathom*, social-love and self-love in *Sir Launcelot Greaves*, and primitivism and progress in *Humphry Clinker*.

Mr. Goldberg does not, of course, contend that Smollett wrote these books as didactic exemplifications of the position of members of the Common-Sense School, namely that both parts of each of these antitheses, and others, are equally present and universal in man and therefore in society, but that neither part can be shown to be "superior" to the other and that the "contradictions," since they are not real but only apparent, are not to be "resolved" but accepted and understood as part of man's dual nature. Smollett was a novelist, not a philosopher nor a polemicist, and these books are not tracts, but novels. Nevertheless, they are more than just stories; they are complex books which have not been very clearly understood or judged. Among other things that Goldberg's book accomplishes is the brief but clear enumeration of past critical opinions of Smollett, often somewhat ironically

in "pairs of opposites"; and he shows why this criticism, even when valid, is incomplete and explains Smollett only partially.

A strange fact of British literary history is that all competent judges, so far as this reviewer is aware, regard Smollett as a major novelist, one of the great eighteenth-century shapers of prose fiction, a founding father; nevertheless his reputation today rests mainly on one book, *The Expedition of Humphry Clinker*, a letter novel and Smollett's last, published in 1771, the year of the author's death, with *Roderick Random*, his first novel, 1748, a troubled second favorite. Smollett had great influence: he anticipated the whole Gothic school of fiction and brought new material, notably the sea and the British Navy, into fiction, and in Charles Dickens found his greatest disciple. But both the man and his books have been controversial from the beginning. His contemporaries both attacked and praised him; they fought him and they fought about him, and by and large critics have been doing much the same ever since. To this reviewer it seems no longer necessary to continue doing so, however, for Mr. Goldberg's enlightening analyses of the plots, structures—rather brief but very helpful discussions pretty well settling the charge against Smollett of "formlessness"—and ideas in the five novels make it possible to read the books with understanding as well as

enjoyment. The two or three usually acclaimed as "best" will take on added importance and the "inferior" ones will be seen to have meaning hitherto overlooked.

—C. V. WICKER

*Professor of English at UNM, C. V. Wicker is the author of Edward Young and the Fear of Death.*

**THE ART OF THE ANCIENT MAYA**, essays by Alfred Kidder II and Carlos Samayoa Chinchilla. New York: Thomas Crowell Co., 1959. 124 pp. Illus. \$5.00.

This handsome volume presents to the American public a collection of fine and unusual examples of pre-Columbian Maya art. With the exception of five plates on Maya architecture, the material illustrated in this volume was assembled from various museums in order to circulate throughout the United States as the first large and representative exhibition of Maya art. Fifty specimens, representing the nucleus of the collection, came from the National Museum of Archaeology of the Republic of Guatemala. The special permission necessary for this material to leave its country of origin was graciously granted by the Guatemalan government. Upon its arrival in the U.S. the collection was supplemented by material from the University Museum of Philadelphia; the Peabody Museum of Harvard

University; the Middle American Research Institute of Tulane University; the Museum of Primitive Art of New York; Yale University Art Gallery; and several private collections. The collection was subsequently exhibited at the University Museum of Philadelphia; the Detroit Institute of Arts; the William Rockwell Nelson Gallery of Art, Kansas City; the de Young Memorial Museum, San Francisco; and the Los Angeles County Museum. The volume under review was financed by the Eleanor Clay Ford Fund in cooperation with the Detroit Institute of Arts.

The two essays in this volume are written by Alfred Kidder II, Assistant Director of the University Museum, Philadelphia, and Carlos Samayoa Chinchilla, Director of the Institute of Anthropology and History of Guatemala. Kidder's essay introduces the reader to a history of Maya civilization from the Pre-Classic period to the Spanish Conquest (2000 B.C. to A.D. 1520). The essay by Chinchilla, on the other hand, departs from the chronological and cultural setting to discuss Maya art from a topical viewpoint incorporating such related aspects as ceramics, design motifs, sculpture, murals, architecture, feather work, metallurgy, dance and music. The essays are followed by the illustrative material which is divided according to the five Maya subculture areas; the Highlands, the southern Lowlands, the

northern Lowlands, the Atlantic slope, and the Pacific slope. This method of presentation is to be highly commended since it represents a pleasant departure from the usual uninformative breakdown into sculpture, ceramics, metal objects, etc.

The lay reader will find the book easy and informative and will enjoy greatly the powerful and often ornate art of this outstanding civilization. He is also referred to a list of further readings. For the specialist the text contains a good although brief summary of Maya art and many hitherto unpublished specimens.

—STEPHAN F. BORHEGYI

Stephan F. Borhegyi is director of the Milwaukee Public Museum.

**DOG GHOSTS AND OTHER TEXAS NEGRO FOLK TALES**, by J. Mason Brewer. Austin: University of Texas Press, 1958. 128 pp. \$3.95.

**THE FAMILY SAGA AND OTHER PHASES OF AMERICAN FOLKLORE**, by Mody C. Boatright, Robert B. Downs, and John T. Flanagan. Urbana: University of Illinois Press, 1958. 69 pp. \$2.50.

Folktale collections by Mr. J. Mason Brewer are almost unique because they are the work of a Negro presented in Negro dialect. Mr. Chapman J. Milling devotes much of his foreword in *Dog Ghosts* to the



passing of dialect telling and recording of folk tales in national communications media. Dialect is little used today, even by comedians, because it singles out minorities by using one of their least valued characteristics. Mr. Milling feels that this tendency is both good and bad, but that the loss is greater than the gain. Mr. Brewer's work is unique also because not many Negroes are collecting Negro folklore today. He feels that the Negro folk heritage is significant as well as entertaining and that the dialect is an inseparable part of the narration. The stories themselves make a pretty good case for his contention. The stories would not have the flavor they have without the dialect; as a matter of fact, not more than a quarter of the sixty-three tales in the collection are distinctively Negro tales. At least half are known internationally, and another quarter are told by American whites as well as by Negroes. The reader's reaction to the stories will, however, be dependent upon his willingness to take

the time initially to get accustomed to the dialect. He will have to slow his reading, and he will have to puzzle over a few constructions before they become familiar.

The collection is divided into five parts: "Slavery and its Legacy," "Carefree Tales," "Tales of Animals and Ranch Life," "Religious Tales," and "Dog Ghosts and Other Spirits." The collection is a good one; Mr. Brewer has taken the tales from good informants, and he has presented them as they were told with little editorial change except to regularize the dialect. Informants, dates, and places are duly noted. Earlier collections by Mr. Brewer have appeared in *Publications of the Texas Folklore Society* (Vols. 10, 11, 21) and in a separate volume, *The Word on the Brazos*. *Dog Ghosts* is another valuable contribution of Negro folk materials.

*The Family Saga and Other Phases of American Folklore* consists of three essays that were originally three lectures of the Sixth Annual Windsor Lectures at the University of Illinois. They are "The Family Saga as Folklore" by Mody C. Boatright, "Apocryphal Biology: A Chapter in American Folklore" by Robert B. Downs, and "Folklore in American Literature" by John T. Flanagan. The essays are uneven in their originality and their usefulness. The first, by Mr. Boatright, has the most substance. The others, while competent and though they were undoubtedly

successful as lectures, make the transition from lecture to print less happily. Mr. Boatright has the habit of saying perceptive things in brief essays. I remember one, "The Nature of Myth," first published in *The Southwest Review* (1954); another was "The Western Bad Man as Hero" (*Publications of the Texas Folklore Society*, Vol. 29). In "The Family Saga as Folklore," he calls for greater recognition and appreciation of the folk elements in family stories that purport to be family history. I have been contending for years that many family reminiscences and items presented as family history are not history at all, but folktales; and I have been urging folklorists to investigate this realm with some care. While I take no credit at all for having started Mr. Boatright's investigation, I do take pleasure in his documentation of his thesis.

With quiet humor and persuasiveness, he shows the patterns that exist in clusters of family stories and the principles that operate in their use and continuing existence. He uses a number of stories from Texas, his home, to illustrate the patterns. I will mention two to indicate his approach. One group of tales explains why the first family member to settle in Texas left his former abode. If, for example, he left Louisiana just ahead of the law, the story told today must meet certain requirements: the crime must be inadvertent; or he must be the victim of mistaken suspicion.

But the deed, whatever it is, must not indicate a criminal mind. It must not be robbery, embezzlement, or murder with malice aforethought. If any of these were the real crime, then the family saga would have to make a substitution or remain silent.

A second group deals with a subject that is probably more universal than the G. T. T. (Gone to Texas story). These are the stories which explain why the family does not have a million dollars: the lost mine, the buried treasure that was recovered by somebody else, the missed opportunity to invest in oil land or an oil well, or the corner lot with unrealized possibilities. We have all heard some of these stories. What is fact and what is fiction—or folklore?

—ERNEST W. BAUGHMAN

Dr. Ernest Baughman is associate professor of English at UNM. He has been active for many years in the field of folklore.

**THE TIME OF THE PANTHER,**  
by Wesley Ford Davis. New York:  
Harper & Bros., 1958. 288 pp. \$3.95.

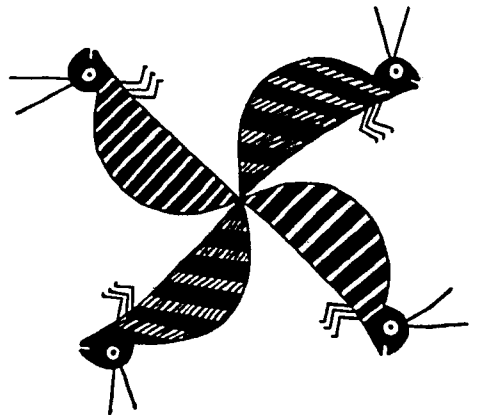
In Autumn of 1953, *New Mexico Quarterly* published a story by Wesley Ford Davis, "A Piney Woods Idyll." In 1958 came this story of Thomas Jackson Jarrad ripened into a novel, *The Time of the Panther*.

Tom Jarrad, aged fourteen, rambling through the backwoods of a south-central Florida lumber-camp town, makes inroads on awareness.

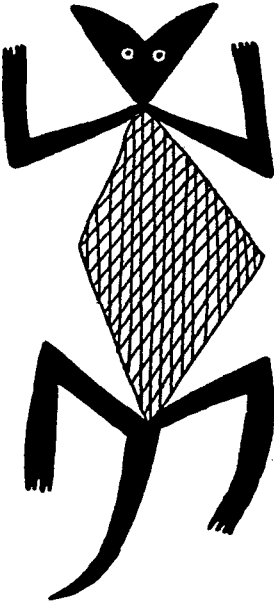
On the world—"It was like a panther crouched in the bushes just beyond the edge of the yard, ready to spring and put his teeth in your gullet if you got too close to the bushes." As yet, Tom is on the fringes of the time, but he will be ready when the beast in the jungle makes its pounce.

Recognizable characters occupy the novel. Older brother Jeff, who is something of a tomcatter, is fond of ribald negro blues; the itinerant capitalizing preacher "Brother" Mims and his "sister" Amie Lou, initiate their gentle swindles; and Tom's dead (or gone-away) mother is strongly outlined, tenderly seen. The least believable character is Tom's younger brother, Andrew, who, with his Barlow knife, scarcely escapes stereotype.

But Mr. Davis redeems himself with a seventh-day view of nature. Woodpeckers—the large ones known as Lord God woodpeckers—and the ivorybilled woodpeckers for which Tom Jarrad searches, are a part of the contemplative growth of the story. And within the sight of



Whitey's Bones, a spot in a clearing where a bleached cow skeleton perches in the fork of a big water oak, the hapless cow having been marooned there by floodwaters, Tom clearly reveals that a man is half his memories, whether or not he remembers them.



**13 DAYS TO GLORY**, The Siege of the Alamo, by Lon Tinkle. New York: McGraw-Hill Book Co., Inc., 1958. 256 pp. Illus. \$3.95.

A day-by-day account of the last days of the Alamo mission-fortress in San Antonio de Béxar up to the last explosive day of March 6, 1836. A popularized account of bayonets vs. bowie knives, *13 Days to Glory* stresses the gallantry of such Texas heroes as Bowie, Travis, and Davy Crockett. The book also brings into

focus the lesser-known figures of the Alamo, such as sentry Daniel William Cloud and woman survivor Mrs. Susanna Dickinson.

Recipient of a Texas Institute of Letters Award for the best book on Texas history, the book is honest (although it appears that Colonel Fannin's hesitation in moving troops from Goliad to the besieged Alamo has been glossed over) and carefully documented. Its usefulness would have been enhanced by a judicious index.

**THE RHODES READER**. Stories of Virgins, Villains, and Varmints by Eugene Manlove Rhodes. Selected by W. H. Hutchinson. Norman: University of Oklahoma Press, 1957. 316 pp. \$5.00.

This is a book which should appeal to many reading tastes: to those who prefer the short story as a form of literary art, to those who like good "Westerns," and to those who love New Mexico and its particular natural charm, folkways, and history.

Gene Rhodes has been long neglected by a public that devours any kind of Western literature, very little of which can compare with his writing. Bernard de Voto, in 1938, has said of Rhodes' stories, "They are the only body of fiction devoted to the cattle kingdom which is both true to it and written by an artist in prose." In 1954 he again stated that only Rhodes had "succeeded in mak-

ing first-rate fiction out of the cattle business," and the only two books he believed to be in a class with this writing were Owen Wister's *The Virginian* and Walter van Tilburg Clark's *The Oxbow Incident*. High praise indeed from the acknowledged master of Western non-fiction literature!

Vincent Starrett, who himself wrote the classic "whodunit," *The Thirteenth Juror*, in his *Books and Bipeds* has this to say of Rhodes, "His 'horse operas' are the Western story's nearest approach to Literature. . . . But don't confuse his tales with those of Zane Grey, B. M. Bower, Clarence E. Mulford, et al. —whose more ephemeral entertainments I am not for a moment disparaging. They simply didn't play in the same league as Rhodes, and neither did Owen Wister."

Mr. Hutchinson's introduction to this volume, from which it takes its title, is "worth the price of admission alone," as the side-show barkers of Rhodes' day would have said. It is an outstanding piece of literary criticism and reflects a tremendous amount of research along with a keen and unusually lucid analysis. His knowledge of American literature, both in book and magazine form, is encyclopaedic; and his tracing of the origin and development of the so-called "Western" is a reading adventure in itself. That the Western was sired by James Fenimore Cooper, Davy Crockett, Bret Harte,

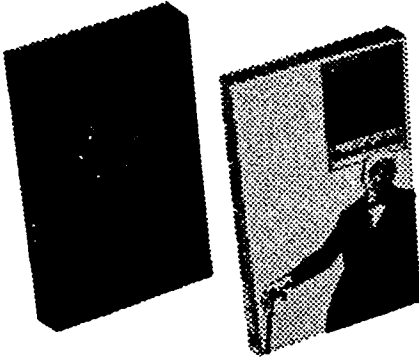
and Mark Twain, and nurtured by O. Henry, Jack London, Rex Beach, et al. is obvious; but the exposition of the descent is truly exciting. After reading this essay it is easy for one to understand the set "formula" for the standard Western and why it has such a widespread vogue in motion pictures, on TV, and in the sales of paperbacks. That Gene Rhodes worked within this formula and yet surmounted its limitations perhaps better than anyone else is a true measure of his genius; and yet he was one of the earliest writers in this field.

The University of Oklahoma Press is to be complimented upon giving the reading public a chance to read Rhodes' stories and not just references to them, for they are nearly unobtainable except to the avid and well-heeled collector. It is to be hoped this effort may inspire some of the paperback publishers to re-issue his many books and to collect in book form the stories which appeared only in magazines; and it would be a godsend if this publication were to have the influence it should have on the powers-that-be in Hollywood. Maybe New Mexico itself should sponsor a revival of Rhodes. Certainly no one loved and understood and appreciated its countryside and people so much as this man who came to live in it and adopt it as his very own when he was twelve years old, in 1881.

—ALEXANDER D. PARNIE

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