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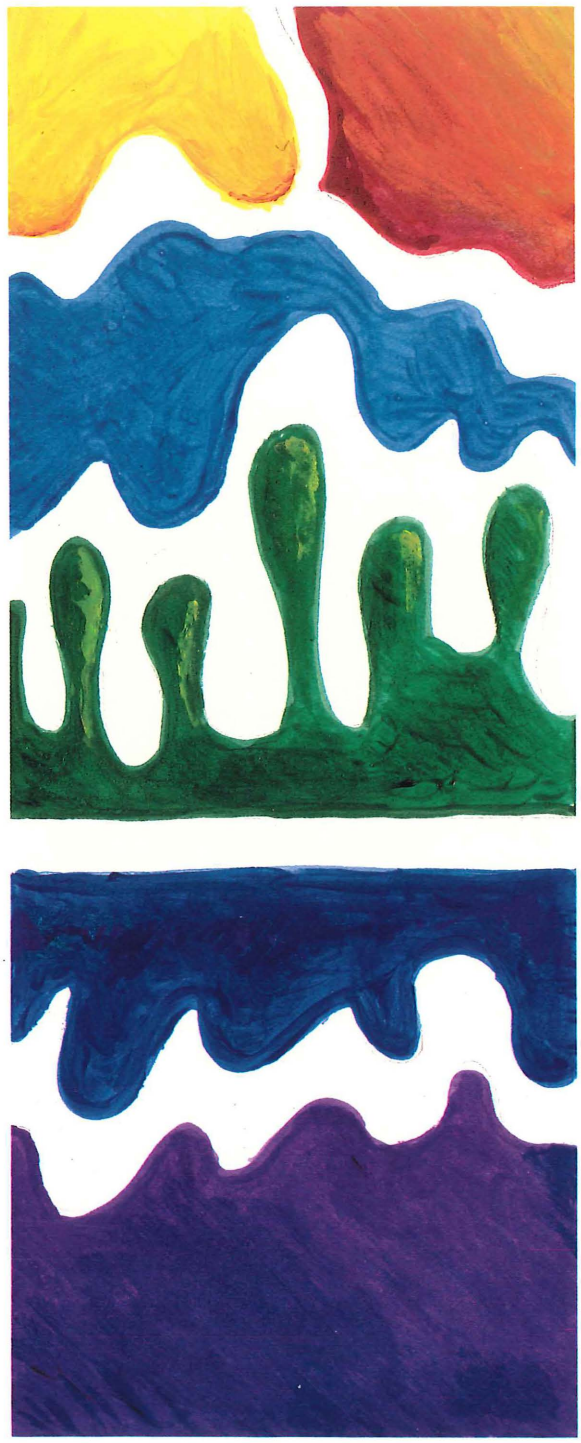
Dialogue

Staff and writers of Dialogue

DIALOGUE

A Journal of Commentary and the Arts



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DIALOGUE

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E D I T O R I A L

In the course of growing up, most children experience the death of a family pet. Though the passing of a fish or a hamster may start a child questioning the fragility of life, neither case causes as much deep thought or sorrow as the decision to put a long-time companion, such as a dog or a cat, to sleep.

The decision to practice euthanasia on a family pet is never easy to make. When I was in junior high, my family decided to put our dog to sleep. He had lived longer than I had, and neither my sister nor I had known life without him. Instead of realizing that his life brought him more pain than joy and taking the necessary action, we kept him alive for our own sake. We did not want to be forced to deal with the issue of death and thought that the inevitable would be easier to take when it occurred if we avoided the fact that he was slowly and painfully approaching his natural end.

Sadly, this attitude is applied by many physicians to their human patients. An issue of Newsweek from a few years back features the story of Mac, a cancer patient whose athletic frame had wasted away to a sixty-pound skeleton and who repeatedly asked his caretakers to let him die. They did not heed his request. Over the course of Mac's last month, his doctors resuscitated him fifty-two times. Acting from the belief that life must be extended for as long as possible, the physicians put off Mac's immanent death even though he asked them not to. One day when she was alone with her pain-racked patient, nurse Barbara Huttmann saw that Mac was failing. Instead of pushing the button to bring the "code blue" team rushing into the room, she sat down next to Mac's bed and held his hand while he died. When she was sure that they would not be able to resuscitate him, she rang for the team so that she would not be held legally responsible for his death. "Nothing I've ever done in my forty-seven years has taken so much effort as it took *not* to press that code button," she testifies. Rather than avoiding the inevitable, she faced death and let it give its welcome relief from physical suffering.

If in the same position as Huttmann many compassionate people, I assume, would do the same. But how far are we to go in condoning euthanasia? In Mac's case, the euthanasia was passive; no one acted to bring about an early death for him. Rather, the life-sustaining action which had already been taken numerous times was this time withheld at his request.

Groups such as The Hemlock Society which lobby for the legalization of both passive and active voluntary euthanasia argue their case effectively from examples such as the one above. By pointing to the suffering of terminally ill patients such as Mac, they claim that once someone with an incurable disease or illness reaches a point where the suffering of life outweighs the benefits, he or she should be able to die in a dignified manner through either the withholding of life-sustaining treatment or by physician-assisted suicide. They point to Dr. Jack Kevorkian, inventor of the infamous

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"suicide machine," as the example of a physician who cares enough to help his patients leave life in a dignified manner when they decide they no longer wish to live.

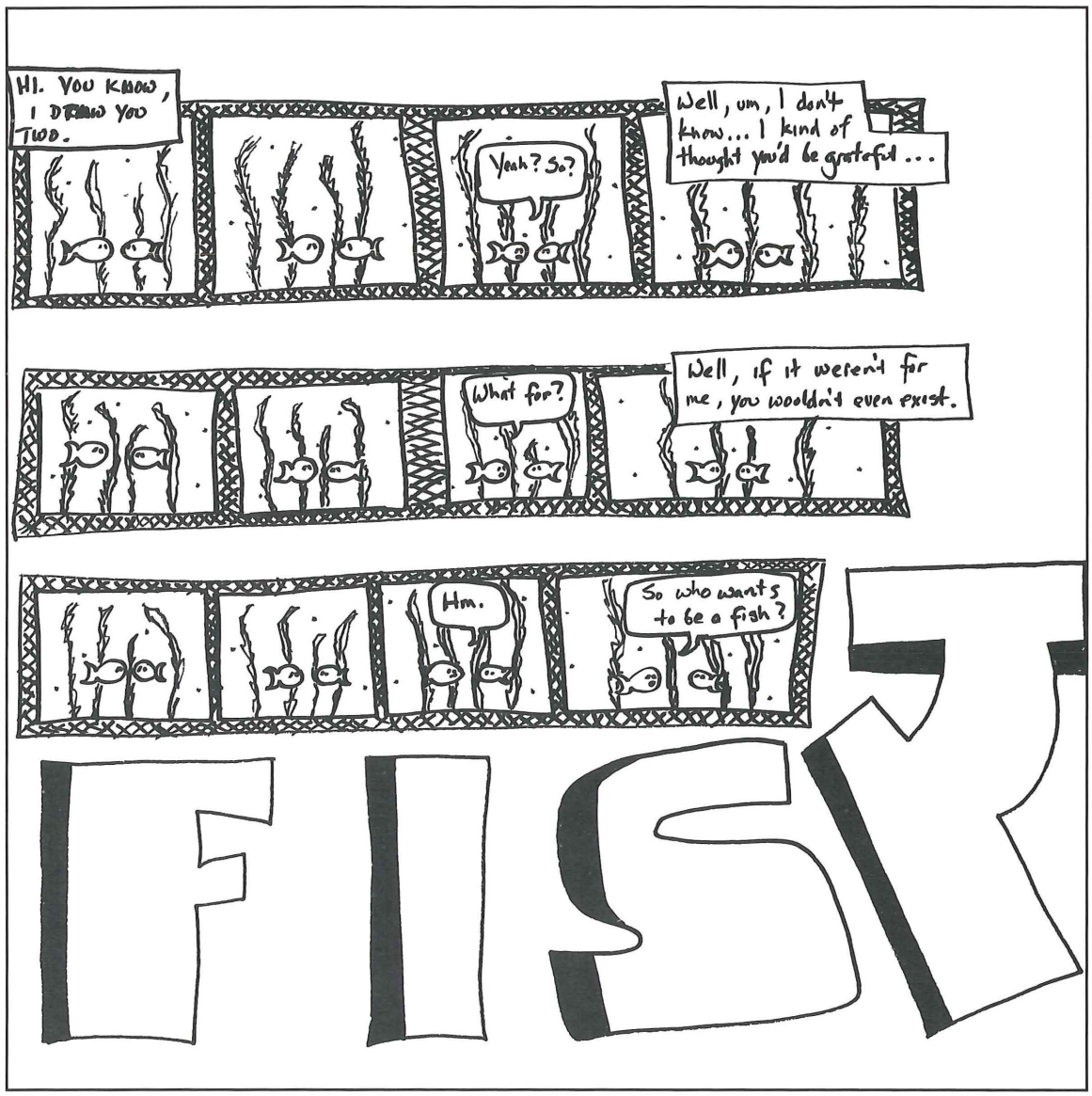
When arguing the case for active voluntary euthanasia, most proponents claim that the main objection raised by their opponents (the legalization of active voluntary euthanasia will lead to active involuntary euthanasia) is nothing more than a slippery slope. However, when we look at what has happened in the Netherlands, we see that this defense is not entirely correct.

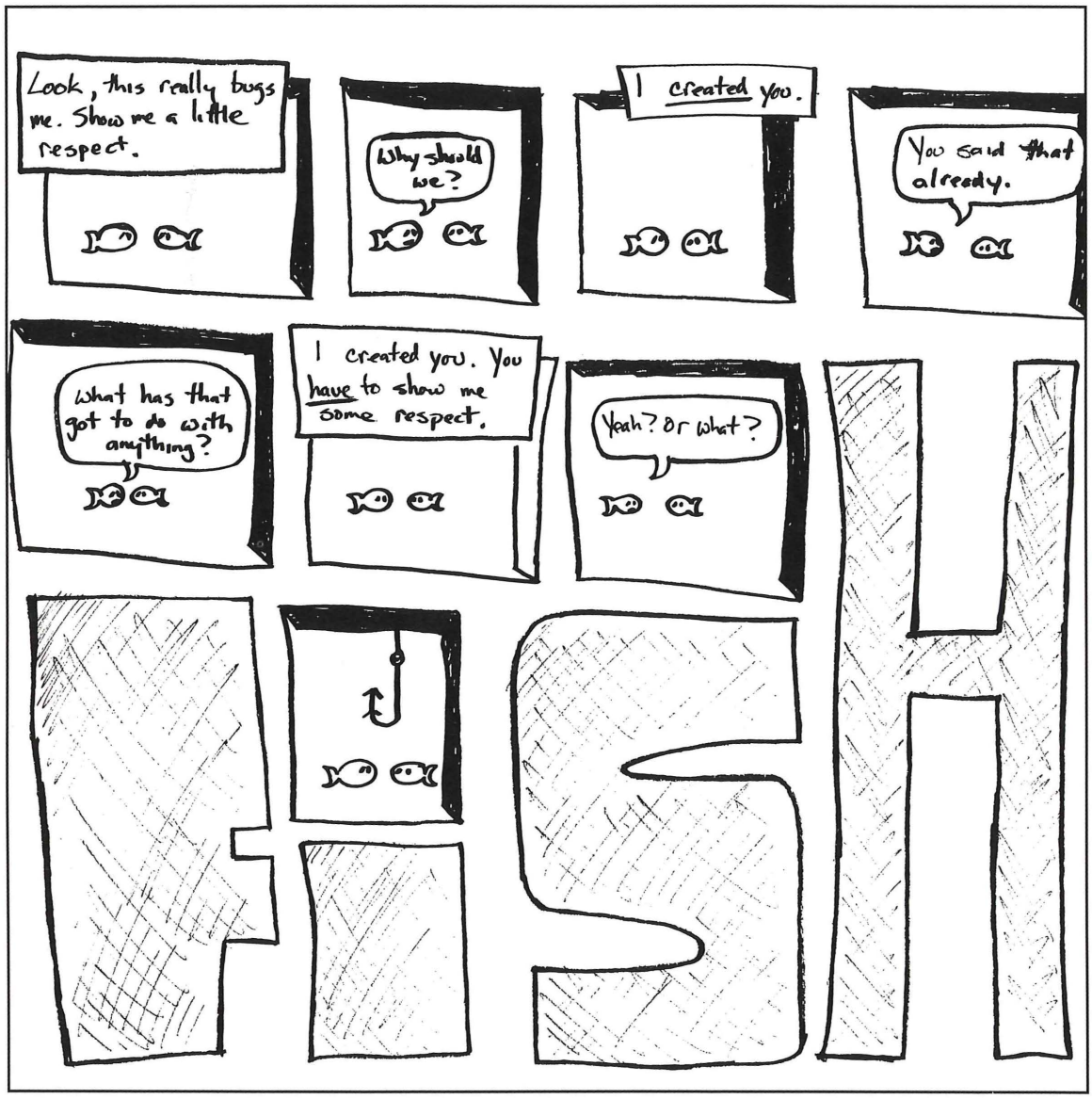
In Holland, active voluntary euthanasia is widely practiced in the health care system. Last year, it is estimated, Dutch doctors performed 5000 cases of active euthanasia. Eighty-one per cent of all Dutch general practitioners have performed active euthanasia at some point during their careers. Fourteen per cent practice between three and five cases every year, and this number is expected to rise with the number of AIDS cases. (Currently in the Netherlands 11% of all AIDS patients choose to end their own lives rather than face a long battle with the virus.)

As this acceptance of active voluntary euthanasia has worked its way into Dutch culture, it has brought with it the approval of active, involuntary euthanasia. Seventy-seven per cent of the Dutch population now support active involuntary euthanasia while one in three express "considerable understanding" for those who practice euthanasia on their father or mother without that person's consent. One doctor was recently arrested on suspicion of killing twenty residents of a rest home without their permission. The ensuing court case ended with his acquittal (even though he had admitted to five of the killings) and his receiving $150,000 in damages. In a similar case where four nurses admitted to killing (without authorization) several patients who were in a coma, an Amsterdam court found them innocent of the charges brought against them, and they ended up being praised by the press for their actions.

Now that Kevorkian's case is in the news again in America, we must begin to seriously think about the implications of condoning physician-assisted suicide and euthanasia in general. When giving thought to the matter, we must remember to consider the distinction between active and passive euthanasia and also consider the claims of those who declare that arguments against active euthanasia are nothing more than slippery slopes down which our society will never slide. If our society begins to condone active euthanasia, even if it is only approves euthanasia which is voluntary, the practice becomes one of the American mores. With its acceptance, we come a step closer, as we can see from the Dutch experience, to approving of involuntary euthanasia.

How much will you trust your children? ❑


HI. YOU KNOW, I DRAW YOU TWO.
Yeah? So?
Well, um, I don't know... I kind of thought you'd be grateful...
What for?
Well, if it weren't for me, you wouldn't even exist.
Hm.
So who wants to be a fish?
FISH


Look, this really bugs me. Show me a little respect.
Why should we?
I created you.
You said that already.
What has that got to do with anything?
I created you. You have to show me some respect.
Yeah? Or what?
SH

Epiphany

BY TACYE L. LANGLEY

Swaddled in the gray pall of winter a black train pulsated through the thin ash-colored snow, chewing at the dense air, grasping greedily at the approaching German border. Within its comfortable belly a child crouched upon a faded seat, contradicting the train's motion with a hand firm upon the armrest. Her picture books and drawing paper lay scattered on the seat beside her, and a cheese sandwich grew warm and forgotten in her palm, all abandoned for the fascination of the window pane.

The glass was thick and glazed with a watery light that held and mirrored the child's dark eyes. Leaning closer to distinguish the intricacies of her own face, she pressed her smooth white forehead to the silk-chill of the glass, but her breath, warm and smelling of sweet bread, consumed her mirrored face in a flush of fog.

Her forehead numb, she drew back and traced her name upon the window. Peering through the letter C, the child regarded the landscape.

The gray bolt of land was pocked with stubble, the ruins of the harvest, and oppressed by the low arch of the implacable, equally gray sky. The few trees that marred the uniformity of the flat land were skeletal, depthless as the child's black construction paper, twisted and contorted, their thorn-like branches pricking the heavens in gaunt agony. A row of telephone poles had grown up like branchless trunks alongside the railroad tracks, pinning together the horizontal and vertical grays. The train's whistle groaned, stark against the silence of the hardened wasteland-world.

It had not been so in Wales—Wales for a week in summer, its severity broken by the butter-yellow light, strewn with bridal daisies. Even the soil of the cannibal hills had brought forth heather and fruit trees that had made the child's eyes itch with beauty.

"Why don't you draw a picture for Uncle Pauly. You can give it to him when we get to Frankfort," suggested the child's mother, leaning over to take the remains of the sandwich.

The child nodded gravely and took up the drawing paper, leafing through it carefully until she came to a blank page. With a childish hand she sketched a tree in blue pen, hanging a lopsided circle from each branch.

"An apple tree?" her mother asked as the child paused, contemplative.

"No," said the child, carefully choosing a crayon. "A tree with green fruit."

"Oh," said the mother understanding, "a pear tree."

"Yes. A pear tree."

On the bottom of the page the child added violent strokes amid a few large flowers.

"Prickers," she explained.

"That's very good," said the child's father when she had climbed upon his lap and showed him her work. "Are you in this picture?"

She thought for a moment before adding two figures, one on each side of the tree. The one to the right seemed to have curls.

"That's me with the flowers in my hair," she said when she had finished, signing it in round capitals and writing her uncle's name (with help from her father) between the sun and a cloud.

"You wore flowers like that when you were in Chris' wedding in Wales. Do you remember?" asked her mother.

The child nodded. She had chased a boy with dark eyes and a cobbled accent around a young pear tree in a game of late afternoon tag. But the game had ended when, too curious, he had fallen into a patch of nettles hidden by a canopy of wildflowers.

The child folded her picture, placing it in the safety of her pocket. Leaning against her father's blue shirt, she listened, growing heavy-eyed, to the even pulse of his heart.

She awoke to the jostling of passengers and the rumbling of her father's conversation in his chest. She sat up and looked about at the emptying passenger car.

"Is this Frankfort?" she asked. "Are we there? Can you see Uncle Paul?"

"You had a very long nap," said her mother, helping the child into her blue quilted coat. "Take your straw bag and let's go find him."

Under the gray glass roof of the station, the air was dense with humidity and dulled with urban grime. Clutching her mother's hand and the bag filled with books and papers and a worn blue rabbit, she searched the crowd for a familiar face among the anonymous raincoats and gray-lined features. Disembodied voices stained with guttural articulation spiralled like pigeons around her, punctuated by the descant

of the intercom. A black raincoat swept past the child, accompanied by a mottled German Shepherd who seemed to be stalking the gloom, its muscles tense against the black harness that bound its chest. Grasping her straw bag more tightly, she twisted the straps until the blue glass eyes of the stuffed rabbit faced away from the retreating figure of the dog.

"There he is," said the child's mother, sighting a meticulous figure. "Finally."

Darkness had long ago conquered the city of Frankfort, draping over it not the rich healing blackness of the countryside but a pall blotted in a lavender haze made artificial by the brash street lights. At a narrow rain-pocked restaurant, the uncle had chosen a table in the front window. Surrounded by potted plants and brass artifacts, he ordered hors d'oeuvres and began to map out his plan for their trip to Switzerland.

"I thought we could have Christmas dinner atop the Schilthorn. There's a wonderful revolving restaurant there I thought we could try...."

The plants to either side of the child were luminously green. Pulling at one of the leaves, she twisted it around her finger. It was not until a venous wire pricked its surface that she realized that the plants were only plastic.

"Don't touch the plants," her uncle snapped, interrupting his conversation. "You'll kill the leaves."

The child unwound the leaf, returning it to its original shape. Its color seemed garish and waxy now, made to appear natural only by fault of the gloom. Her hand retreated to her pocket and grasped the rough paper of her drawing as she stared evenly at her uncle.

"Do you see those prints on the wall?" asked the mother, pulling the child up on her lap. "Those are prints of very famous Rembrandt paintings. The one on the left is called *The Anatomy Lesson* and opposite it is *The Night Watch*." The gray death-drained corpse and the girl in the golden dress leapt from the darkness at the child.

"What is that?" she said, pointing to the object beneath the prints.

"I think it's a fish fossil," her mother explained. "A stone skeleton of the fish. You may touch it if you're gentle. Run your finger over the bones."

Leaning closer to the wall, the child pressed a cautious finger to the

ridges of the vertebrae. Her uncle looked over his wine glass, uneasy. Tracing the curve of the fish's form, she felt the chill of the stone and withdrew her hand, returning it again to her pocket. She pulled out the drawing and placed it on her knees so that it was veiled by the tablecloth. The folded lines had seared a shadowy cage over the crayon scene, cutting the depiction of herself in two.

Laying her head upon her father's arm, she watched the darkness beyond the window. The restaurant threw out a liquid light like dishwater upon the street, allowing it to trickle into the cobblestones before it was consumed by the rapacious night.

On the train to Switzerland, the child opened her drawing book and chose a brown crayon. She began to sketch a room as voices reechoed in her mind.

"Shall I tell you the Christmas story?" one of the girls had said to the child, kneeling beside the creche.

Left alone with the family who rented her uncle a room while the three adults attended the ballet, the child had amused herself by investigating the Christmas decorations. She had just picked up the wooden figure of the Christ child when the girl entered the room.

Without waiting for a response, the girl seated herself next to the child and began to recount the ancient story.

"This is Mary," said the girl, pointing to a haloed figure beside the manger. "And here are the shepherds and Joseph—"

"I know this story," interrupted the child, placing the infant figure back upon the manger. "But you can tell me about the star. That is my favorite part."

"Another picture?" asked her father, interrupting her thoughts.

"I'm drawing a star," said the child, choosing a yellow crayon.

The girl had taken a white candle from the center of the Advent wreath upon the table. She carefully drew the matchstick across the stone hearth, and it ignited into flame with a hiss and a flicker, dancing in the child's eyes before it was set to the candle.

"That shall be our star," said the girl, placing it upon the stable roof. "But you shall have to pretend to be one of the wisemen because we're missing one."

"Is this a table or a bed?" said her uncle, looking at her work.

"It's a stable," answered the child, and she colored more darkness

in around it.

"Shouldn't you have more color in this picture?" he persisted. "Here, I'll show you. Add some green—"

"No," said the child. "This drawing is dark—like Rembrandt in the restaurant." Without a word, the uncle returned to his newspaper.

Christmas Day upon the hoary heights of the Schilthorn was strained with sun against the snow. Spat out upon the summit of the mountain by a cable car, they trudged toward the revolving restaurant, pilgrims in quest of culinary experience, knees wet with snow. Skiers dove past them, crying like birds, disappearing only ten feet below them. The child grasped her father's hand, fearful of the abyss, unable, even with the prodding of her uncle, to look into the gaping jaws of the valley.

High atop the world, as in an eagle's nest, she dared at last to release her father's hand. Stripping off her boots, she spilled snow upon the wine-red carpet and watched it melt into a dark stain.

"Must you do that?" her uncle snapped, after he had ordered the duck. "Have you no sense?"

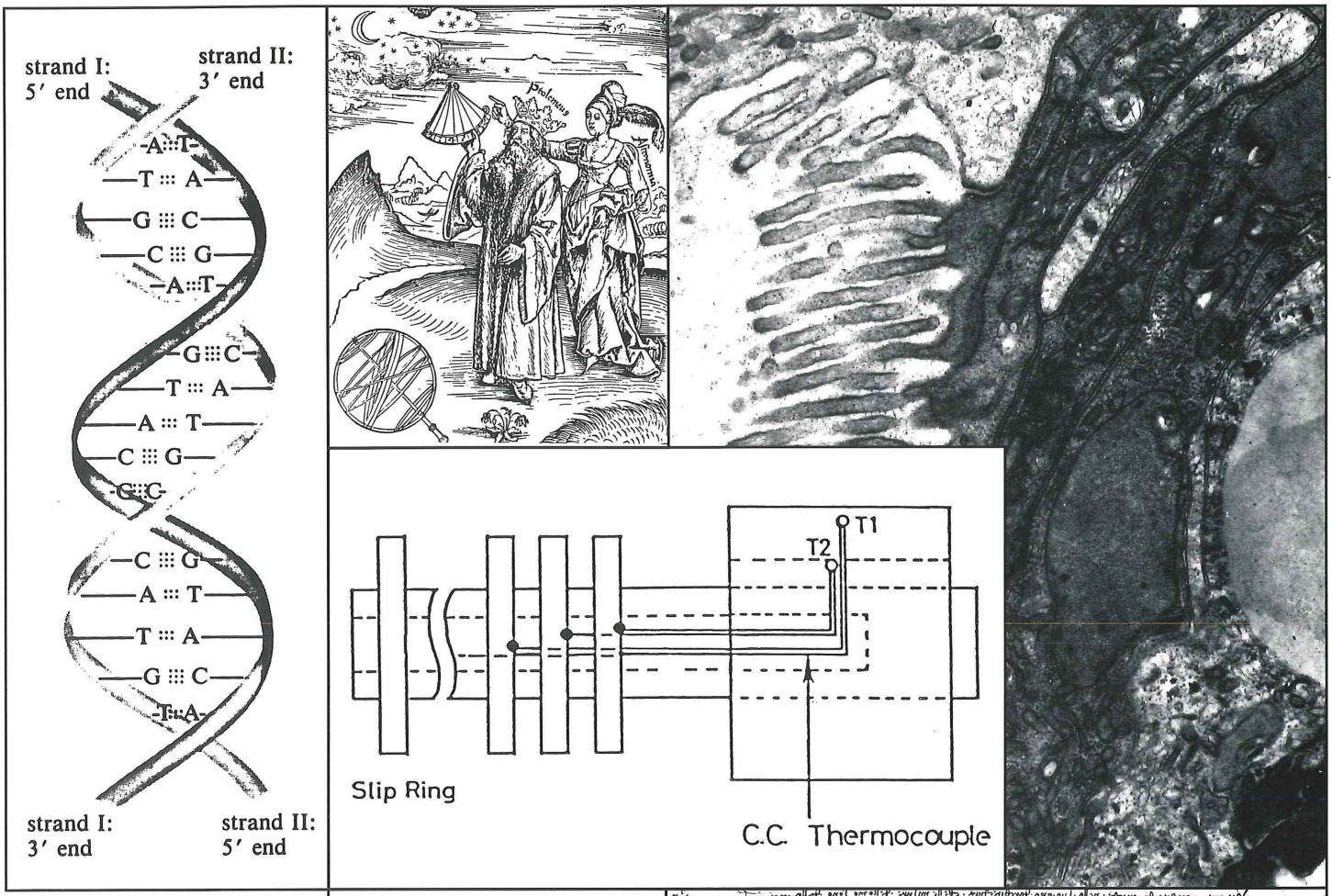
Safe again beneath the coffee table in her parent's cold hotel room, the child closed her drawing book and breathed in the darkness, thinking of the vision of light.

"Will I remember this?" she wondered, succumbing to sleep.

There had been a service in the valley-cradled village that Christmas night. They had heard bells rippling over the snow, wafting carols among the white-boughed evergreens, and had followed the crowd of tourists and natives to its source. At the edge of the village perched a small white church, throbbing with light even against the desperate stillness that ached through the darkness. The fire from the candles in the window blossomed out upon the world, banishing shadow from the snow and sparking specks of crystalline light that flared out to touch the heavens. From higher up the mountain the child heard a man call out, "Follow me!" and his voice echoed and reechoed like the pulsation of a star.

"Wait," called the child as the adults began to drift back into the night. Reaching into the pocket of her coat, she drew out a crumpled paper. "This is for you, Uncle Paul," she said, handing it to him. "I thought you'd like it." ❑

Clutching at Straws (left)
2 Door Fear (right)
Kirk Datema


strand I:
5′ end
strand II:
3′ end
A ::: T
T ::: A
G ::: C
C ::: G
A ::: T
G ::: C
T ::: A
A ::: T
C ::: G
G ::: C
C ::: G
A ::: T
T ::: A
G ::: C
T ::: A
strand I:
3′ end
strand II:
5′ end
Slip Ring
T1
T2
C.C. Thermocouple
Metallic emitter
Light
Collector
Sensitive ammeter
A
V
10 V supply

Snubbing Science:

The Necessity of Scientific Literacy

AMERICANS EXALT THE BENEFITS OF SCIENCE BUT SIMULTANEOUSLY DECLARE IT TO BE BORING, IMPERSONAL, AND INCOMPREHENSIBLE. WHAT'S SO DANGEROUS ABOUT A 94% RATE OF SCIENTIFIC ILLITERACY?

BY REBECCA FALB

Five hundred years ago Spanish society mocked Christopher Columbus for thinking that he could sail *around* the world. They all knew he would fall off its edge. Two hundred seventy years ago Bostonians condemned famous witch-hunter Cotton Mather for having his children inoculated against the dreaded disease, smallpox. He deserved to be damned for interfering with God's willed pestilence, they whispered.

Today we smugly laugh at such ignorance. Of course the earth is not flat. Of course vaccinations are necessary. These are obvious, elementary truths of science. Our society has so advanced beyond these basic questions of science that we have the power to create artificial limbs, orbit the earth for months, and program a missile to strike an exact target.

Although we possess these capabilities, do we deserve to be confident in our advancement? Do members of American society generally have a much more sophisticated knowledge of science than the people of Columbus' generation, or Mather's?

Absolutely not. Though surrounded by electrical appliances, automobiles, airplanes, calculators, and medical technology, most Americans have a meager understanding of science. A 1988 survey conducted by the National Science Foundation reveals that less than one half of adult Americans know that the earth revolves around the sun in one year (Cowley et al. 56). Even those who claim to be educated exhibit a disgraceful lack of scientific knowledge. Robert Hazen and James Trefil, authors of *Science Matters: Achieving Scientific Literacy*, report that at the 1987 commencement celebration at Harvard University, only two of twenty-three (8.7%) randomly chosen graduates could correctly explain why it is hotter in summer than in winter. Hazen and Trefil further state that just 17% of US college graduates and 25% of those with graduate degrees have an even rudimentary knowledge of science (24).

What these statistics provide is not evidence for confidence, but for alarm. Americans exalt the benefits of science—swift transportation, efficient production, protection against disease, effective weaponry—but simultaneously declare science to be boring, impersonal, incomprehensible to the average human, and reserved for social outcasts (ie, "geeks"). What is even more paradoxical is that while the United States prides itself on being one of the most

technologically advanced nations in the world, many of its citizens, including the educated, are perversely proud of their scientific ignorance. We are not scientifically sophisticated, but rather, scientifically illiterate.

The American Association for the Advancement of Science (AAAS) has determined that a scientifically literate person should have:

—A familiarity with the natural world—an ability to recognize both its diversity and underlying unity.

—An understanding of key concepts and principles of science.

—An awareness of the interdependence of math, science, and technology.

—A knowledge that science, math, and technology are human enterprises with both strengths and weaknesses (43).

Jon D. Miller of Northern Illinois University reports that only six percent of Americans meet these criteria, leaving 94% of the population scientifically illiterate (Culliton 600).

Why be alarmed by these numbers? For the simple reason that scientific knowledge is directly related to everyone's daily life and involvement in the world's community. Science is an integral component of any program of education and is necessary for responsible decision-making in a society as technologically based as the United States. We now know that the earth is round, but what about questions involving the age of the earth and its creation? Vaccines have proven to be tremendously valuable in preserving life, but what of debates concerning life-support systems and euthanasia?

No less significant is the value of science as a means of fascination. To understand how the human body heals itself and to observe stars—this is not dull information but the powerful excitement of life.

In order to fully address the problem of scientific illiteracy, its origins must first be analyzed. What caused people to stop studying science and consider it unnecessary to the educated mind? Why does society question the value of science and fear its exploration? Why is science regarded as intimidating, unfathomable, boring, and impersonal?

The tremendous growth of science in nineteenth-century America initiated the development of a scientifically ignorant society. In the Colonial era, many American leaders were men of science—Benjamin Franklin, for example, was an inventor and experimenter and Thomas Paine was an engineer. Once the Colonies became an independent nation, the quest for scientific knowledge became even greater as Americans looked to science for economic progress, to control and make use of the resources of their vast land, and to spread democracy. The "American Lyceum," a popular lecture series, was established in the early part of the nineteenth century for the teaching of biology, astronomy, chemistry, geology, and physics to the general public. The study of science was pursued by everyone for both material gain and social equality.

Around 1850 this attitude of "science for all" changed dramatically when a group of American scholars who had been studying science in sophisticated European schools returned to the United States. In "Science and American Social Thought," Charles Rosenberg reports that these scholars condemned the popular study of science in the United States and claimed that when science was made appreciable to a public audience it lost its "essence"

ARE YOU LITERATE?

ONE MEASURE OF SCIENTIFIC LITERACY IS BRUTE FACTUAL KNOWLEDGE. TEST YOURSELF BY ANSWERING THE FOUR QUESTIONS WHICH APPEAR ON THE NEXT PAGE. THE ANSWERS ARE ON PAGE 21.

and became "clap-trap." They also ordered that the duty of a scientific scholar should be to add to the body of knowledge and not to disseminate knowledge (156).

This superior attitude contributes to what Richard Falb, who holds a PhD in chemistry, terms "elitism," an attitude that exists in the modern scientific world. Falb states that elitism causes some scientists to regard themselves as "supergeniuses" endowed with the rare gift to understand science. In response, society regards scientific information as incomprehensible to the average individual and promotes the idea of science as only for those who are "science-minded." Consequently, science is removed from the realm of society.

As the popular study of science slowly diminished in the mid-1800s it also became isolated from general education. Michael Hall and David Van Tassel, editors of *Science and Society in the US* contend that as science progressed through the years of the Civil War and as scientists continued to add to the body of scientific knowledge, science became more specialized. This specialization isolated science into particular fields of study, and science became disengaged from the forum of general education (30). Therefore, an educated person of today is expected to be acquainted with the works of Shakespeare and know who George Washington was, but scientific knowledge is reserved for scientists.

After the Civil War, scientific pursuit continued to escalate as America entered the Industrial Age. Because industry was powered by invention and technology, many nineteenth century humanists such as Mark Twain and Walt Whitman became disenchanted with the "materialistic determinism" of science (Hall and Van Tassel 33).

As science advanced into the twentieth century, this disenchantment evolved into what René Dubos terms the "new pessimism" found in most because science could solve some problems, but not all, society became pessimistic about its true value.

Although historical in origin, scientific illiteracy is also fostered by genuine fears, such as the fear of the unknown. John Paulos, author of *Innumeracy*, links scientific illiteracy to the comparatively great problem of mathematical illiteracy. Both inadequacies, he states, are related to a "natural psychological response to uncertainty" (5). People avoid science because it delves into the unknown, uncertain areas of life and forces them to confront their preconceptions, which is sometimes an unsettling experience. The Catholic church condemned Galileo for teaching that the earth revolved around the sun, rather than the sun around the earth. How frightening to think we are not the center of the universe!

1. ELECTRONS ARE SMALLER THAN ATOMS AND ORBIT A NUCLEUS. ***T F***

2. LASERS FOCUS SOUND WAVES. ***T F***

3. THE CONTINENTS ARE MOVING. ***T F***

4. THE EARLIEST HUMAN BEINGS LIVED WITH THE DINOSAURS. ***T F***

Exploring the unknown also causes some to fear that deciphering the mysteries of the earth will diminish their appreciation of its complexities. People seem to prefer mystery to scientific discovery, although the latter is vastly more amazing. An even greater fear is that an understanding of these complexities will lead to the control of the world by science. Dubos notes a "paradox of fear" in which past societies were afraid of their ignorance because they could not control their world. Today, people are afraid that the vast amount of scientific knowledge will harmfully dominate the earth (62). The possibility of nuclear devastation or the establishment of Aldous Huxley's Brave New World causes condemnation of science and a separation of society from the body of scientific knowledge.

Social factors also nourish the growth of scientific ignorance and strengthen the separa-

tion of society from science. In the January 1991 *Atlantic*, Robert P. Crease and Nicholas P. Samios argue that science is negatively represented in American culture due to the abundance of scientific achievement. They write that the beneficial effects of science are so integrated into society that they are taken for granted while "pernicious applications" of scientific discovery are taken as representative of all scientific activity (82).

The stereotypes associated with those directly involved in science further contribute to this negative representation. The dominance of the white-male-scientist stereotype discourages many women and minorities from taking an interest in science. The National Science Board reports that in 1986, only 13% of the scientific work force was female and only 2.2% black (Norman 803). This stereotype is often instigated in the educational system in which males are typically more encouraged to study science while females are directed toward English or social work.

An additional and, most likely, more discouraging stereotype is that of a scientist as socially inept and impersonal. The well-known image of Dr. Frankenstein could hardly be called inspiring. No one wants to be a "science nerd"—calculator, Bunsen burner, and a handful of pens, slaving away in the dark recesses of a laboratory, separated from life. Society views these individuals with pitying distaste and then quickly retreats to the real world where science doesn't matter. "We'll call on science when we need to cure a disease or win a war," is the attitude taken by many Americans

This regard of science as impersonal and unrelated to daily life is exactly what makes scientific illiteracy a problem in need of urgent attention. Science is concretely personal. It is not only involved in our homogenized milk and fuel-efficient cars, but it is also imperative to the survival of the United States economy and a central figure in many government policy issues that affect every citizen every day. George E. Brown, member of the US House of Representatives, states that scientific literacy is "as vital as lingual, historical, or cultural literacy and that those who master science have potential to wield immense power over those who do not" (340).

To master science in one's personal life simply means to wisely apply common scientific knowledge to daily decisions. Industry's exploitation of consumer scientific illiteracy is common. Although society tends to shun science, the caption "scientifically proven" holds such mystery and importance that industry uses scientific "fact" to sell an abundance of products. Any drug store beauty counter will be chock-full of creams claiming to be scientifically proven to remove fat or wrinkles. Advertisers bill shampoos as containing special scientific ingredients, each with an impressive, technical name, and consumers are impressed—the shampoos sound "scientific" and therefore must be good.

Food marketing is an area especially vulnerable to industry exploitation. For example, producers of a certain brand of peanuts advertise on their package that these peanuts contain zero percent cholesterol. This information is given for the benefit of those who wish to avoid cholesterol for health reasons. However, this same small bag of nuts also contains seven grams of saturated fat which is just as harmful to a person's heart as cholesterol. The advertisers of these peanuts appear to have good intentions by insinuating that their peanuts are healthy, when in fact, they are taking advantage of the fact that most people are aware of the much advertised dangers of cholesterol, but not of saturated fats.

Another point of exploitation is in that area which Paulos terms the "pseudosciences". He claims that many Americans spend thousands of dollars every year investing in astrological charts, fortune-telling, and tarot cards, despite the very illogical and unscientific basis of these practices (96). Think of the vast amounts of money wasted on the "scientifically proven" drivel contained in every supermarket tabloid.

Concerning the matter of pseudosciences, Christians must be especially aware of the importance of scientific knowledge. Paulos, along with many others who are studying scientific illiteracy, include Christianity in the pseudosciences and belief in Biblical fact as evidence of scientific illiteracy. But science and Christianity are not mutually exclusive. God commands us to delight in the glory of His works, and science is a powerful tool for understanding the wonders of creation. Science does not question God but gives further evidence of His greatness. Rather than shun scientific learning, Christians should seek the integration of science and Christianity. Failure to do so leaves the Christian community vulnerable to the dominance of a human-based, rather than God-based, science.

Lack of scientific knowledge also renders a person vulnerable to misinterpretation of information and bad judgment. Paulos' diagnosis of American innumeracy contributes to the scientifically illiterate decisions that people make in their personal lives. He states that typically, innumerate people tend to have no grasp of percentages or probabilities (111). Falb cites evidence of this in the scare in the late 1970s concerning minute amounts of formaldehyde, believed to cancer-causing, found in housing insulation. Homeowners spent tens of thousands of dollars to remove and replace the insulation in their homes, yet many continued to smoke, ignoring the fact that smoking claims approximately 300,000 lives every year.

Apart from the necessity of scientific knowledge in personal life, science also plays a fundamental role in the United States economy. In a 1989 speech to the Massachusetts High Technology Council, Lester Thurow, Dean of the Massachusetts Institute of Technology Sloan School of Management, warned that the issue of adequate scientific and technical education is a matter of life or death with respect to the United States' survival as a major world economy. He explained that in 1992 with the formation of the European Common Market, the US will no longer be the world's single largest economy. Every major economy will have to compete in areas of high technology such as microelectronics and biotechnology. Thus, literacy in science must be demanded in order to effectively compete and retain a strong economy.

Morris Shamos, emeritus professor of physics at New York University, challenges Thurow's argument. He states that Americans can be economically strong without specific technical training. Americans have learned to work VCRs and movie cameras in their own homes, and he contends that learning to master an industrial robot would be much the same. Shamos also suggests that on-the-job training would further eliminate the need for any technical background (Cowley et al. 54).

Despite Shamos' confidence, Americans are already screaming about the economic competition between the United States and Japan, a country in which the fiftieth percentile of senior students compares to the top five percent of American high school seniors. Thurow states that Japanese industries demand a demonstrated level of competency in math and science, which is perhaps responsible for their industrial efficiency. If the United States economy is to successfully compete against Japan and the Common Market, we need sufficient math and science education prior to employment.

*1. **T.** ELECTRONS ARE SMALLER THAN ATOMS AND THEY ORBIT A NUCLEUS.*

*2. **F.** LASERS FOCUS **LIGHT** WAVES.*

*3. **T.** THE CONTINENTS ARE MOVING.*

*4. **F.** THE EARLIEST HUMAN BEINGS LIVED **AFTER** THE DINOSAURS.*

Encompassing the need for scientific literacy in personal and economic situations is the demand for scientific knowledge in the formulation of public policy by the United States government, policy that affects the living and working environment of everyone. As most of those who are active in government are trained in law and business, voters have a responsibility to be scientifically literate in order to knowledgeably participate in government action regarding science.

Many policies involve the control of scientific research. William Haak, who holds a masters degree in chemistry, contends that Americans want the benefits of science but are unwilling to allow research. People are demanding a cure for AIDS and microbes to eat oil spills, but they are skeptical of scientific investigation. No longer is science conducted in small, individual labs. It has emerged as "big-science," requiring huge facilities and millions of dollars. If we understand and appreciate science and participate in its regula-

tion, we have no need to fear its development.

Other public issues such as the development of alternative energy sources, environmental preservation, and weapons technology also demand adequate scientific knowledge. Much of the public debate concerning these matters is permeated with hearsay and myth. Falb contends that part of the problem in developing alternative energy sources is that voters have no true understanding of the proposed options. "People equate nuclear energy with atomic weapons. Does anyone really know what 'nuclear' means?"

Along with governmental regulation of research and development, voters must also aid in policies concerning morality in science. Genetic engineering, for example, raises many questions concerning its use as a manipulator of life. Visions of another race of Hitler's Aryans marching down the streets of Hometown, USA, cause some Americans to hastily condemn genetic experimentation. However, genetic engineering has produced the technology for the mass-production of insulin for diabetics and promises possible cures for many genetically-related diseases. Voters need adequate scientific knowledge to responsibly distinguish between the beneficial uses and harmful practices of science.

IF YOU WERE NOT ABLE TO ANSWER THE QUESTIONS ON THE PRECEDING PAGE, YOU COULD BE SCIENTIFICALLY ILLITERATE. LESS THAN 35% OF AMERICANS ARE ABLE TO CORRECTLY ANSWER ALL OF THEM.

Achievement of responsible scientific literacy demands a new educational approach. The main reason for students' rejection of science classes is boredom with dreary memorization of facts and formulae that seem unrelated to everyday life. Both proposed projects at the forefront of educational reform in science, Project 2061 and the New Liberal Arts Program, sacrifice formulae and rote memorization for a "hands-on" approach to science.

Project 2061, proposed by the AAAS and aimed at kindergarten through twelfth grade students, functions on the premise that schools do not need to teach more science, but less in order that it can be taught more efficiently and thoroughly. Instead of focusing on specific vocabulary and procedures, ideas and thinking skills are emphasized. Students are instructed in certain scientific values necessary to applying science to every aspect of life and are encouraged to view science as an influential "social enterprise." Classroom demonstrations strive to be creative and practical hands-on experiments are designed in an attempt to teach students that science is not only to be learned but lived (AAAS 44-45).

Similarly, the New Liberal Arts Program, designed to teach science to non-science college students, focuses on the use of modern technology as a vehicle for motivating and guiding students. Classroom demonstrations in forensics and lasers stimulate student interest and attempt to communicate concepts without copious equations and technical explanations. Students learn to understand scientific options and develop skills in decision-making, rendering them fit to live as scientifically literate citizens (Pool 157-158).

Another aspect of educational reform in science is that of improving the position and quality of science instructors. Hazen and Trefil declare that at today's universities, there is almost no incentive for a professor to teach undergraduate science. Most instructors are caught in the "publish-or-perish" syndrome (26). Professors should be encouraged to teach rather than to devote most of their time to research because as Representative Brown notes, a scientifically literate community will be able to properly allocate federal funds for the benefit of science. In failing to educate society, the science world "risks destroying its basis of

support" (340).

Hazen and Trefil also comment that according to tradition, science professors know a great deal about their area of expertise and teach mainly from that specialized field. Professors, rather, need to communicate the idea of the universe as an interconnected system of all the sciences in order to ensure a general scientific knowledge among students. In order to understand the present controversy concerning the "greenhouse effect," for example, a student needs to know some ecology, some chemistry, and some physics (26).

The position of science instructor also needs to be more financially attractive in order to secure quality science teachers. Thurow observes that in the United States, most high school science and math teachers come from the bottom 10% of their college classes. In Japan, high school teachers get twelve percent more than an engineer's starting salary. Therefore, the schools get better teachers.

For those removed from the educational system, an increasing number of literary journals, news magazines, and household magazines are attempting to print scientific articles in understandable terms. Television news programs often have a daily or weekly science story and many newspapers carry a science section. There is an abundance of interesting, practical science information that is readily available to the public.

We don't want society in 2200 to shake its head at our hasty, ignorant condemnation of some highly valuable scientific achievement. We have no cause to be scientifically illiterate and no reason to be proud of our disabling lack of information. The responsibly of developing an understanding and appreciation of science must be accepted by both the public and those directly involved in scientific work. If we ignore science, we risk exploitation, decline, and faulty judgment, and we deny ourselves exposure to a fascinating body of knowledge. ❑

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To Grass
(growing tender)

I am a weed.

Bent, broken
Wished upon and blown
Away with a sigh.

I am the root of the dandelion
Bitter and stubborn.

Amy Z. Olson

Lisa Strom

American

I eat healthy
portions of pain

drain teacups
of sorrow

I chew and swallow
and wipe my mouth

still hungry
for tomorrow.

Amy Z. Olson

Conrad Bakker

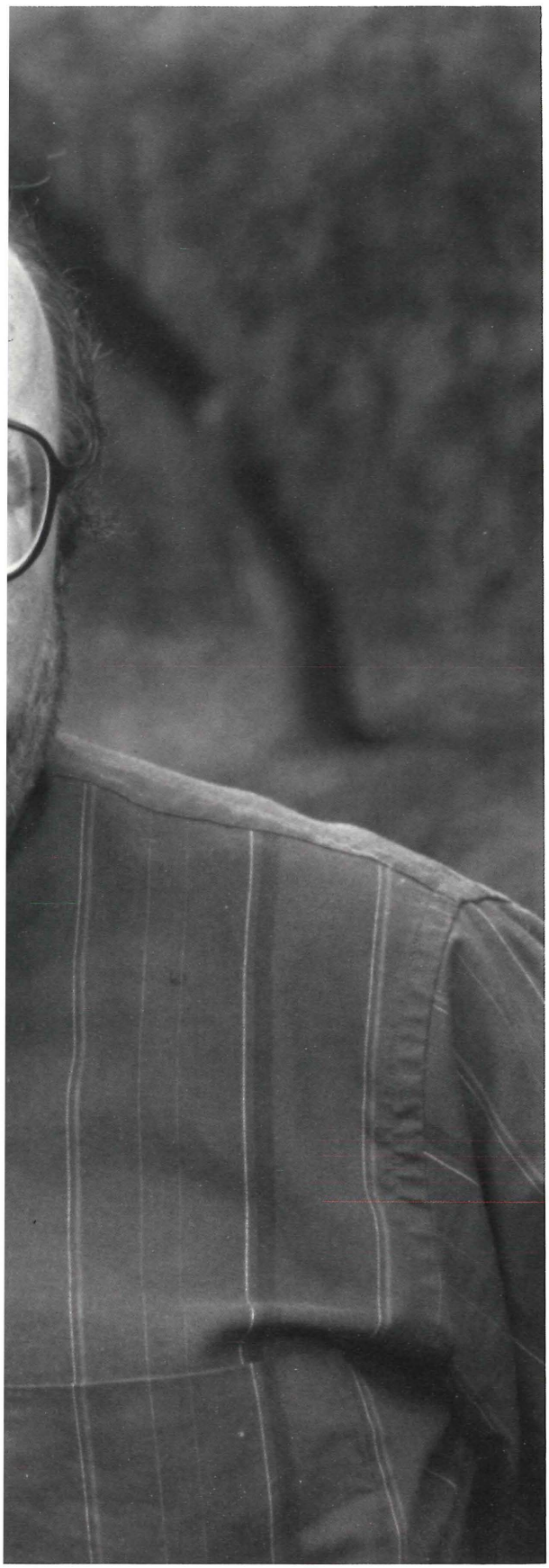
INTERVIEW

Harry Olmstead is a man of surprises. Olmstead is current

Editor's note: The following interview was conducted on February 5, three weeks after the air war with Iraq started. Though Harry Olmstead's predictions about the war proved false, the information he gives about Selective Service remains timely. Since the date of the interview, Olmstead has come under criticism by members of the Grand Rapids community for his outspoken stance against the war and his efforts to educate students of their rights before Selective Service.

By Nathan Bos

chairman of the Grand Rapids draft board, a controversial position during any war. Harry Olmstead is also a Quaker who believes in the inherent evil of all war. In the event that a draft is enacted, any Grand Rapids resident who is called to serve but wishes to seek a deferment will see Harry Olmstead and four other Selective Service volunteers when he goes before the draft board to plead his case. But if you want to see Harry Olmstead sooner than this, your best bet would be to go downtown to the Federal Building where Olmstead and others have been marching every Saturday to protest the United States' involvement in the Persian Gulf.



When I walked over to the lobby of Calvin's library, where I had arranged to meet Harry Olmstead, I kept in mind the description of himself he had given me: red hair, medium height, and wearing a hat. I also had in mind a picture of what I thought a man in his position would be like: clean-shaven, well dressed, and reserved. I walked right by the first red headed man wearing a hat that I saw in the lobby. His hat looked like Indiana Jones', and his two day beard added to the cowboy image. Luckily for me, I suppose, redheads are somewhat rare in Calvin's library, and I eventually got back to the fedora-clad man who was, in fact, Harry Olmstead.

My expectation that a man in his position would be serious and reserved was also quickly shattered. Olmstead's quite uncensored commentary was interspersed with loud, abrupt laughter. Soon after we started going over the particulars of the draft procedures, I noticed him referring to Selective Service's database as "Big Brother Computer." He mirthfully explained that this was, of course, just his personal name for it. That episode gave him the second biggest laugh of the interview; the first was after stopping halfway through the explanation of his theory of man's evolution away from war to exclaim, "Wait! I can't talk about evolution here, can I?"

Olmstead, who became a Quaker at the age of thirteen, has served as chairman of the Grand Rapids draft board for eight years. When he applied for the position, the issue of his being a pacifist never came up for discussion. Olmstead volunteered to work with Selective Service partly so that future draftees applying for conscientious objector status would have an understanding ear on the draft board. During the Vietnam War, Olmstead had been drafted and had appeared before a draft board consisting entirely of military veterans, "gung-ho Rambos who felt that someone who did not want to serve in the military was unpatriotic to his country and a real wimp." (Olmstead applied for draft deferments as a conscientious objector and also as a 4F—someone who is unfit for military service. He received the disability exemption, so his CO claim never was heard.)

"When you have a draft, what you're doing is taking all those eligible young people to serve in the army, to serve in infantry, to serve on the front lines. You're replacing the fallen bodies, literally."

Olmstead bristled whenever he thought I was implying that he joined the draft board somehow to sabotage it, or that he will play loosely with the draft laws. He was quick to explain that he joined the board as a "fulfillment of a patriotic duty to my country." Olmstead was also emphatic in our interview that he was not speaking to me on behalf of Selective Service, but stated repeatedly that he was representing the Institute for Global Education and the Grand Rapids Friends Meeting (the Quakers).

As a twenty-two-year-old male, one of my first questions to Olmstead was whether he thought there was going to be a draft in this war. His answer was an unequivocal "yes," and he cited as evidence the pushing up of the draft board's annual meeting from its usual spring date to a weekend in early February. I asked him about women being drafted, and he also seemed to think that this was a distinct possibility. "Currently there is no provision for women to be drafted. My personal opinion, and based on the law of common information, is that women will be drafted. Probably the best scenario there is the fact that the National Organization for Women approximately ten or twelve years ago was asked the question of whether they would support a draft for women. Of course they said, I'm sure very reluctantly, that they would support a draft for women in terms of equality for women. So the chances of women getting drafted are just as great."

Olmstead made no attempt to allay any of my fears whatsoever. I had heard from someone else that if there would be a draft, it would be mostly for support personnel. Supposedly the army needs to have something like eight support personnel for every soldier in the field. But Olmstead was almost eager to correct me on this: "I must remind you that when you have a draft, what you're doing is taking all those eligible young people to serve in the army, to serve in infantry, to serve on the front lines. You're replacing the fallen bodies, literally."

Most students are aware by now that there is no longer any provision for long-term student deferment; a student who was called up would be allowed to complete his current academic year and then would be conscripted. Harry Olmstead expects it to be much tougher to get off on a hardship case as well. In Vietnam, having a wife and child was an almost automatic deferment. But Olmstead believes that the large number of single women in the workforce have disproven the need for a husband at home; Olmstead expects that his and every other draft board will have to look very carefully at any hardship claims.

After hearing his gloomy predictions for the draft he anticipates, Olmstead and I went on to talk about the conscientious objector status. There are, he explained, "two classifications of COs. The first that we would hear would

be the 1O, which is a person who is opposed to all and any wars. The second would be the 1AO. That would be the alternative; they would not be willing to serve in a combatant zone, but they would be willing to serve alternatively in some form in the military. Even if you get a 1O classification, conscientious objector, you still are required to put in two years of alternative service." This alternative service could be in a hospital, or a veteran's center, or in a number of other community-service institutions.

Wondering about the origins of the conscientious objector status, I asked Olmstead whether it had been created with the Quakers and the other pacifist churches in mind. Olmstead was not sure, but his speculation on the topic led to one of his typically ironic anecdotes: "I'm sure organizations like American Friends Service Community and the Friends Community on National Education had a lot of influence on the passage of CO legislation, as well as the Mennonite Brother Churches. I'm not sure if they had them totally in mind or not because the grounds for CO aren't just religious but also ethical and moral values. You do not necessarily have to be a religious person to get CO status. In fact, strange as it may seem, you don't necessarily have to be a non-violent person to be a CO. Perhaps the most classic study of that is Muhammed Ali, the boxer, who was a CO during Vietnam. His claim was that as a Muslim he did not feel that the state had the right to draft him. He was conscientiously opposed to war and he used that argument and was upheld by the court. Although I don't encourage people involved in combative sports to become a CO, there certainly has been a precedence for it!"

I asked Olmstead to tell me what the guidelines are for the conscientious objector status. "Oppositions are based on these: religious training and belief, strictly religious belief, or ethical or moral beliefs that are strongly held." A conscientious objector must be morally opposed to all war, not just one specific war or intervention. If you are opposed to the Gulf War but believe you would have supported World War Two, you would not be eligible for CO status.

According to Olmstead, "Sincerity (of CO applicants) is judged on demeanor when they appear before the board and that their beliefs are strongly held. (This belief) may be a recent development or gradual process. The behavior must be consistent with the sense of belief acquired. We used to use a term we don't use anymore, but I think it's a real vital and important term for young people to be aware of and that's the term 'crystallization,' which the Selective Service defines by asking the question, 'At what time did you recognize this belief that you hold?' For me it was when I was thirteen and I became

Photos: Harry Olmstead leads a mock draft board at Aquinas College.

A conscientious objector must be morally opposed to all war, not just one specific war or intervention. If you are opposed to the Gulf War but believe you would have supported World War Two, you would not be eligible for CO status.

involved in the Quaker movement. For others it could be the day they get that 1A letter in the mail. Does that make it any less significant? I don't think so. I remember a case scenario we did one time in role play that involved an ambulance driver in a volunteer fire department. When he went to the scene of a gun shooting, he recognized that he did not like what weapons did, and that was his point of view."

Olmstead estimates that, in the event of a large draft, a candidate would be given approximately fifteen minutes in front of a draft board to prove the sincerity and depth of his belief. Documentation, Olmstead stressed, will be very important. Students should start now in preparing a CO file folder with copies of things a candidate had written or drawn or records of marches, meetings, or other forms of activism. Olmstead also strongly encourages parents with pacifist leanings to start such files early on for their children.

For draft-age students, Olmstead encourages writing a letter that states a student's beliefs about war and violence. Students should keep one copy of this letter and ask their pastor or someone else to keep another copy on file. The Institute For Global Education (located at 415 Ethel SE in Grand Rapids) will also keep such letters on file for students.

Before the interview, one of the questions I had decided to ask Olmstead was whether he thought that conscientious objector status might, like the college draft had during Vietnam, unfairly exempt the intellectuals and the elite. Would students who could put together an intellectual case for pacifism be exempted, while just as peace-loving but less-educated students be forced to serve? Olmstead and I did not pursue this question very far, however, because I judged that Olmstead was quite immune to this criticism. His opinion on what counts as a pacifistic outlook is extremely broad. Olmstead encourages parents to include in their children's CO folders any things "that show the beauty of life rather than the destruction of life. It could be any of their activities, it could be something that they might say. It could be drawings, things that they did that were ecological or environmental in nature." "Is ecology a part of pacifism?" I asked him. In Olmstead's view it is; his pacifism is a part of a loosely connected worldview of ideas about affirming life, preserving nature, and being respectful of fellow humans.

One of the things that Olmstead has been doing in the last months is holding mock draft boards at various area colleges and high schools. The purpose of these is to educate students about Selective Service and prepare those who might want to apply for conscientious objector status. Olmstead mentioned twice that he would welcome a

chance to hold such an event at Calvin; he was also eager to have *Dialogue* print what the rights of draftees are in front of a draft board. Draftees do have the right to bring some sort of counselor, although this counselor does not have the same rights that an attorney would have in court. The Institute for Global Education can put young people in touch with trained CO counselors if they desire one. Draftees also have the right to bring up to three witnesses into the proceedings. Olmstead is quite critical of some aspects of the proceedings. He describes the process as " like a court-martial; it's under military law with its own set of guidelines."

Wondering how much I knew about the Selective Service, Olmstead asked, "Do you know where the Selective Service Office is here in Grand Rapids?" I confessed I did not. "It's your recruiter station," he explained, insinuatingly. "The night that the Director of Selective Service is given authority to run a draft, your recruiter stations are closed because there is no need for recruiter stations any longer. The personnel that are in recruiter stations are now hired as what we call compensatory employees by the Selective Service, and they now run the Selective Service. Now if you know much about recruiter stations, you know they have quotas, and who's to say that a Selective Service officer won't have quotas? I think you can see where this might lead to some corruption within the system. When they gets those (deferment) applications in, what's to say those applications won't find their way into a basket, a file thirteen, rather than onto my desk? That's why it's important that when you send in your form that you send it registered mail, return receipt requested, so at least you have some proof, some evidence that you've sent a letter to your Selective Service board." Olmstead is additionally critical of Selective Service because it has no educational arm. The information about deferments is available, but Selective Service makes no attempt to publicize it or to make sure that students know what rights they have when they go before a draft board.

Harry Olmstead and I spent the last part of our interview talking more personally about his perspectives on war, pacifism, and the current war with Iraq. Olmstead, to some degree, condemns the current administration for involving our country in this war, but more broadly he insists that "None of us are exempt from supporting what's going on in the Middle East because we're all still driving our cars. Why are we over there? It's increasingly obvious that it's because of oil and economic interests. We have to start making some very critical decisions about what lifestyle we're willing to have and what we are willing to sacrifice or not sacrifice, and that's going to have to be each individual's concern."

Olmstead attributes almost all international tensions

"Now if you know much about recruiter stations, you know they have quotas, and who's to say that a Selective Service officer won't have quotas? I think you can see where this might lead to some corruption within the system."

to oppression of some kind: "It's totally the idea of the oppression of people, whether it be the Israelis and the Palestinian lands, or the apartheid of the South Africans, blacks being oppressed, or whether it be Central America and its forms of government oppressing the peasant farmers there. The oppression is all the same because it's all based on one thing and one thing only, and that is economic gain."

This theory did not sit very well with me; I pressed him to say who exactly we were oppressing by trying to free Kuwait. His reply satisfied me even less, "I think you have the oppression of the people of Iraq, the civilians. It seems to me that Saddam Hussein is taking this action, not based so much on wanting to take over Kuwait and destroy the capitalism or the economics of that country, but more to demonstrate a set of principles that his part of the world believes in very strongly, and that there has to be other ways of taking and resolving conflict."

Saddam Hussein as an oppressed idealist? I was trying to get Olmstead to draw up for me some kind of philosophically integrated theory of pacifism versus just war, and what I was getting from him sounded like 1960s era peacenik talk. I asked him, "Do the Quakers recognize any sort of just war?" His answer started clearing things up for me. "The basic tenet is that there's that of God in each person. To destroy a person or another living thing is destroying that of God because we have all been created in God's image and God is a part of us. So if I slap you in the face, it's like slapping God in the face."

I was looking for a Just War theory from a man who had none. Whenever I pushed him on when it might be necessary to make war or kill, he came back to the same statements: "There is the image of Christ in every person. Whatever you think of Saddam Hussein, there is still the image of Christ in him." In the Quaker view, that part of Christ in all of us makes killing another human unthinkable, whatever the provocation. In the discussion of whether or not to make war, then, politics and practical concerns become completely superfluous.

At the conclusion of our interview, I thanked Olmstead for his time, and he insisted that it was his pleasure. Harry Olmstead also reiterated his wish to hold a mock draft board at Calvin sometime. Preparing young people for a possible draft has become his full-time occupation. Because of a car accident, he has been on disability leave from his substitute teaching job since December. Olmstead now sees this accident as God's giving him time to do the teaching he is doing now. ❑

SO YOU WANT TO BE CULTURALLY LITERATE?

No, you don't. To be thoroughly literate, you have to read approximately one million books. Not fun books either, but heavy gray ones that libraries put on the shelf without a dust jacket. Don't spent time learning stuff you'll never need! We both know you don't want to be really literate; you just don't want to look stupid at parties.

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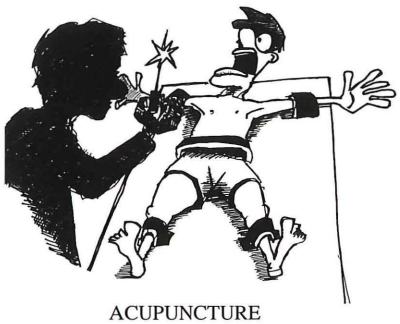
Abel According to the traditional Judeo-Christian story, Abel was the first murder victim, killed by his brother CAIN. We sophisticated moderns, of course, know this story to be a mere charming allegory; the true story is that it was Fred who only accidentally wounded Barney and immediately went to apologize to Betty and Bam-Bam.

absolute zero The IQ score of someone who has been frozen solid.

Achilles A famous Greek athlete. He invented tendons, allowing the Greek team to win every single gold medal at the first Olympic games and causing the entire world to boycott every Olympic contest for the next 3,000 years.



ACUPUNCTURE

Acropolis The mountain where Socrates and Plato and Aristotle used to hang. Located near METROPOLIS, where Superman and Lois Lane live.

acupuncture An oriental healing method whereby sick patients are threatened with needles.

Adam and Eve The first man and woman. They lived harmoniously in the GARDEN OF EDEN until their credit rating was destroyed by JOHNNY APPLESEED. After being evicted from the Garden, of course, the pair was cursed and forced to live in Appalachia.

ad hominem What an advertising executive tells acquaintances he does for a living. "An ad man? No, no, I'm an ad hominem."

Alamo, The Texas chapel attacked by the ruthless Santa Anna who killed all the Texan patriots inside save two. This format was so popular in Texas that *The Alamo* was followed by *The Alamo II*, *III*, and *IV*. The rest of Mexico became so disgusted with these films that they kicked the Texas territory out of their country. *The Alamo* was remade in the late 1960s and entitled *The Texas Chainsaw Massacre*.

a la mode French phrase meaning "please spit on my dessert and then cover it up with ice cream." This phrase is often taught to American tourists by French waiters.

algebra The high school math subject in which students try to find out what x and y are all year, only to find out at the end that it was just a rhetorical question. Algebra is a key ingredient in later-life success.

Ali, Muhammed A champion heavyweight boxer of the twentieth century. Ali could "float like a butterfly and sting like a bee" and used this ability to "kill bugs dead, back in the walls where they're hidin' and breedin'."

alimony see CARSON, JOHNNY.

Anthony, Susan B. An American reformer who campaigned for women's suffrage. Her attempts went unnoticed by most Americans of the time who often mistook the feisty lady for a quarter.

antidisestablishmentarianism Who cares what it means; it's still a cool word.

Appleseed, Johnny The world's first door-to-door salesman. He used to corner suburban housewives when their husbands were gone, drop apples on their carpets, and then try to sell them a snake to sweep up the mess. Eve's disastrous capitulation to this technique exceeded the first couple's credit limit and shortly thereafter the GARDEN OF EDEN was foreclosed. Johnny Appleseed went bankrupt soon afterwards because ADAM AND EVE were, after all, the only couple in the world to sell snakes to.

Aquinas, Thomas A famous Catholic. Most likely he is now a saint. Wasn't he nice to animals or something?

Archduke Ferdinand Mr. Ferdinand's given name was just Duke, but he changed it to Archduke because he got sick of people naming their dogs after him. Shortly after this somebody shot him, which all of Europe decided was as good an excuse as any to start WORLD WAR I.

Aristotle A very significant old Greek guy who, along with his buddies Plato and Socrates, invented Western civilization. Aristotle's influence was very important. You are very ignorant if you don't know what an impact he had on Western civilization. Yes sir, quite a lot of impact in fact. An *undeniable* impact, such that there might not even *be* a Western civilization today, or even Western movies, or even John Wayne if not for Aristotle's influence. So, in conclusion, Aristotle and the Greeks were very significant forerunners of our Western civilization.

Famous quotes that maybe Aristotle said:

"Give me liberty or give me death."

"There ain't room enough in Western civilization for the both of us."

"Toga! Toga!"

See also: PLATO, SOCRATES, WESTERN CIVILIZATION, GREEKS, HOW THE WEST WAS WON THANKS TO ARISTOTLE AND THE BOYS, MORE GREEKS, IMPORTANT GREEKS, *WAY* IMPORTANT GREEKS.

Arkansas One of the fifty states of the Union. Many people do not know where Arkansas is located. This is not really a problem, unless you happen to have left something there. Arkansas is unique because you can never set out to go there; you can only stumble onto Arkansas on your way to somewhere else.

ARKANSAS

Arnold, Benedict An American traitor of the Revolutionary War period. Arnold gained national notoriety when his misdeeds were recreated by Peter on *The Brady Bunch*.

art Nobody really understands art, so the best thing for you to do is memorize a list of phrases about art. A starter list would include the following: That ain't art. Art for art's sake. An artist's right to free expression. Paul Simon made Art what he is. Art's solo career stunk, and I don't care if he did sing "Bridge over Troubled Waters." Yes, but is it art?

Arthur, King An average English king of the Middle Ages who gained fame because he gave such entertaining nicknames to his knights. His most famous knight was Sir Lance-a-lot; other famous knights were Sir Fight-a-lot, Sir Sleeps-all-the-time, Sir Pimple-face, Sir Sneezy, Sir Dopey, and Sir Doc.

Asteroids You don't need to know this. Who plays Asteroids anymore? Geesh, you might as well play SPACE INVADERS.

au revoir French colloquialism meaning "good-bye and good riddance you filthy, ignorant American." Thought by many American tourists to mean simply "good-bye."

Augustine Many people confuse Augustine with AQUINAS because they were both early Christian philosophers. In fact, the alphabetic proximity of their names caused them to be seated next to each other all through elementary school where they often used to pass notes between themselves and throw apples at JOHN CALVIN in the next row.

Bach, J. S. Many people believe Bach to be the inventor of the harpsichord, which is not a harp at all, but a broken piano. But in fact Bach did not invent the harpsichord, he merely played it; Bach's invention was the shirt with frilly cuffs.

Bacon, Francis A famous philosopher of science, Bacon teamed up with BENEDICT "Eggs" ARNOLD to invent breakfast.

Famous quote of Francis Bacon: "Here I am, a famous philosopher of science, and all they can do is make dumb breakfast jokes about my name."

Battles, Mother-of-all- see SADDAM "What's a smart bomb?" HUSSEIN.

Bay of Pigs A disastrously failed attempt by the KENNEDY administration to overthrow FIDEL CASTRO. A bunch of Cubans who dressed as Indians snuck aboard a ship full of livestock to protest Castro's newly-instituted pig tax. The protestors threw all the livestock overboard only to discover, to their horror, that the porkers could swim.

unfinished
symphony

visions
ordered
pure
painfully
birthed
deliver
entropic
shadows.

who hasn't
sat
enthralled with
the vision of
Beethoven
dancing in your
ears at the
symphony
yet if we could
sit in
his
head
what
a
glorious
sound
we would
hear.

Lambert J. Van Poolen