

Calvin University

Calvin Digital Commons

Dialogue

University Publications

9-1-1989

Dialogue

Staff and writers of Dialogue

Follow this and additional works at: <https://digitalcommons.calvin.edu/dialogue>

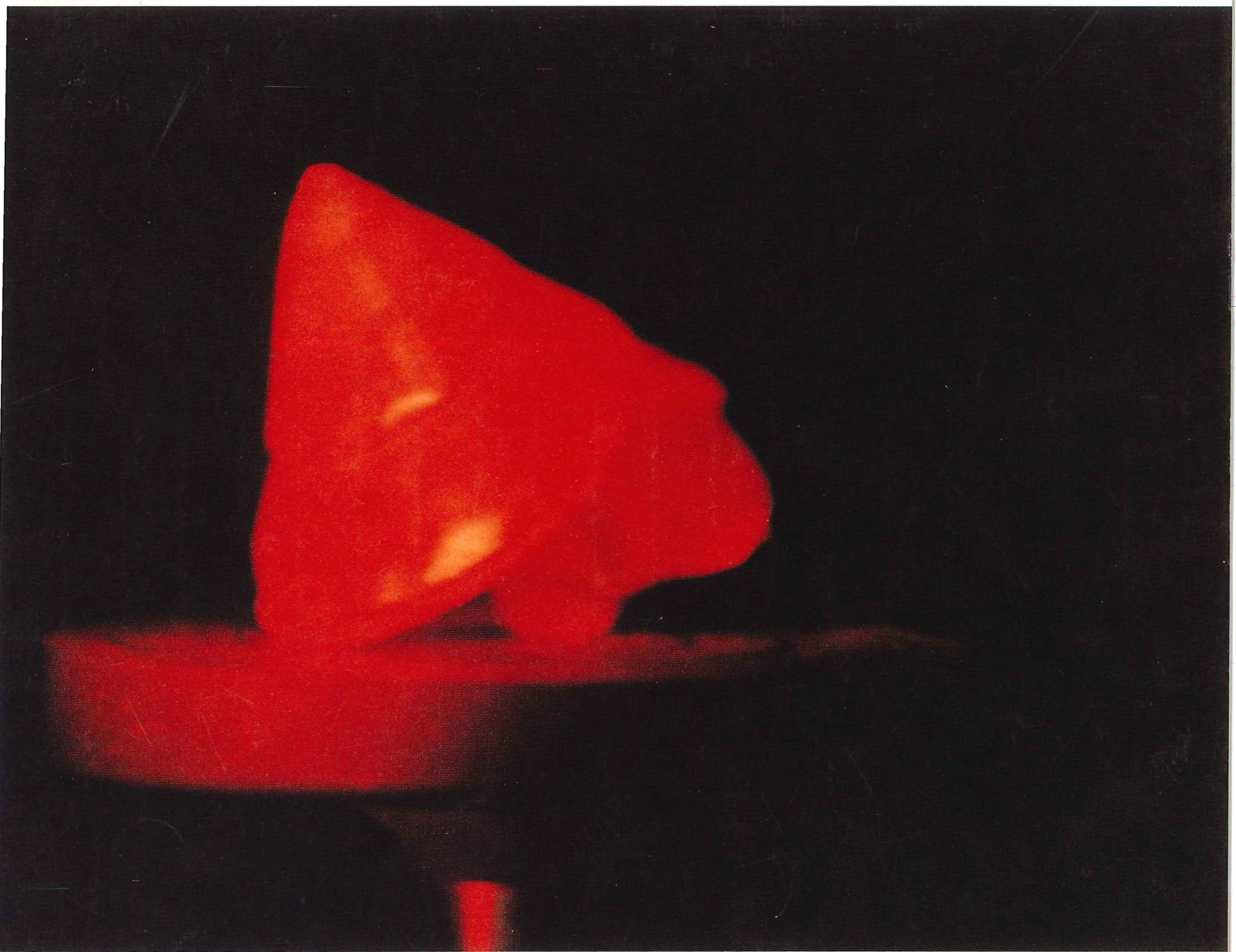
Recommended Citation

Staff and writers of Dialogue, "Dialogue" (1989). *Dialogue*. 128.
<https://digitalcommons.calvin.edu/dialogue/128>

This Book is brought to you for free and open access by the University Publications at Calvin Digital Commons. It has been accepted for inclusion in Dialogue by an authorized administrator of Calvin Digital Commons. For more information, please contact dbm9@calvin.edu.

D I A L O G U E

SEPTEMBER 1989



Holograms

In China this Summer

ABOUT THE COVER: Seashell and pedestal bathed in laser light. The shell, originally pearly-white, takes on a reddish hue from the photons emitted by helium and neon. See the cover feature about holograms on page twenty. Photo by Thomas Hegewald.



DIALOGUE

SEPTEMBER 1989

EDITORIAL	<i>H Gemmen</i>	4
"MYSTERY" (POEM)	<i>S Douma</i>	7
"FULL CIRCLE"	<i>J Brower</i>	8
"A VODOO SONG" (POEM)	<i>R Gritter</i>	10
CONTRIBUTORS GUIDELINES		12
"ANCIENT RHYTHM" (POEM)	<i>C Dyke</i>	13
PORTFOLIO (ARTWORK)	<i>A Ringnalda</i>	14
"WHEN READING POETRY" (POEM)	<i>R Gritter</i>	19
HOLOGRAMS (INTERVIEW)		20
IN CHINA THIS SUMMER	<i>L Herzberg</i>	26
"MEMORIES" (POEM)	<i>R Flietstra</i>	28
"DIARY OF A SIMPLE PASTOR" (POEM)	<i>P Holtrop</i>	29

Cultivating a Thinking Mind:

An Editorial

In a good mystery novel, it's not the murder itself that readers enjoy. Whether the murderer used a bookend in the library or a bar of soap in the lavatory to do in the victim is not, in itself, what readers savor. No. Rather, people read mysteries so they might participate in solving the crime, either by trying to identify the murderer before the main character does, or by tagging along and letting the sleuth do all the work.

I tend to do a little of both. This summer I read a few mystery novels, including an early work by Dorothy L Sayers, *Unnatural Death* (1927), PD James's novel, *An Unsuitable Job For A Woman* (1972), and the latest by Thomas Harris, *The Silence of the Lambs* (1988). While reading to uncover the murderer in each of the novels, I also began trying to discover how the novelist developed her (or his) story. What constitutes a well-crafted story? I attempted to answer this question without going to a how-to book for would-be mystery writers; I did not want to risk reducing the story to a formula. I wanted to probe the mystery story's technical structure to gain a higher appreciation for the genre, which was a good activity, I thought, for cultivating a thinking mind.

A good mystery novel, it seems, is not made up

merely of clues placed strategically throughout the book. The novelist doesn't allot one clue per chapter, to be logically tied together by the protagonist and presented to the reader in the last chapter. It's not so simple as this. Often the novelist begins by creating the characters and the crime scene, and then outlines key events and clues as they should appear. These elements come out of the personality of the characters. Readers would find it unfitting for a persnickety teetotaler to commit unpremeditated murder while drunk because such an action, though conceivable in real life, is unforgivable in the realm of the novel. Since personality determines behavior, a mystery novel is more a study of the minds and motives of its characters than it is an exercise in detached logic. A good mystery writer knows what makes characters "tick"; in other words, a good mystery writer understands human nature.

As the novelist probes the minds and motives of the characters, and as I probed the technical structure of the mystery novel, so also should we probe our lives. Although in the Reformed community we generally do not consider life to be an unsolvable mystery, each life does require the proper clues, and proper reflection on those clues, for it to make sense

and flourish. In effect, a student snatching bits of knowledge from the different disciplines, as is done at a liberal arts college, must do more than memorize historical events and scientific principles. Memorization might produce a high GPA, but, when taken alone, learning by rote doesn't assure students of understanding how scholastic trivia contributes to their personality and worldview. These clues must be weighed, turned over, and rearranged by the active mind, then meditated upon, before the student can understandingly fit them into his or her life-scheme.

A good mystery novel can't be reduced to a formula. If it could be, then it wouldn't be worth reading. The society we live in tends to classify life as the narrow time between birth and death, a senseless time to be filled, wasted, or killed, and it views the living as characters without purpose. If

we succumb to the "life is meaningless" mindset, which is easy to do in our busy lifestyles, then we turn ourselves over to a formula that denies us purpose and meaning, and we join the majority of society in thoughtless living.

We desire to live fully, but before we can do this we must prepare ourselves to live deeply. We need time for reflection, to think about our studies, our spirituality, and our social habits, to consider the past and its effect on the present, and to anticipate the future. Abiding by society's formula for thoughtless living provides no fulfillment. Rather, fulfillment comes from understanding ourselves and others, creation and the Creator, and the relationships between these elements. We must nurture our understanding so it may flourish, and the cultivation of a reflective, thinking mind is what each student should pursue at Calvin.

— HG

EDITOR

Heather Gemmen

ASSOCIATE EDITOR

Steve Mulder

STAFF

Deborah Boelens

Amy Voetberg

Steve Ondersma

John Bolhuis

Tom Hegewald

Michele De Jong

MENTOR

W Dale Brown

Dialogue is a journal of Calvin College art, literature, and commentary published monthly by the Calvin College Communications Board. Address correspondence to *Dialogue*, Calvin College, Grand Rapids, Michigan, 49546. Copyright 1989 by the Calvin College Communications Board.

The editors welcome inquiries, contributions, correspondence, submissions, works of art, poems, short stories, term papers, essays, plays, and doctoral dissertations of any length. We reserve the right to edit, but will do so only with the author's prior consent and approval.

Born from your hopes

I am your nightmare.

Oh creator...

I rise from your sweat

to save you...

...but I condemn you.

I am Golem.



Timothy Graziani

Photography and ink

Mystery

The Scientists bustle.
They hurry to skin the cats
Found on the table in the back,
They lie heaped, in mounds, and wear baggies.
Students pick up scalpels and begin.
The life juice, the essence
Might be found within.

The thoughtful lit prof shuffles,
Book in this hand, hard chalk in the other.
Students follow him like chicks
To witness the disembowelment
In first person.

The chalk is sharpened
Poised over line three
The phrase trembles, then dies.
The diced words are piled
Back into original structure
And left for dead.

I walk through the bright new snow
Carrying and protecting my books
And I wonder who I am
And what my life could ever mean.
So I take out my exacto knife
And I begin the search.

We all say this:
We need to see the form
The structure, the true essence is
Just the sum of all the parts.

Shelley Douma

Full Circle

by Jeff Brower

"Come on, Eric," the counselor was saying, "Tell me about this." She held up the composition paper. "This story you wrote about suicide was so graphic that it managed to shake up the teacher. It's good, but why suicide? Something wrong?"

"Do you really care?"

She didn't, he could tell. She was too crisp, too efficient.

"Or are you doing this just because you get paid for it?"

"I'm trying to help, Eric. You've been going through a rough time lately. Is it because of Gabe?"

Gabe.

Gabe, who had once been Eric's best friend and was now nothing more than a statistic. In the cemetery outside of town was a newly-cut gravestone, evidence of his successful suicide. Successful for some. Eric's vision began to blur.

Who the heck was she to talk about him like that? She mentioned his name so flippantly; it was like she was saying "toast," or "chair."

"Don't you ever, *ever* talk about him around me again! You don't have any idea what he went through, and you don't care. You don't care!" He was on his feet now, shouting at her, shaking. He picked up a cheap ceramic figurine and threw it against the wall. "You don't care!"

The rage was over, abruptly. He sat down heavily, a raspy sob forcing its way up, like a wheeze from a pair of old bellows.

"Gabe. Gabe, why did you have to go and die?"

Eric remembered the funeral. He had been one of the only students there, a stranger among all of Gabe's relatives. Staying there after everyone else had gone, with the autumn wind whipping the leaves over Gabe's fresh grave, he had felt detached, as if he had just let go of something. He remembered the words of Salieri, in the movie

Amadeus:

(And that was when the madness came upon me... the madness and the man... splitting in half...)

One for all, he thought.

All for one, Gabe.

Saturday night, two AM. A blue Camaro was cruising down the street of a darkened neighborhood.

"So anyway," Jimmy was saying, "As soon as I stood up for him that one time, don't ask me why, he starts to tag along with me, like we're old pals or something. I let him hang around for awhile, and suddenly he's *everywhere*. At my house, waiting for me after school.... So finally I just told him to get out of my face and leave me alone. Get this: he gives me this puppy-dog look and says, 'Jim, I thought you were my friend.' I mean, right."

No one really remembered whose idea it was to finally TP Eric Strand's

house, but at about two in the morning, they had found themselves heading down his street. They had been amusing themselves with stories about Eric, trying to prove that their actions were justified, because Eric, in short, was a nerd.

But as they neared his house, it became less a game and more a mission. No mercy, men. *Destroy* the sub-human abomination!

Eric had never fit in around school. He was the shadow always hanging around in corners, silent and unnoticed. The kind of boy who never hit the ball. And before him, there had been Gabe.

They parked the car a few drive-ways down from his and snuck over to his house with their arsenal of toilet paper. While the others got to work, Jimmy was dispatched to check out the place.

The only light in the house came from the back. Jimmy ran quietly along the back wall of the house until he neared the window of the lit room, then slowed to a crawl. Eric was home alone, in his bedroom.

Jim stationed himself under the bedroom window, out of Eric's view, and watched what Eric was doing. The light shone out into a small group of trees in the backyard. A flock of starlings, which for some reason had picked this time of night to fly, passed overhead silently, a group of tiny silhouettes against the moon. He peered into the window.

Eric wasn't doing anything. Not reading, watching TV, or sleeping. Just staring numbly at something

cradled in his hands.

A pistol.

"It's like quicksand," Gabe had once said, "The more you fight against it, the deeper it pulls you down. So eventually, there's only one thing you can do. Go down fighting, Eric."

Eric sat there, thinking. He felt oddly numb. The feeling of oblivion had never been as strong as it was now, and there was no way of stopping it. He had to take it to the end of the line.

He got up off the edge of the bed where he had been sitting and turned the volume dial on his stereo as far to the right as it would go, then walked back and sat back down. A rueful smile played around the corners of his mouth, then fled.

(What? What th'heck's he gonna do?)

Then Jimmy's thoughts concentrated themselves into a single word.

(Suicide?)

Naw.

As if he sensed someone watching him, Eric turned toward the window, then back again, his face blotched with the silvery streaks of half-dried tears. Although he knew that the light in the room prevented Eric from seeing him through the glass, Jimmy froze. Eric saw only his own reflection.

In that single second, as those blazing corneas, lit by some secret turmoil, passed over him, Jimmy could sense what was behind that

stare, and it sickened him. Pain. Anger. Unbelievable self-hatred, Eric finally seeing himself as others saw him. It was the pain that really came across, the cold, piercing, damnable pain of ten years of rejection, ridicule, and numbing isolation. He was looking at a human being and seeing only a shell. In that single second, he could see his part in the slaughter.

(Suicide!?)

Eric just stared at the gun. His face was a battlefield of conflicting emotions.

Jimmy stared too. His head was pounding, his thoughts twisting and spiraling in an unspoken conversation.

Tell him to stop.

I can't.

Why not? Tell him to stop!

I don't have anything to do with... that.

In a pig's eye you don't.

It's his battle.

Then what are you doing here, Jimmy? Does that mean that he has to fight it alone? Here you are, above and beyond the call of duty, to see the final outcome of your appointed rounds.

Shut up.

Appointed by whom, Jimmy?

Eric spun the gun around in his hands.

(I'm coming, Gabe. Mom and Dad, I love you.)

Here we are, laydees and gennelmun. Absolutely free—see Mr. Vanilla Nobody waste himself. Special offer! One time only! Havin' fun, Jim?

Oh, no—

What's wrong? Isn't this what you and your pals have worked for all this time? Suppose he kills himself. You go back to school and everyone says, 'Gee, he had so much to live for.' Wrong-o. It's all crocodile tears. Anything he had, any chance at all, you and your fun-loving buddies took away from him. Right, Jim? Am I right?

...Sorry, so sorry.... What have I done?

The jury's still out on that, pal. So do you stop him? Yes or no?

Jimmy glanced back in the window. Eric's face had become com-

posed, a totally blank sheet of paper. With a fluid motion that seemed to have a terrible note of finality, he raised the gun up

(Yes or no yes or no yes or no) to his forehead, placing it calmly and gently in the hollow of his temple. His eyes closed.

Someone put the brakes on time, and everything was moving slowly, so terribly slowly, and it was all a silver-gray smear of a paintbrush, and Jimmy could see Eric's finger close around the trigger, around the cold, compact death. Jimmy didn't want to look, but he had to look

(yesnoyesnoyesno)

and suddenly he knew what he had to do and he stood up, his hands and face pressed against the window, but Eric's finger was squeezing the trigger and Jimmy was shouting for him to stop, stop everything....

Eric saw Jimmy shouting, *heard* him shouting. His head turned imperceptibly, his eyes making contact with Jimmy's, and... he smiled.

Jimmy was stunned, the image burned into his brain.

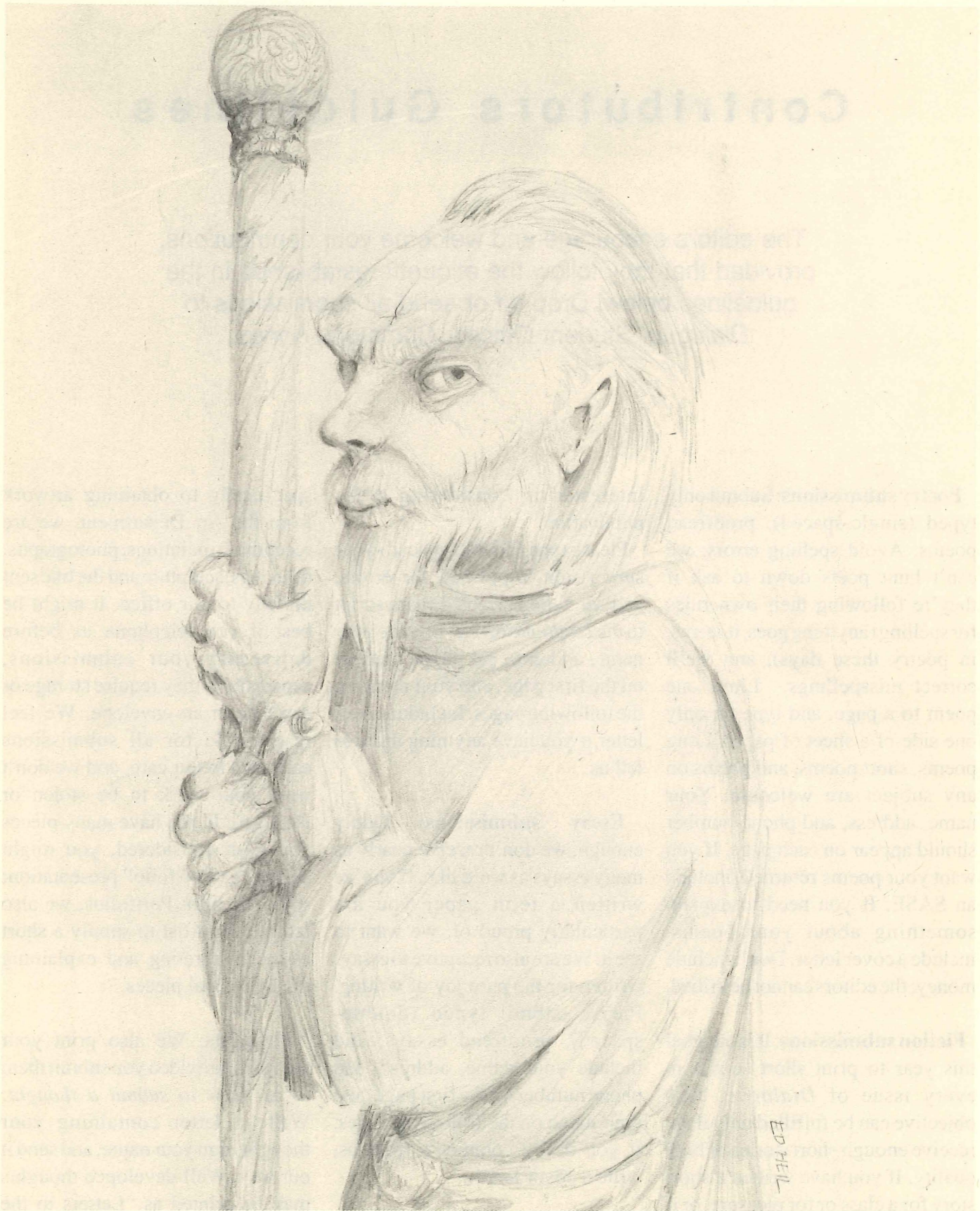
(Oh, dear Lord...)

The gun exploded.

A Voodoo Song

A shattered mirror; a raging sea
 The distorted image that I see.
 A blinding burst of falling light
 The numbing darkness of the night.
 A violent storm; a lightning flash
 The shaking earth and thunder crash.
 A slave to rhythm; a demon rhyme
 The compulsiveness of ticking time.
 A voodoo song; a haunting tone
 The empty note played all alone.
 A vast expanse; an open range
 The freedom found in being strange.
 A minor chord; a melody unchained
 The sound of love now unrestrained.

Ryan Gritter



Ed Heil

The Enchanter

Pencil

Contributors Guidelines

The editors encourage and welcome your contributions, provided that they follow the etiquette established in the guidelines below. Drop off or send all submissions to *Dialogue*, Student Offices, Commons Annex.

Poetry submissions: Submit only typed (single-spaced), proofread poems. Avoid spelling errors; we can't hunt poets down to ask if they're following their own rules for spelling (anything goes, it seems, in poetry these days), and we'll correct misspellings. Limit one poem to a page, and type on only one side of a sheet of paper. Long poems, short poems, and poems on any subject are welcome. Your name, address, and phone number should appear on each page. If you want your poems returned, include an SASE. If you need to explain something about your poems, include a cover letter. Don't include money; the editors cannot be bribed.

Fiction submissions: It is our goal this year to print short stories in every issue of *Dialogue*. This objective can be fulfilled only if we receive enough short stories of high quality. If you have written a short story for a class or for pleasure, or if you have a work that can be considered a short story, we are

interested in considering it for publication.

Please type (double-spaced) your submission, proofread for errors, and send the corrected manuscript to the *Dialogue* office. Include your name, address, and phone number on the first page, and your name on the following pages. Include a cover letter if you have anything more to tell us.

Essay submissions: Oddly enough, we don't receive nearly as many essays as we'd like. If you've written a term paper you are particularly proud of, we want to see it. We are also receptive to essays written for the pure joy of writing. Please submit typed (double-spaced), proofread essays, and include your name, address, and phone number on the first page, and your name on the following pages. If you desire comments from us, write a cover letter.

Art submissions: Although we do have a staff member assigned

specifically to obtaining artwork from the Art Department, we are receptive to paintings, photographs, drawings, sculpture and the like sent directly to our office. It might be best if you telephone us before delivering your submissions, especially if they require storage or can't fit in an envelope. We feel responsible for all submissions entrusted to our care, and we don't want your work to be stolen or damaged. If you have many pieces you wish considered, you might suggest a "Portfolio" presentation; when we print Portfolios, we also require the artist to supply a short essay interpreting and explaining the individual pieces.

Thoughts: We also print your thoughts, provided you submit them to us. *How to submit a thought:* Write a letter containing your thought, sign your name, and send it our way. Well-developed thoughts may be printed as "Letters to the Editor," a department that may or may not appear in each issue.

Ancient Rhythm

flapping gulls, calling to their kind
lapping waves, coming home to the shore

Ancient Cycle

blooming blossoms, dotting the greenery
dancing leaves, playing in their death
drifting snow, sculpting the landscape
bursting buds, promising life

Ancient Peace

rising sun, shining over hushed water
caressing breeze, nudging leaves into song

Ancient Love

rhythm — pounding nails through flesh
 calling us to come home
cycle — forgiving sins of the children
 promising life in Him
peace — enduring promises that cannot fail
 nudging the children into song

Chery Dyke

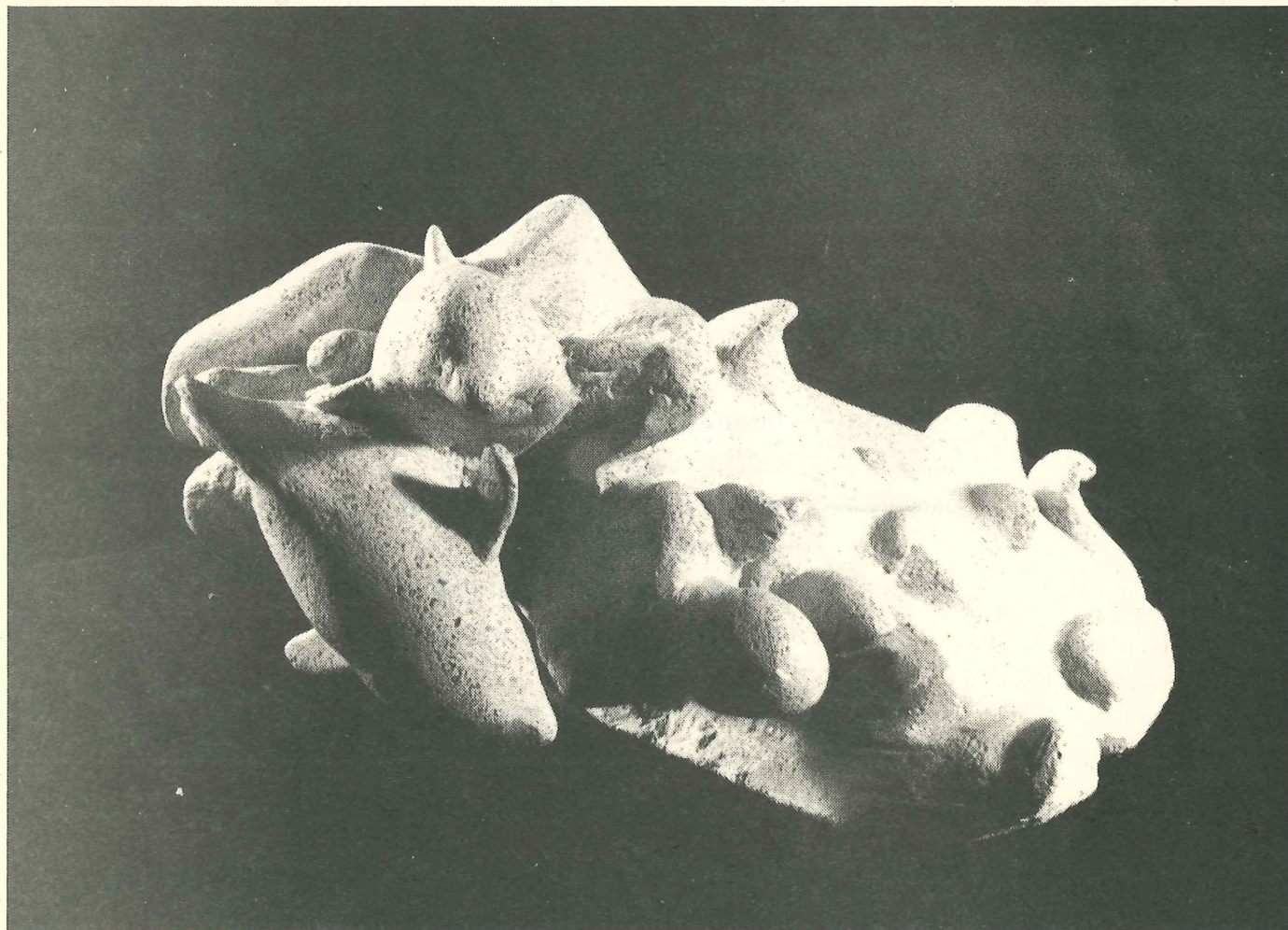
PORTFOLIO

by Arie Ringnalda

As Christians, I suppose that we ought constantly to re-evaluate why we follow the paths that we do. But when faced with a few hundred words in which to describe why I do art, I find it surprisingly difficult. Perhaps it is the element of discovery—of seeing things in a new and exciting way—that allures me. Or it may be the delight that occurs when a work comes

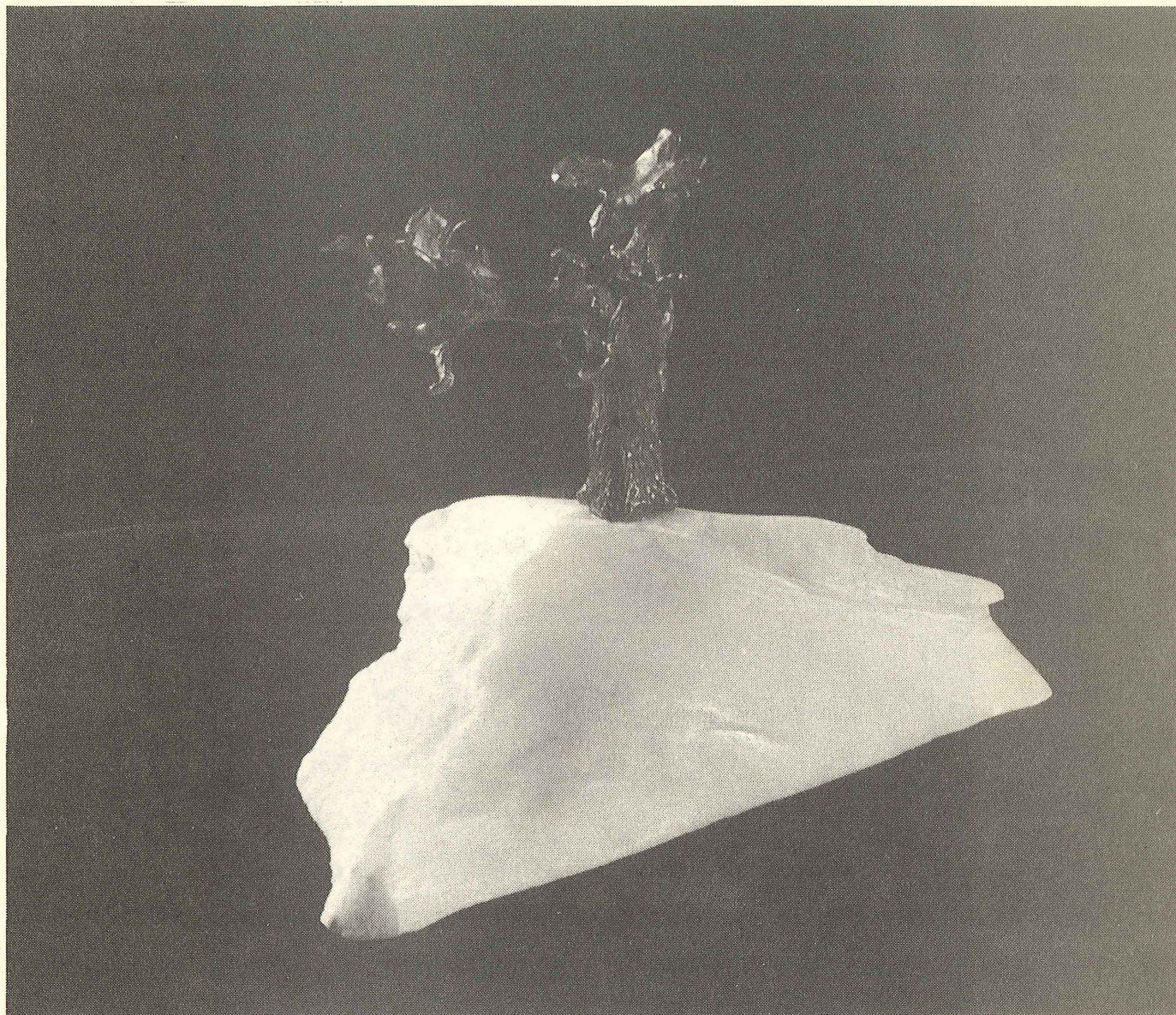
together in an unexpectedly dynamic manner. It could be the pride of a job well done. I suppose it is all of these, but hopefully it is more.

As students at Calvin College, we are taught to live out our lives as transformed Christians, continuing to redeem all aspects of God's creation, the arts included. I recall Professor Carl Huisman simplifying the role of



Sea Song

Carved Vermiculite



The Joy of the Pair

Bronze and Alabaster

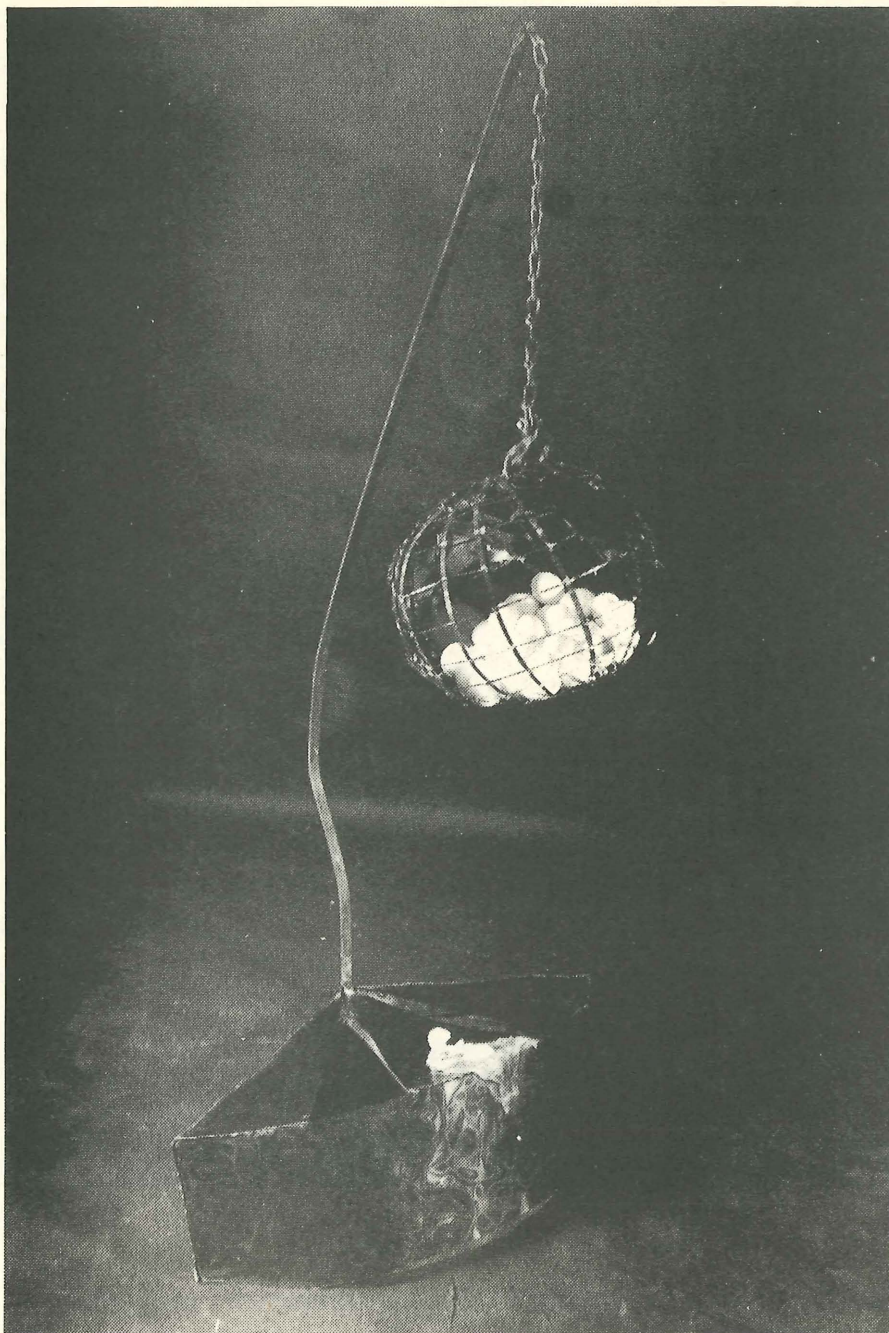
the transformational artist to a three-fold task related to the three offices of the believer—prophet, priest, and king. The prophetic nature of the Christian artist looks to the Fall and its effects, making us aware of needs within our society and, perhaps, also offering solutions. The priestly office points towards our redemption from the Fall, and consequently the art which relates to this office speaks of renewal and hope for all creation. The kingly office is one of celebration—praise

through the arts for God's redeemed universe.

In retrospect, I have come to see that the three offices of the believer are a binding strand in my many works of art. I have not always been conscious of this; perhaps it is the working out of faith in my life without my awareness. A work such as "The Frailty of Life in the Big Chicken Coop," for example, is prophetic in that it reminds us of our failure to maintain our environment. A globe, filled with eggs (a common

symbol of life), hangs perilously on a rough industrial hook, playing on the idea of industry versus ecological balance.

While I continue to address the needs of our fallen world, I have also been inspired by the renewal found in Christ's resurrection. A work such as "Piece over Peace," which addresses the notion of peace in death, points towards God's redemption of creation. The greatest volume of my work, however, falls into the kingly office of celebration



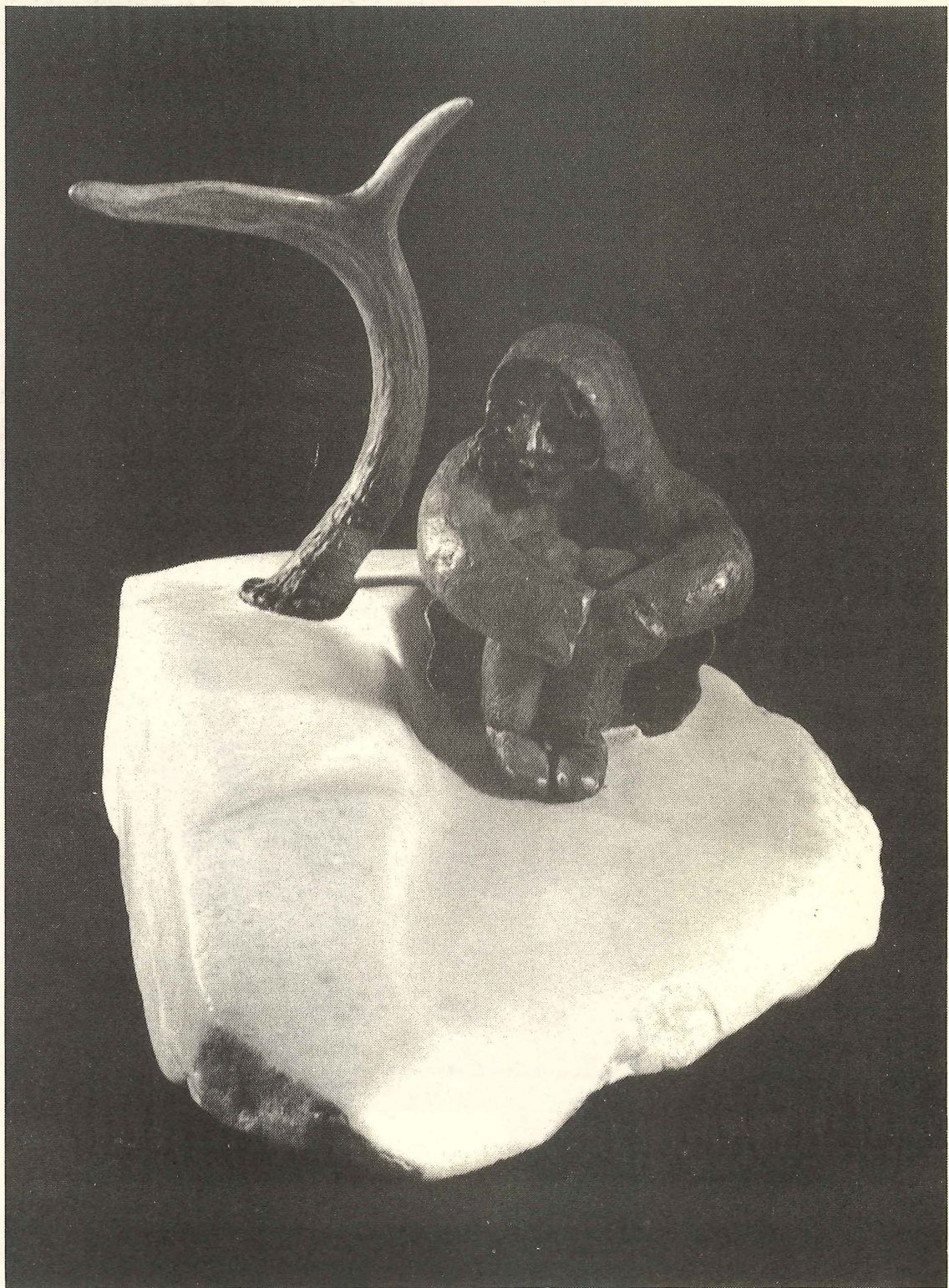
The Frailty of Life in the Big Chicken Coop

Sheet metal, Eggs, Epoxy

for the renewed world. It can be located in the contemplative motif suggested by "Solitude," or, conversely, in the happy-go-lucky spirit of "Sea Song." Whenever we find ourselves embracing a part of creation which has relevance to us, we celebrate its redemption as well. The thoughts offered here on living

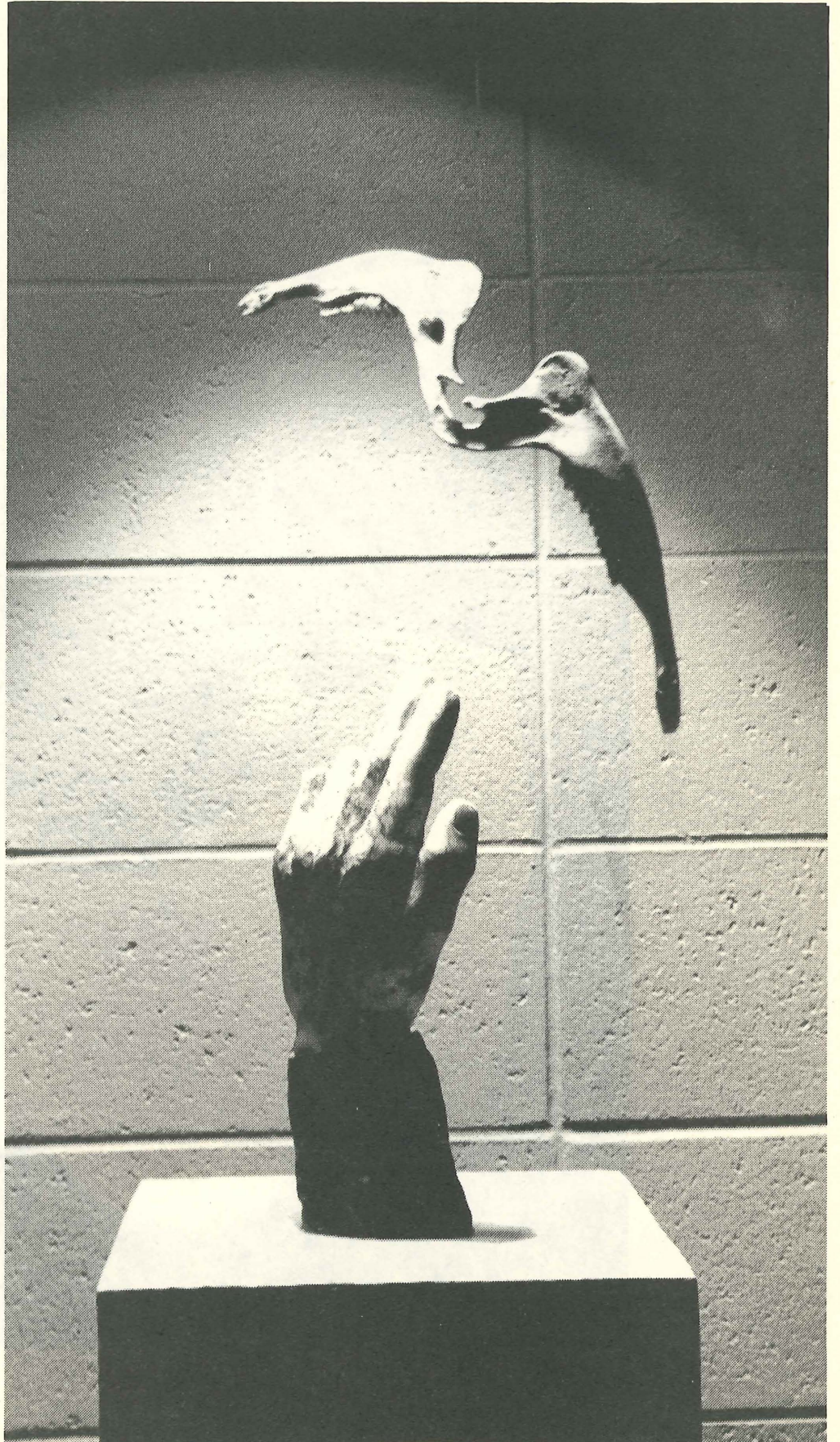
the transformed Christian life apply to all disciplines, not only to art. Redemption and renewal are universal, and they need to be worked out in every area of our lives. There is always an element of struggle when putting faith into practice, but God is near to guide us, whether we are aware of it or not.

All of us together at Calvin—engineer or artist, musician or statistician—compose an orchestra of many different instruments and sounds. We vary in character and capability—but as one, we can offer a joyful unified symphony to our Creator.



Solitude

Bronze, Alabaster, Antler



Piece over Peace

Bronze, Alabaster, Bone

When Reading Poetry

When reading SAD poetry
Watch out for LOVE emotions
Carelessly HATE tossed out
On the HAPPY page.

Also beware
Of a forced rhyme
It only works
Once in a time.

Rhythm and meter are also very important and can
be abused.

But I always cry,
Like a waterfall in May,
When I hear a trite expression
Or read a good cliché.

Similes are snakes
And metaphors like blenders,
But we can burn that bridge
When we come to it.

Grammar must be used good.
Form is important too.
Organic can be too free
And form too constricting.

Purple images too vague,
Concrete ideas too true,
The only "good" poetry
Is what sounds good to you.

Ryan Gritter

Cover Feature

Holograms

In the following article, *Dialogue* interviewed Michael Dykstra, a senior physics major. Dykstra worked on a hologram experiment last semester with fellow physics major David Dorner, and with the use of a laser they produced a three-dimensional image from a photographic plate.

Dialogue: First of all, what was the project for—was it a lab, or seminar?

Dykstra: It was part of our Junior Lab. “Modern Lab” is what it’s called.

Dialogue: So it was a requirement. What exactly did you do? You can start on a general level and become more specific.

Dykstra: Okay. It was originally the professor’s idea, I think. We had the optical bench, which is basically a vibration-free bench, and all the various lenses and other optics that go with the bench.

Dialogue: An optical bench. Is it just a regular bench, or what?

Dykstra: First of all, you have just a standard oak table, then the optical bench rests on top of that. The bench is basically a metal box with inner tubes filled with air inside it. Then there’s a granite slab, which has grooves for the optics to fit on, and little markings, like meter-sticks, printed on it, and the granite slab rests on top of the inner tubes.

Between the metal box and the oak table we put crumpled-up *Chimes*. I ripped them into pieces about 6" x 8" and

crumpled them up into balls. Then I flattened them out again and stacked them up into stacks about 6" high and set the bench on them, and they crunched down into stacks about 2" high. This added vibration isolation.

Dialogue: So the purpose was to rid the table of vibration.

Dykstra: Yes, because the building vibrates.

Dialogue: Really.

Dykstra: Everything vibrates.

Dialogue: Except the table.

Dykstra: When you’re working on something like the frequency of light, which is very tiny, less than a micron, any tiny vibration will screw up a hologram, because a hologram works on the fact that the wavelengths of light interfere constructively and destructively. If you remember from high school physics, when you played with wave tables and put an object in the pool, it would create waves. When you’d have two objects creating waves, when their waves interacted with each other.... When a wave trough hit a trough you got a really

low trough, and when a peak hit a peak you got a really high peak, and when a peak hit a trough they balanced out and you got nothing. Well, the hologram works on the same principle, except that you're working with light waves and not water waves, and the light interacts on the film.

Dialogue: Okay, so you got a vibration-free table. Then—

Dykstra: —How did this question start, anyway?

Dialogue: I just asked you to explain the optical bench. What sort of equipment and set-up did you use in addition to the bench?

Dykstra: We had a laser, which was a helium-neon laser.

Dialogue: You might want to explain a little about a laser too.

Dykstra: (Laughs) Yeah. Well, a helium-neon laser works—oh, good grief, how does that.... It's kind of like a fluorescent lightbulb. It's a glass cylinder, excited from each end electrically, kind of like a fluorescent tube.... I don't know, maybe it's not excited from each end, maybe it's excited along the sides, I really don't know—

Dialogue: It's excited.

Dykstra: It's excited by an electrical field or... I'm pretty sure it's an electrical field. And basically—aw, this could go on forever.

Dialogue: Um-hmm.

Dykstra: One of the two, helium, is excited by the electrons produced by the field. In other words, the helium has electrons in orbit around its nucleus, and when they're excited that means they jump to a higher level. So, helium is excited by the electrical field, then it in turn excites the neon. So there's kind of a "step procedure."

Dialogue: A chain reaction?

Dykstra: It's the neon that actually produces the laser light. The electrical

field excites the helium, the helium excites the neon, and the neon, when it drops down to its stable electrical orbit, emits light of a certain wavelength. Now, somewhere in this a neon atom emits a photon—that's what light is, kind of a "light particle," though it's really not a particle. When the photon passes by another excited atom, it stimulates the atom to also emit. So the photon passes by an atom which emits a photon, in step with the first one.

"Laser" stands for *Light Amplification by Stimulated Emission of Radiation*. The radiation, of course, is the photons. Emission is the fact that the electrons are dropping down an energy level and emitting the photons. "Stimulated" means they don't drop until the one passes by to cause the other to drop. That's where you get your chain reaction, where the one passes by the second one, and you've got two going along, and they pass by another and three are going along, and pretty soon there's a whole bunch of them. They're all waiting to be triggered off. It acts as an amplifier in that way.

Dialogue: I think that's an adequate description of—

Dykstra: Then you've got mirrors on each side, and one is completely silvered and the other is partly silvered.

Dialogue: The mirrors are at either side of the tube?

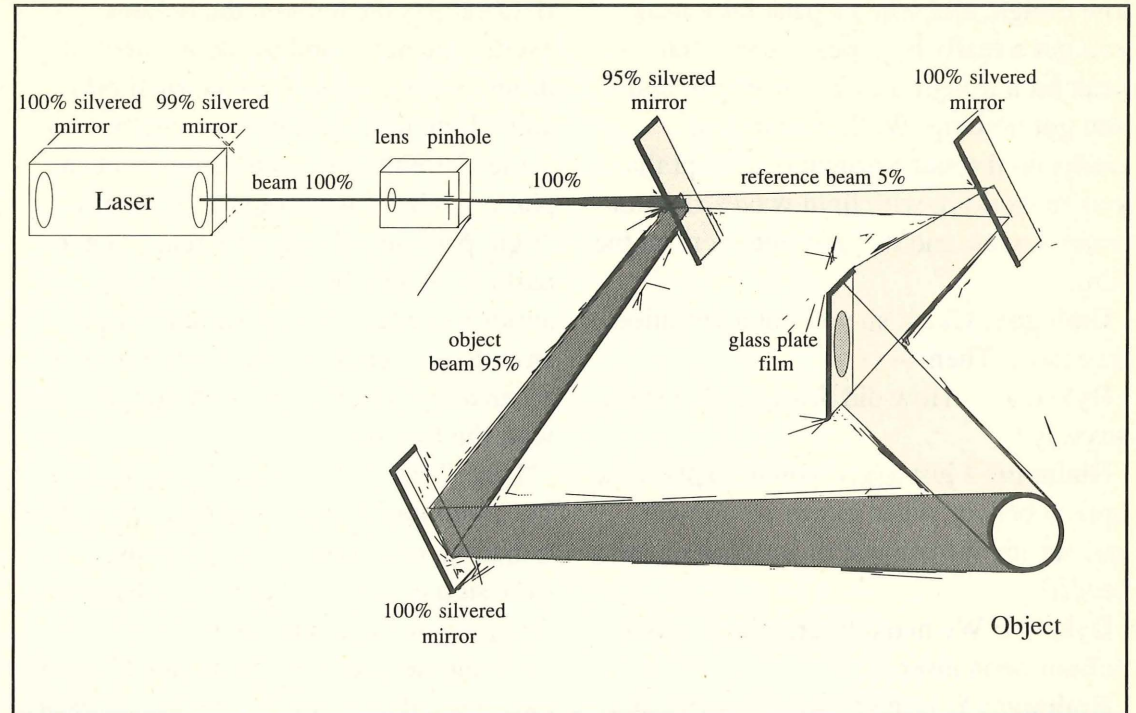
Dykstra: Yes, on the tube. The completely silvered mirror is 100 percent reflective, while the other is probably 99 percent or so. The photons are bouncing back and forth in the tube, and you get a beam out the mirror that isn't completely reflective. The beam spreads out only a tiny fraction of a degree. It's all one color, 633 nanometers.

Dialogue: Can you see it?

Dykstra: Yeah, it's red. Helium-neon is red.

Dialogue: Just a tiny beam or—?

*Illustration:
producing a
hologram. The
glass plate film
captures the
diffraction pattern
from the object
beam, a process
requiring only a
few seconds.*



Dykstra: You can't see the beam when it's not going toward your eye.

Dialogue: I see.

Dykstra: When it hits an object, which may look smooth but really has a scratchy surface, the object diffuses the light and you'll be able to see the light on the object or whatever.

Okay, then, we had a laser. You run the beam through a lens into a pinhole, and your beam is quite thin, but the lens is very small, and it focuses the beam through the pinhole. You can't see through the pinhole, it's so tiny, you can barely see sunlight through it. The beam is focused on the pinhole. What that does is filter out any photons that aren't in step with the main beam, because they'll focus differently than the beam will. So the beam will hit the pinhole, which purifies the signal, and also spreads it out so it's no longer tight.

Behind the pinhole we had a 95 percent silvered mirror, which allowed five percent of the light through and reflected 95 percent of it.

Dialogue: Was there a purpose to get

just five percent?

Dykstra: No. We used both beams. The five percent beam, called a "reference beam," bounced off another completely silvered mirror to completely cover the film. The other beam, or "object beam," bounced off a different mirror, then the object, and then hit the film. Now, we tried to set up our systems so that the distance the reference beam traveled was the same as what the object beam traveled, in order that the beams would spread out the same width. Once the object beam hit the object, of course, beams went everywhere. It turned out that only about five percent of the object beam bounced off the object and hit the film. This is where interference occurs: where the two beams come in. The two beams interact, like I said before, constructively and destructively, to print a diffraction pattern on the film.

We had no lenses between the object and the film. In a normal camera, an image is focused on the film, and that's how you get a picture on the film. But in our case, when the hologram film was developed,

the film just looked smeared out, with all sorts of swirly designs on it. We couldn't really see anything on it because nothing was focused, there was just the interference pattern caused by the two beams interacting.

After we developed the film we removed some mirrors from the table, got rid of the object, and remounted the film in exactly the position where it was originally. In this way, you have the entire beam bouncing off one mirror and hitting at exactly the same angle that the reference beam did. Then when we looked through the film, we saw the object floating behind the film. In other words, the film was clear, but it was like a film negative.

Dialogue: Okay.

Dykstra: We used 3" x 5" film on glass plates. The film chemicals weren't mounted on clear plastic but on glass, and you could hold it up and look through it. If you'd look at it with the laser shooting through it, you'd see the object floating behind it in the air. Also, if you'd flip the film around, you could get the object to float out in the front. That looked really weird.

Dialogue: Out of what type of objects did you try to make holograms?

Dykstra: We tried various objects, but what worked best was a seashell, which had that pearly luminescence on it. It just glowed when we shot the laser at it, so we got an excellent picture of that.

Dialogue: What didn't work?

Dykstra: Anything that was a flat black definitely didn't work. We tried my fiancée's diamond ring but that...

Dialogue: Maybe it wasn't a real diamond.

Dykstra: The problem with the diamond was that it focused the light, or completely reflected the light, so that there were bright spots on the film. The film ended up polka-dotted, because the light that would go in the diamond would

bounce around, head straight back out, and hit the film in a tight beam. Its faceted surface acted like a mirrored disco ball. And we made some mistakes with developing the film and other things. It was a typical lab procedure: you just had to fudge it and see how it works.

Dialogue: How far along is hologram research—how many years have they been playing around with this?

Dykstra: Since the 60's. No, the lasers came along in the 60's. Holograms were being produced quite soon afterwards.

Dialogue: What do they use holograms for? Or, what might they use them for? Just for scientists to have fun with?

Dykstra: There's one use that we were going to do, which we never got up to, called a "double exposure hologram," where you take a picture of the object when it's with and without stress. You take one picture of it just sitting there—you expose the film when the room is in pitch darkness and the film is out in the open. You'd turn the laser on, turn it off, then apply stress to the object, like pressure or some kind of weight. In one case, scientists took a picture of a tin can, put a rubber band around it, then turned the laser back on. Supposedly, the force distorts the form slightly. When you look at the final picture, there'll be diffraction patterns on the object corresponding to how the object was deformed. This is used to find cracks and impurities in manufactured things, such as flywheels. Stress is applied, and it shows the weaknesses.

Other types of holograms, where you just have three-dimensional images of things—

Dialogue: Like in the science fiction movies, are those really holograms, when they have a hologram delivering a message, and it looks as if it's made out of light...?

Dykstra: You mean with Princess Leah,

out of *Star Wars*, and the little droid, when they.... Well, that supposedly was a hologram. They probably didn't really do one, probably just made it look like one. I don't know if they've gotten to the point where they can project the image away from the film—really, you have to be looking through the film but not focusing on it, you have to focus on the image.

Dialogue: To see the image?

Dykstra: The light hits the film and goes through it—I didn't explain that. When the beam hits the film as you're seeing the image, the light hits the diffraction patterns on the film and forms the image, and transmits the light through the other side, in such a way as if the object were sitting there behind the film. So when you look through the film, the light coming through the film toward your eye is as if there were an object there.

Dialogue: To see the object, you'd have to be on the other side of the film? Am I correct in that?

Dykstra: On that particular account. As I said, we were able to get the image to float out in front, in which case the viewer is on the same side of the film. But there are reflection holograms where the laser, the object, and the viewer are all on the

same side of the film.

Dialogue: But in this particular one—

Dykstra: It was a transmission hologram, in which case the laser light goes *through* the film, and the viewer sees the image on the other side. Now, if it *reflected* off the diffraction patterns, then it would be a reflection hologram. You could probably get a reflection hologram where the image is in front and in back too.

Dialogue: And you spent a whole semester doing this?

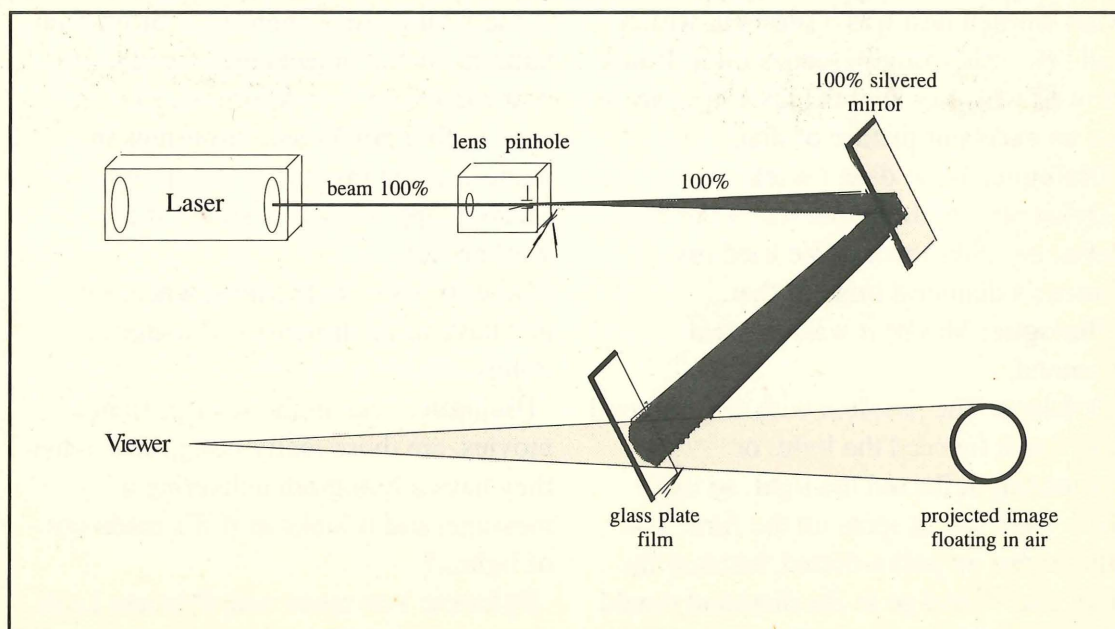
Dykstra: No, half a semester.

Dialogue: Okay. Did you come up with this project yourself, or was it assigned?

Dykstra: We had the optical bench, we had all the optics, and it looked as if there was nothing holding us back from doing it. It wasn't on last year's agenda for projects, but the professor decided to add it to our list because it looked like it was ready to go. And I seemed willing to tackle it; Dave Dorner and I both had an interest in holograms. I did more of the actual physical putting-around work, while he did more recording of information and arranging it, making up the report, stuff like that.

Dialogue: Like getting the grade.

Illustration: Viewing a hologram. For the image to be seen, the viewer must look through the film itself.





Cameron Van Dyke

Photography

"This photograph shows that, to some, alcohol may seem attractive as a way to solve (or at least bury) a problem, but it just ends up making you more confused and distressed. The photograph portrays a confused, alone person."

In China this Summer

by Larry Herzberg

"We're just ordinary people, not intellectuals. But the students speak for all of us. We're sick of bureaucratic privilege and corruption. It's time that the people had a voice!..."

The woman was a middle-aged Chinese factory worker. It was 9 o'clock at night, dusk, on June 3, 1989. She was standing a block from the giant statue of Chairman Mao, which hovers over the square in the middle of Chengdu, capital city of Szechuan province. She was surrounded by a crowd of men of all ages, interested to see how she might answer the question put to her by the curly-headed, big-nosed Calvin Chinese teacher.

This woman was daring to criticize the government openly in front of hundreds of Chinese people. They applauded her. And I had tears in my eyes. My five Calvin students, for whom I was translating what the woman said, were also interested

until the press of humanity around them became intolerable and we took our leave.

The atmosphere on the main street was electric. Groups of people were gathered up and down the main street that led from the square to our hotel, a half mile away. College students protesting and speaking out in the square had stirred up the populace just as in Beijing. Who could have guessed that the next morning would witness a bloody battle between these peaceful protesters and armed government troops?

The next day, June 4, we visited a commune in the countryside. All was peaceful in the rice-fields. The children in the village school were all reciting their lessons in a loud unison. We introduced them to Frisbees at recess. One of the villagers proudly welcomed us into his family's roomy two-story apartment. The protest in the city seemed remote, unreal. Peasants in

China are concerned with tractors and TV sets, not with freedom of speech.

But when we returned in the afternoon to our hotel, our driver could barely maneuver around the giant crowd of thousands and thousands of people, who stretched elbow to elbow from our hotel gate all the way to the square. The soldiers had forcibly tried to clear out the protesters from the square late that morning. And the people had fought back. It was Molotov cocktails and bare hands against rifles and machine guns, and it was no contest.

That night we watched the violence in the square from the safety of the roof-top balcony of our hotel. The handful of foreigners still left in the city were all there, sitting at cafe tables sipping Coke or beer and listening to the Voice of America. "The BBC estimates that this morning as many as 2,500 were killed in Tiananmen Square and 16,000 injured," the radio crackled

out. "Did they say 16,000 or 60,000?" someone asked.

From the balcony we could see burning buses and trucks lighting up the square a few blocks away. From time to time, rifle shots rang out in the summer night, punctuated by the cannon-like explosions of tear gas being fired. Suddenly a cheer would arise from the crowd, whenever the Red Cross truck would circle around the square, trying to pick up the wounded.

It became impossible to sit still and watch helplessly from the hotel balcony. On the street by the hotel gate, a massive crowd of Chinese stood, waiting. An old crippled man hand-cranked his bicycle-cart toward me through the crowd, returning from the square. "Are they killing people?" I asked. He raised his fists together and thrust them both at his throat, gave the Chinese hand signal for the number "eight" with horror in his eyes, and rode off. Eight Chinese had just been bayoneted in the square. Some two hundred people were estimated killed and several thousand wounded there in Chengdu, we learned later. It was the same day as the massacre in Beijing. "The Chinese government has gone crazy!" we heard people say.

The next afternoon each of us from Calvin sat with one or two Chinese students at a different little cement table in a wooded part of a university campus. "You weren't in the square yesterday, were you?" I asked the two sweet young Chinese women seated across from me. In soft, gentle voices, they took turns telling me of their classmates who had been in the square. They had just returned

from visiting many in the hospital—beaten beyond recognition, crippled, and worse.

"We thought at first the government was right, that the protesters were only disrupting our society. But now the government has been so brutal, so cruel...." They spoke in English, slowly and carefully, in whispered tones and with tears in their eyes.

"What do you think of all this as an American?" they asked.

"When I think that the college students who have been beaten and killed are China's best and brightest, it makes me very sad." My eyes were too filled with tears to hold them all, and soon all three of us had tears streaming down our faces. Perhaps music is not the only universal language.

"We do not know if we will be able to graduate next month as planned. If we do, we may not be

must go into the factories and into the countryside. We must educate the people about democracy and freedom just as the Communists spread their ideology years ago." They kept looking at their watches and left promptly at ten o'clock.

An hour later we were awakened in our hotel by the scuffling of many feet in the hotel courtyard. Then came the sound of glass shattering, over and over and over again. A long silence. Then three cannon shots, sounding as if they came from the next room. The soldiers had found the students and workers barricaded inside. The next morning the floor of the hotel lobby was all shattered glass and white tear gas powder. As we walked down the main street at dawn, our eyes smarted from the smoke arising from burned buses. But the square was empty and no Chinese would look at us.

"We thought at first the government was right, that the protesters were only disrupting our society. But now the government has been so brutal, so cruel...."

assigned to jobs. I had hoped to work for the Heinz Corporation in Shenzhen, but now.... We do not have much hope for China now."

That night several young men from the university came to our hotel room. I had bought them soda pop and beer. But they were not interested. They had come for the books we had promised—John Updike and Stephen Crane. "We

Like the young women at the university, I, too, have little hope for China—for now. The government holds all the guns, after all. But there is too much anger and sorrow in too many hearts. The best and brightest in China know Communism to be a lie. There will be another time. For the Chinese people have dared to speak out, for the first time. Their voices cannot be stilled forever.

MEMORIES: erasable #2

I forgot I could forget.
and so memories of 10 years, 1 month, 20 days—
when my grandma was a grandma—
were written in pencil.
Smudgable, Erasable, Pencil.

'cause pencil was common, perfect for comfortably common
memories
and
I forgot I could forget.
January came and I looked forward, never
back.
The pencil was turned over and
I
 erased

and tears
do well for a day
but when they dried the page was smudged.
The songs she taught were stroke-
blurred.
Prayers, holiday feasts, letters, grandma
all blotched in my penciled memory

And now that I'm remembering all the things I've
forgotten, I wonder
how much more I forgot I've forgotten and
I wonder
why I used pencil and I wonder
if my grandchildren
will write me in pencil.
Smudgable, Erasable, Pencil.

Rebecca J. Flietstra

The Diary of a Simple Pastor

Notes on faith, reason, and going to church

-1-

Yesterday I spoke at Manchester Public High School. A class there wanted me to talk about “the Christian view of man and all its implications”—and “while you’re at it would you tell us what’s so great about going to church. Please be prepared for a lot of questions.”

I thought it would be good if the kids themselves drew all the important conclusions. I was concerned that they be with me at every point of the way.

I started with the concept of the image of God—the dignity and nobility of people in relation to him and their fellow human beings and this world in which we live. I wasn’t concerned about my “Barthian accents,” as I might be if I’d write in *The Banner*. These kids are uninhibited. I simply wanted to hold forth a high view of mankind in all our relationships. I wanted those kids to see that they are important—no monkeys, machines, or manikins for someone else to handle and put in place. “God has given you dignity and ability to respond to him and to others. He has given you response-ability.”

I mapped that all out for those young people
and it took me at least a half hour.

"And now," I said, "we're ready to draw
some important conclusions.

I want you to draw them, and not me.

I want to ask you four questions,
and I'd really like
your honest answers.

"Question one:

How many of you agree with me
that a man or woman,
boy or girl,
has this kind of dignity?

Bear in mind that otherwise
we're some sort of animal or thing.

In the Bible you read that you are great,
with all kinds of ability.

God has made you a little lower than himself,
and he crowns you with glory and honor.

How many of you want to see yourselves
in that way?"

Just about every hand went up.

They wanted to see themselves
as people with God-given dignity.

"Well now, we're ready for the second question.

If every person has this dignity
and the image of God is seen in our relations
to him and all things,

as he wants us to relate,

then doesn't it follow

that we 'reflect' him best,

and we're most ourselves,

and most free,

when we're close to him

and not far away?

I wonder, how many of you would agree
with that statement?"

Almost every hand went up,

though some furtively and tentatively.

I think they began to see where I was going.

"And so let's move on to the third question.

You have said that we should 'reflect' God

and that we can do that best when we are close to him.

But isn't the Church—

with all its faults—
precisely the place where we try at least
to be ‘near him’ and
to ‘come into his presence’?
We do that by singing
and praying
and reading the Bible
and hearing the sermon
and eating bread
and drinking wine.
We do that in various traditions
and in all kinds of ways.
But isn’t the Church,
at its best,
the place where we are ‘near God’?
How many of you would agree?”

Most of the hands went up again,
but some students were obviously uncomfortable.
They knew where I was going.
“That brings us to question four.
If we’ve seen the image of God as we should,
and if we’re most free when we’re close to him,
and if the Church at its best is the best place
to come into his presence in a special way,
then wouldn’t it follow that going to Church,
at least in principle,
is a matter of our freedom
and not a crimping of our liberty?
How many of you agree?”

Here was the cruncher, of course.
“If we’re right in what we’re saying,
then going to church is freedom, joy—
and exactly there you are most yourself,
the ‘image of God.’ The only trick
is to find a veritable church
where you are in the presence
of God.”

-2-

There were no questions when we finished
our confabulation at Manchester. Dear Lord, why?
I spoke so simply and directly—what more could I do?
The kids gave all the answers—I only asked some questions.
I wonder if the cogency of my reasoning will bring any of them

to our church, where we worship the true God on Sundays.
But meantime, Lord, I have this gal whose wedding
I have to get ready for. You remember that I've
prayed about her so many times—so many.

A few years ago she told me she wanted
no part of me, or the Church, or Jesus Christ—
she had a bad problem with drugs. And so, would I kindly
move out of her way? I told her I would stand there
out of love for her and the simple recognition that
she belongs to Jesus Christ. And therefore
I continued to have more confidence in her
than she had in herself.
She went through hell—
drugs, free sex, and attempted suicide.
Good church people rejected her.
Good God, you know the things
that they said.

Constantly I urged her to be her true self
as you called her to be—but all my arguments
seemed to be so empty. And here she is,
asking me to officiate at her wedding
and thanking me for sticking with her
when others “wrote her off.”
She wants to have a Christian wedding
in the church.

-3-

I must get ready for Sunday morning, Lord.
If you give me the strength in these busy days
I'll preach that sermon I've been wanting to do on Habakkuk—
“Why Do Good People Suffer?”
Why are thousands killed in earthquakes?
Why is there so much injustice in this world?
“You who are of purer eyes than to behold evil
and cannot look on wrong,
why do you look on faithless men,
and why are you silent
when the wicked swallows up the man
more righteous than he?”

I remember the time, Lord, that you were silent
and didn't respond to that Canaanite woman,
even though she called you the “Son of David”
and asked you very nicely

to heal her daughter.
She kept begging you
and you answered her abruptly—
“It is not fair to take the children’s bread
and throw it to the dogs.”
I remember what she said—
“Yes, Lord, yet even the dogs eat the crumbs
that fall from their master’s table.”
She was willing to be called a dog;
she claimed nothing for herself.
And then you looked at her and said,
“O woman, great is your faith!
May it be done to you as you desire.”

She knew the terms on which you came to her.
She knew that your silence was a test of her faith.
She knew that it’s one thing to believe
when we see you acting and speaking and answering,
and quite another when you are silent.
And that’s what I learn from Habakkuk—
Lord, isn’t that what you want us to say?
We don’t read an answer to the question
why good people suffer
but we do see what it means
to have true faith.
“Though the fig tree do not blossom, nor fruit be on the vines,
the produce of the olive fail and the fields yield no food,
the flock be cut off from the fold and there be no herd in the stalls,
yet I will rejoice in the Lord,
I will joy in the God of my salvation.”
*So help us to have strong faith
when we don’t see external evidences
and all our reasons are inadequate
to achieve the results that we desire.*
I remember that Thomas believed in you
because he put his finger in your side
and actually saw your pierced hands—
and therefore he exclaimed,
“My Lord and my God.” I remember that you looked at him and said,
“Thomas, have you believed because you have seen?
Blessed are those who have not seen
and yet believe.”

Philip C. Holtrop

START YOUR NEW MAJOR NOW! ANY GPA! UNDECIDEDS WELCOME!

UPHOLSTERING

**NO PREREQUISITES
REQUIRED!**

**EARN SOME CREDIT AND
LEARN A PROFESSION!**

STUDY THE HOURS YOU LIKE TO STUDY!

If you like to sleep in on weekdays, upholstery lets you do it and make a really fine living. On the other hand, if you're really ambitious and take the Protestant work ethic seriously, you are starting to talk about some really big bucks! Many Calvin students who minor in Upholstery do a few pieces part-time just to keep things nice and comfortable.

TO GET STARTED, MAIL THE COUPON... TODAY!

It costs you nothing to get the information and there's no obligation. No prof is going to call. This much and this much only, every successful UPHO major must do for herself/himself —send the coupon today!

YOU'LL GET A BIG TEXTBOOK ON UPHOLSTERY

You'll also get a workbook, lab book, notebook, student handbook, hymnbook, coloring book, bodbook, phone book, and an actual free sample lesson showing how the fabulously successful UPHO system is taught. For your sake and the sake of your future, do it now. Clip the coupon, fill it out, put it in an envelope and mail it now. And if you live off-campus, don't forget the postage stamp!

You get six big
Furniture Kits
FREE

"What started as an audit, now pays me \$15 an hour!"
Yes, many Calvin graduates make better than \$15 an hour turning old worn-out furniture into bright new decorator pieces! **Stack it up against what you'll be making after graduation!** Will you be making \$300 a week? \$350? \$400? Will you put in hours of dull work, with small raises? Is that the way you want to spend the rest of your life? Just imagine, you can make \$300, \$400, \$500 upholstery just **one sofa!** And if you're the kind of person who likes to work and earn, you can sometimes you can sometimes finish a job like this in a day. That's pay, **and it beats what most liberal arts grads make!**



HERE'S JUST A SAMPLING OF THE COURSES YOU CAN TAKE!

UPHO 101 Fundamentals of Furniture—Tacks, knots, studs, stuffings, and springs are examined and discussed. Students will be encouraged to bring in wornout chairs and sofas, but this is not required. Two term papers and a final.
UPHO 201 Etymology of Upholstery—Upholstery will be taught with an emphasis on linguistic and literary appreciation. How did *upholster* come from the Middle English *upholdester*, "one who upholds or repairs"? Chaucer's *The Upholdester's Tale* serves as course text, and each student will be required to write a paper on

any topic in the upholstery genre.
UPHO 395 Seminar: Upholstery, You, and the Opposite Sex—Calvin students have always been bashful when it comes to dating. In a coed environment, students learn to upholster for social success. Students work in pairs to restore a loveseat, backseat (automobile), and even the lowly porch swing. Guest lecturers recount their courtship experiences as they pertained to upholstery. *Prerequisites:* proven lack of success on dormitory floor dates. Open to upperclassmen only.

This Free Upholstery Book May Be The Most Important Book You'll Ever Open.
MAIL COUPON NOW!

Name _____ Age _____

Address _____

City _____ State _____ Zip _____

APPROVED BY SYNOD Calvin College and Upholstery
Chairman
Upholstery Department
Grand Rapids, Michigan 49546

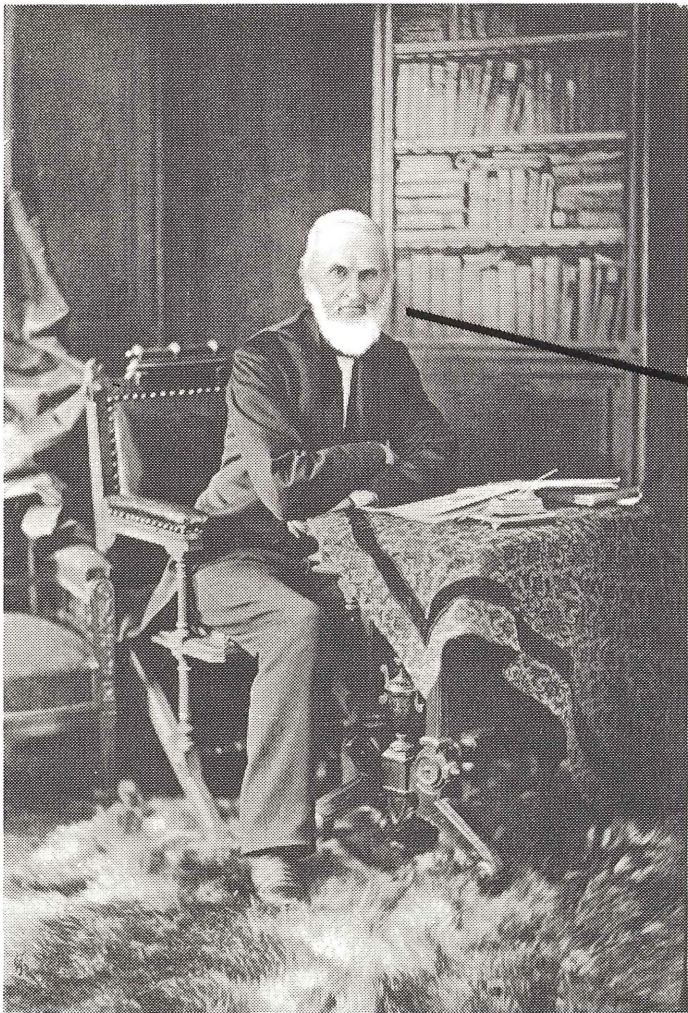
All the special "Tools of the Trade" are yours... **FREE**

You get this **CALVIN DIPLOMA** when you graduate

Calvin College
And Upholstery

CCU is approved by the Michigan Superintendent of Public Instruction and is authorized to issue a diploma in upholstery.

Do you know me? In my day I was one of the most prominent literary figures of the times; I helped to shape American literature as it entered the twentieth century. But most people today don't even know my face. That's why I carry the American Express Card and recommend that you see Schmidt and Kuiper about their Boston Interim, 'English W52. You'll visit Lexington, Boston, Cambridge, and (pay attention to this last one) Lowell.



Is it true, or can I just have imagined it, that you have not yet inquired about Kuiper and Schmidt's Boston Interim: 'English W52? Carpe diem, child! Broaden your mind while the fair mistress Opportunity permits, and sprint to the English department immediately!

