Spring 1982

The Gamut: A Journal of Ideas and Information, No. 06, Spring/Summer 1982

Cleveland State University

Follow this and additional works at: https://engagedscholarship.csuohio.edu/gamut_archives

Part of the Arts and Humanities Commons, Life Sciences Commons, and the Social and Behavioral Sciences Commons

How does access to this work benefit you? Let us know!

Recommended Citation
https://engagedscholarship.csuohio.edu/gamut_archives/36

This Book is brought to you for free and open access by the Publications at EngagedScholarship@CSU. It has been accepted for inclusion in The Gamut Archives by an authorized administrator of EngagedScholarship@CSU. For more information, please contact library.es@csuohio.edu.
Prize-Winning Short-Short Stories p. 13

Feeding Zoo Animals p. 3

Historic Houses in the Heights p. 24
RABBI IN CHINA p. 44
Deadline: January 15, 1983

Mail entries to: Concrete Poetry Contest
The Gamut
Rhodes Tower 1216
Cleveland State University
Cleveland, OH 44115

Eligibility: Open to anyone. No limit on number of submissions. Submissions must be original work of the contestant and must not have been previously published.

Definition: For the purposes of this contest, a concrete poem is defined as a unified literary work involving a necessary visual element.

Rules and restrictions: Submissions must be such as can be published in The Gamut, e.g., they must be reproducible in black and white on one or more 7" x 10" pages. Black-and-white photographs are acceptable. Photocopies may be submitted, on the understanding that the originals will be provided for publication. Include name, address, telephone number, and Social Security number with submission. Manuscripts will be returned if accompanied by stamped, self-addressed envelope.

For more on concrete poetry, see pp. 88-93 of this issue.
CONTENTS OF ISSUE NO. 6, SPRING/SUMMER, 1982

Charles R. Voracek. What Do You Serve an Aardvark for Dinner?
The art and science of zoo animal nutrition.

Winning Stories in The Gamut’s Short-Short Story Contest.
Bruce Horovitz. No Reason No More.
Donald Laurila. Lamps.
Marcia Fear. Behavior Modification.
Rose Ellison King. Me and Mrs. Jim.
Donald R. Nichols. Heir to the First.

Mary-Peale Schofield. Meade and Hamilton’s Livable Cleveland Houses.
Taste and comfort are the keynotes in the fine houses built in Cleveland’s eastern suburbs between 1910 and 1920.

David E. Sonner. America’s Oasis: The Great Lakes Region.
An abundant supply of water may be the key to economic prosperity in the industrial Northeast.

In search of China’s lost Jews.

A sympathetic examination of the controversial psychologist and social theorist.

The underlying ethical dilemma in Melville’s powerful story.

Back Matter.
Beverly Simmons. The Origin and Meaning of Gamut.
Leonard Trawick. Concrete Poetry: Medium Awaiting a Masterpiece.


The Gamut is published with the aid of a grant from the Cleveland Foundation.

The Short-Short Story Contest published in this issue has been conducted with the support of the Ohio Arts Council.
Charles R. Voracek

What Do You Serve an Aardvark for Dinner?

The art and science of zoo animal nutrition

We think of zoos as places for wholesome and educational family entertainment: brightly colored balloons in the air, visitors sauntering to and fro in a slightly carnival atmosphere, discovering how exotic animals look and act. "Zoo," of course, is a shortened version of the original name, "zoological garden." When one starts thinking about zoos from a zoological point of view, they suddenly become very odd places indeed.

For example, in their natural habitats, many animals forage within a range that can be quite large. African elephants may travel 30 to 40 miles in a night in search of food. Wolves have a hunting territory of up to 30 miles in any direction, and cougars patrol an only slightly smaller area. Seasonal migration adds an even wider range for some species: North American caribou may travel 400 to 500 miles between feeding grounds.

In order to concentrate animals for public exhibition, a zoo greatly reduces the range an animal species can cover in search of food. Furthermore, a zoo brings together, in a single location and climate, species whose natural habitats range from antarctic ice floes to tropical rain forests and arid deserts. This necessitates that food be brought to the hunter and forager. But what kind and how much? And what about animals whose natural diets are ordinarily unavailable in the metropolitan area where the zoo is located? How would you provide for the needs of your captive koala bear, an Australian marsupial that requires a specific diet of fresh eucalyptus leaves? Eucalyptus trees do not grow in most parts of the United States. For that simple reason, the only koalas exhibited in this country are in the San Diego Zoo, where the semi-tropical climate permits the cultivation of the animal's natural food.

Although animal nutrition as a science is relatively new, zoos have a long history. They were known in China 3000 years ago: the Romans kept wild animals both for their circuses and for exhibition; and so-called menageries abounded in Europe after the Middle Ages. The imperial menagerie at Schönbrunn, Vienna, sometimes called the first modern zoo, was founded in 1752 and opened to the public in 1765; within a few years important ones were also established in

Charles Voracek, Public Information Officer at the Cleveland Metroparks Zoo, was born in Brecksville, Ohio, and attended Fenn College, where he received a B.A. in Biological Sciences. He worked in public relations with the Carling Brewing Company, and edited the monthly publication of its Carling Conservation Club. In his present position he is responsible, among other things, for the Zoo's public relations programs and tours, and he trains volunteers for the Zoo Docent Association. He was editor of the Zoo News from 1962 to 1979, and has appeared frequently on The Morning Exchange on TV Channel 5, and on WCLV-FM. His knowledge of nutrition was sparked by personal interest, his college background, and by the questions that he regularly encounters from visitors to the Zoo. At the right, he is preparing to feed live mice to the Zoo's rat snakes.

Photos by Louis Milic
Paris, Madrid, London, and elsewhere. The Philadelphia Zoo, established in 1859, was the first in the United States, though the Central Park Zoo in New York was the first to exhibit animals for the public, in 1864. The Cleveland Zoo, which celebrates its centennial this year, was located at Wade Park (in what is now University Circle) from 1882 to 1907. Between 1907 and 1914 it was gradually moved to its present location in Brookside. It assumed the name “Metroparks Zoo” in 1975.

The first zoos consisted simply of cages containing wild animals, whose needs were seldom well understood. Animal nutrition was based on scrappy information and rough-and-ready guesses. In those early days there were few real scientific expeditions and even fewer analyses of the day-to-day food consumption of individual wild animal species. It is no surprise that zoo animal life expectancy was relatively short. In addition, many zoos, because of their municipal affiliations, employed friends, relatives, or supporters of political and administrative authorities. The prior experience which a zoo employee in such a system had had with animals was usually limited to the care of domestic house pets. A knowledge of animal husbandry was not an important consideration in the appointment of keepers in these early days; animals that died could be fairly easily replaced. People assumed that there was an unlimited supply of animals out in the bush, in the forest, or on the plains, and indeed at the time a few dollars could buy just about any animal a zoo desired. But the supply was not endless; constant depletion of wild populations began to take its toll.

Newly formed zoological societies fought for — and gradually succeeded in — removing zoo administration from the political arena; this led to a more stable and better-informed operation. Animal caretakers were selected on the basis of education and experience rather than political connections. As zoos matured, they ceased to be simply menageries with a multitude of small exhibit spaces where animals subsisted for short periods of time, and seldom reproduced or otherwise lived as they would in the wild. Zoos came to be designed with moats instead of bars, and with dens, trees, pools, and rocks to approximate the natural habitats of different species.

With improved accommodations, overall animal health also improved. One concern which slowly grew to paramount importance was nutrition. Not only were properly balanced animal diets necessary for the health of the individual animal, but also certain nutritional requirements had to be met in order to insure reproduction. And animal reproduction eventually became a matter of utmost importance to zoos. Surplus animals could be used for cash sales or for trading stock with other zoos. Reproduction also helped to stabilize or even increase populations of species that were endangered domestically or internationally.

The old "by guess and by golly" methods of feeding were altered as nutritionists made careful studies of what individual animals and species were eating in their natural habitats. Scientific data collected from the field produced dramatic results in zoos, particularly in mammal and bird departments. Longevity records were broken time and time again; surprisingly, animals lived longer and healthier lives in zoos than they did in the wild.

Dr. Wallace Wendt, veterinarian at the Cleveland Metroparks Zoo, is responsible for formulating the diets of the animal residents.
In consultation with expert animal nutritionists, Dr. Wendt prescribes specific food items and quantities for each animal species. As he learns of new research, he may change the formulas and quantities. On his weekly visits he routinely observes all the animals to see that they are not too thin or too fat and that they appear in the best possible condition for exhibition and reproduction. Each of the hundreds of species in the Zoo presents its own feeding problems; as an illustration, let us begin at the top of the alphabet, with the aardvark.

What to feed an aardvark

Suppose you were an aardvark in South Africa, and you were captured and sent to the Metroparks Zoo in Cleveland. What could you expect for dinner now that your regular diet of ants, termites, grubs, insects and other invertebrates was no longer available? Here is what the well-fed aardvark gets in Cleveland:

| 1 cup dry dog biscuits (Partners Plus) |
| 3/4 lb. ground meat (beef) |
| 1/4 cup Gerber's Hi-Pro Baby Cereal |
| 1/8 cup dry powdered milk |
| 1 oz. honey |
| 1 hard boiled egg |
| .03 cc PetDrop liquid vitamins (Upjohn) |
| 1/2 tsp. Vionate powder |
| 1/8 tsp. bone meal (pet grade) |

Mix all these ingredients together and then put through a food grinder so that a homogeneous mixture results. This quantity supplies food for one adult aardvark for one day. The aardvark eats the mixture in much the same way it eats its natural diet of insects. It has a long, sticky tongue, a foot or more in length, which it extends into the food dish. A certain quantity of the food mix adheres to the tongue as the aardvark draws it back into its mouth. When the aardvark eats, it sounds very much like a hungry dog putting away its supper.

How did the animal food nutritionists come up with a formula like this one which substitutes for the aardvark's natural diet? By field studies of the types of insects the animal consumes in the wild, and by chemical analysis to determine what substitutes would provide similar ingredients. Techniques for qualitative determination of nutritive content were not available when American zoos first opened for business in the mid-1800's, nor were such items as Gerber's Hi-Pro Baby Cereal. The alternative to such a commercial diet would be to try to find live ants, termites and grubworms. In the middle of an Ohio winter, that would be an exercise in futility which would guarantee that the aardvark would starve to death. With commercial, quality-controlled dietary ingredients available, there is at present little commerce in ants, termites, and grubworms.

Analysis of the dietary components in the dog biscuits that go into the aardvark's diet (Anderson's Partners Plus dry dog food) yields the following ingredients: ground corn, meat and bone meal, wheat middlings, animal fat, ground wheat, corn gluten meal, dried fermented corn extractives, soybean meal, fish meal, dried tomato pomace, methionine (purified amino acid), and a broad spectrum of vitamin and mineral additives. (The crude protein is 21%, the crude fat 10%, crude fiber 5%, and maximum moisture content 12%.) The Gerber Hi-Pro Biscuit ingredients are: soya flour, oat flour, wheat flour, soya oil, calcium carbonate-phosphate, soya lecithin and vitamin and mineral additives. The protein content is 35% by weight. The other ingredients (ground meat, powdered milk, honey, egg, vitamins and minerals) supply additional protein and fat, some simple sugars, and vitamin-mineral complex supplements.

This blend of ingredients in the special aardvark mix provides all the required nutrients to maintain the good health of a captive aardvark. The two Cleveland aardvarks, "Aamelia" and "Aarnold," really do not need the termites, ants, and other African invertebrates which comprise their natural diet. Of course, we would like to know: do they like their replacement diets? Each day they empty the dish containing their daily rations. Furthermore, the aardvarks have enjoyed good health, with normal appearance, color, body weight, activity, and appetite, as observed by the keepers and veterinarians on a daily and weekly basis.

The final proof of proper nutrition is successful reproduction. Cleveland's aardvarks
have been together as a pair for less than a year; in many cases, animal reproduction meets with success only after a pair of animals has been together for much longer than that. A few zoos in the U.S. have bred aardvarks, using the same diet as that described above. Given the proper environmental and dietary conditions, there is no reason why Cleveland's aardvarks shouldn't have young within the next year or two.

A digression on matchmaking

A number of animal species are quite difficult to breed in captivity, the most notorious, perhaps, being the giant panda. Success at breeding this species has been nil in Washington, D.C., London, Paris, Moscow, Mexico, and most other zoos. Neither climate nor diet appears to be a problem; rather it seems that a single, isolated pair of pandas simply rejects man's efforts at matchmaking. The greatest success has occurred in Peking, China, where there is the highest concentration of captive pandas. The secret might be to arrange a pool of eight to twelve pandas and allow each to select its own mate. Zoologists do not yet have all the answers, but we do know that the difficulty is not nutrition, since the Peking Zoo diet is used by all other zoos.

Some species that were once difficult to breed are now propagating well in captivity. Gorillas are an example; the first gorilla born in captivity — "Colo," in the Columbus, Ohio, Zoo — is now only 26 years old. Cincinnati has recently had remarkable success with this species. It has been found that gorillas are such a gregarious species that, like pandas, they breed best when they live in a group. Cheetahs were also at one time very difficult to breed in captivity, but zoos are now achieving success after discovering the importance of a number of environmental factors, including the manner in which males and females are introduced to one another. Thus, although diet is of primary importance, other factors of a more elusive nature help determine whether captive wild animals will reproduce in a zoo.

Grocery shopping

One of the largest suppliers of food to zoos is the Ralston Purina Company of St. Louis, a world leader in research on animal nutrition. Many of the diets used in zoo feed-
ing programs were developed as an outgrowth of applied research aimed at improving feeds for domestic farm animals. A zebra's diet resembles that of the domestic horse, and antelopes, camels, and giraffes eat much the same things as cattle, sheep, and goats.

Animal food must be appetizing, nutritionally correct, and simple to feed. Economy is also becoming an increasingly important consideration. A well-balanced, ready-to-feed ration saves time, energy, and money. Quality control of commercial feeds guarantees that animals get the same ingredients regularly. Because most ready-made feeds come in bags, storage space is better utilized and waste and spoilage are kept to a minimum. At one time the Cleveland Metroparks Zoo bought commercial animal feed such as D & H (Dry Cow and Heifer) Chow or other pelletized hay-grain animal food in bulk and stored it in large grain silos on the zoo property. Problems with moisture and contaminants, and spoilage from mold and rodents drove the feed cost up, so that finally there was no advantage in purchasing large quantities as compared to bagged feed. D & H Chow was once the staple food for nearly all the hay- and grain-eating mammals in the Zoo, but eventually, it was found that feed with a higher protein content was better for the animals.

Commercially prepared, pelletized food has the advantage of easy storage, quality control, and efficiency in feeding operations. The net result is that a zoo can function with a smaller staff, which means in effect that the zoo can spend more money on animals for patrons to enjoy. The Cleveland Metroparks Zoo does not depend entirely on commercially prepared, ready-to-eat rations, however. Hay continues to be a dietary staple for a variety of species such as the ruminating animals (those that have stomachs containing three or four chambers). Deer, giraffes, antelope, and camels, as well as the familiar barnyard animals are in this group. Hay is also fed to nonruminant animals which seem to have little else in common. For example, an adult Nile hippopotamus eats about three quarters of a bale of timothy hay, or approximately 45 to 60 pounds, a day. Zebras and elephants, kangaroos and wallabies, the South American tapir, and small rodents such as the prairie dog and the chinchilla all eat hay. Most of the hay-burners also get a pelletized food ration that has a protein content of 15-18%, depending on the species.

The Zoo buys about 550 bales of hay at a time and stores it in the Pachyderm Building and in multi-purpose barns which also serve as shelters for such animals as zebras, camels, and kangaroos. For some time now, local hay has been in short supply, and this has forced the Zoo to import hay from as far away as Canada during the past year. Supply and demand governs the price of hay as much as any commodity, and hay is expensive at present.

The biggest eater

I cannot vouch for the fabled memory of the elephant, but can assert with confidence that an adult elephant consumes the greatest volume of food of any animal in the Zoo. A typical daily portion for an adult elephant consists of 35 quarts of a pelletized ration called Purina Milk Generator (16% protein), four quarts of Monkey Chow (15% protein), several carrots, apples, bananas and sweet potatoes, plus two bales (120 to 160 pounds total) of timothy hay.

The vegetable and fruit items supply additional minerals and trace elements; and nobody, not even an elephant, wants the same monotonous diet day after day. These foods are tasty treats which elephants thoroughly enjoy. They also make medicating a sick elephant an easier task for the veterinarian: the vet has merely to add the proper dosage of antibiotics or other drugs to an apple or banana, and even the sick elephant will take it. It would probably be impossible to get an elephant to eat hay or pellets adulterated with the same medication.

Catering for the primates

Fruits, vegetables, and Monkey-Chow — the same Chow given to elephants — get top billing for the great apes, monkeys, galagos and lemurs. Most of the primates get bananas, carrots, sweet potatoes, celery, apples, oranges, and endive. Endive? Yes. The endive is a bitter-tasting, green curly-leafed type of chicory. The monkeys are fed a type that is domestically grown, not the expensive
stuff imported from Belgium. It is high in vitamin C and in various minerals and many of the primate species eat it with great relish. In addition, Monkey Chow biscuits (15% protein) are a staple of most primate diets. Where a higher protein content is desired, there is a 25% protein formula available.

The peculiarities of the digestive systems of different species make certain specialized foods necessary. Many animals, for example, need vitamin D to metabolize phosphorus and calcium and, along with the other D vitamins, to prevent rickets. Some animals, including human beings, can convert vitamin D₃ or D₃ (calciferol) from their diets into vitamin D₂, but many monkeys, particularly the tamarins and marmosets, cannot. So, although D₂ is more expensive than either D₃ or D₃, the Zoo must buy the vitamin in special liquid and powdered form, and it must also buy a specialized canned ration — Hill’s ZuPreem Marmoset Diet, with high content of vitamin D₂ — for its marmosets and tamarins. There is also a specialized ZuPreem Primate Diet similar to the Marmoset Diet but without the high quantity of vitamin D₂, which is fed as a supplement to certain species of small monkeys — Diana monkeys, cherry-crested mangabeys, lion-tailed macaques, and red howler monkeys.

Red meat (hold the potatoes)

Some years ago nearly all zoos fed their carnivores fresh horsemeat. It was readily available and relatively inexpensive. But times have changed: in the early 1970s, horsemeat was in demand in Europe as a substitute for beef, which was in short supply. Suddenly, horsemeat was no longer as readily available, and the domestic supply became even more expensive than utility grade beef. Currently, several different kinds of carnivore diet are fed to the big and small cats, birds of prey, and other meat-eating species. Wisconsin Brand Carnivore Diet is made from beef, beef by-products, chicken, and bone, with supplemental vitamins and minerals added. Nebraska Brand Carnivore Diet has an even greater variety of ingredients: horsemeat, horsemeat by-products, liver, soy grits, dried beet pulp, steamed bone meal, dried eggs, brewer’s yeast, and supplemental vitamins and minerals. Chunk beef and ground beef are also used in quantity for birds of prey, lynxes, ratite (flightless) birds, storks and cranes, and other flesh-eating animals which prefer the fresh beef to the prepared carnivore diets.

In order to insure that each lion, tiger, and other big cat gets its proper share of the daily meat ration, they are fed separately. The cats are kept outdoors all day long, and just after they are brought indoors late in the afternoon, their keeper gives the prescribed amounts of carnivore diet to each one in its own feeding compartment. This procedure assures the right amount of food and prevents squabbles which would surely result if there were a community feed. Fighting occurs among lions in the wild; the more dominant cats get the choice portions of a fresh kill and those that are allowed to feed later get the leftovers or nothing at all.

The big cats fast one day per week to simulate their natural feeding habits. On fast days they are given knuckle bones and large leg bones, which serve as tooth cleaners. The cats, as they chew on the bones, remove the tartar from the teeth and maintain good dental health. (Know any dentists who would like to brush a leopard’s teeth?)

When the lion and tiger veldt at the Zoo was new (1962), the big cats that were displayed there were on a diet of fresh horsemeat with added vitamin and mineral supplements. In that year, the Cleveland Police Department had a mounted patrol on duty at the Zoo. One day a mounted patrolman decided to take his horse for a morning stroll in front of the newly-opened feline display, little realizing that he was parading a living smorgasbord before the tigers. Two of them, excited by the smell of dinner, sprang out over the moat toward the horse, which reared in panic. Fortunately, the designers had made the moat a full twenty-four feet across, with the public’s area several feet higher than the tigers’. Much to the policeman’s relief — and no doubt the even greater relief of the horse — the tigers covered only about three-quarters of the necessary distance and then dropped into the twelve-foot, waterless moat-bottom, doubtless surprised at the mysterious disappearance of their prey. After this incident, the mounted patrolmen took care not to ride near the big-cat veldt.
It's wise to feed lions with a long "spoon."

When the Zoo had a giant anteater a number of years ago, it was displayed in the old Cat and Ape Building, and for a time was housed next to the lions in an empty lion cage. Separating the anteater from the lions was a solid metal guillotine-type door — which did not, however, fit quite flush to the floor. The gap was large enough for the anteater to extend its twelve-inch tongue under the door into the lions' cage, exploring the crack for tidbits. The lions noticed the tongue flicking under the door, and would repeatedly swipe at it, trying to catch this new type of carnivore delicacy in their huge paws. Fortunately a keeper happened to witness this dangerous game, and the anteater was moved to safer quarters in another part of the Zoo before it lost its tongue.

The sea-food fanciers

For the piscivores, or fish-eaters, the Zoo provides two types of fish, smelt and mackerel. Smelt are consumed in great quantities by seals, sea lions, Humboldt penguins, storks, and pelicans. Mackerel are fed to the seals and sea lions in winter, inasmuch as the energy content of mackerel is considerably higher than that of smelt and provides more calories for body heat when it is extremely cold outside. The king penguins eat mackerel all year round, and the sea lions would like to. Polar bears are extremely fond of fish and get mackerel in the winter. Every week the Zoo feeds several hundred pounds of fish to the various fish-eaters.

It may sound surprising — particularly after reading of the variety of substitute diets that commercial producers sell to the Zoo — but it is true that there is no adequate commercial food substitute available for the fish-eaters. Plain fish — either fresh or frozen — make up the necessary diet. Since fresh smelt and mackerel are not readily available in large quantities, the frozen variety is the convenience food for the seals, sea lions, penguins, storks, and other piscivores. The Metroparks Zoo purchases most of its fish from Quebec.

The deep freeze

Smelt and mackerel are stored in the Zoo's big walk-in freezer, which has an inside volume of about 3700 cubic feet, maintained at -10°F. It is large enough to hold a six-month supply of frozen fish. Carnivore diet, mostly chunk and ground beef, is also stored here. And if one hunts around, some other interesting items will come to light, such as the "rat-sicles" and "mouse-sicles," rats and mice humanely sacrificed and frozen for later use.
From time to time there may be frozen chickens or roosters in the freezer. These are thawed before being fed to the birds of prey and some members of the cat family. Such whole animals are the same prey the meat-eaters would consume in their natural habitats; and the heart, liver, lungs, and other organs are rich sources of vitamins, minerals, and trace elements.

Oh, yes! There are some frozen bamboo shoots and leaves. These are fed to the lesser pandas from the Himalayan Mountains of Asia. In Asia, the lesser pandas feed primarily on bamboo, and this panda staple is grown locally, bought in large quantities, and frozen, to be thawed as needed.

Eating like a bird

The old expression “to eat like a bird” suggests a diet of meager size, but if you talk to the Metropark bird-keepers, they will tell you that feeding the Zoo’s more than 800 birds is no trifling task. If all these birds ate the same food, the keepers’ jobs would be a piece of cake. But quite the opposite is true. Our birds include seed-eaters, insect-eaters, fruit-eaters, nectar-eaters, flesh-eaters, fish-eaters, grain-eaters, and omnivores (those that will eat everything). The seed-eating birds are the easiest to feed, though even these have their special likes and needs. We keep on hand a variety of millet, hemp, rape-seed, thistle and other small-sized seeds to satisfy the most finicky feathered seed connoisseur. Other types of birds are harder to care for. Here are some sample menus.

| A la carte for macaws, cockatoos, and other psittacines (birds of the parrot family) |
| sunflower seeds |
| raw peanuts |
| soft fruits |
| Monkey Chow biscuits |

| Custom mix for insectivorous birds |
| ground cooked heart and chunk beef |
| cottage cheese |
| sieved hard-boiled egg |
| Gerber High Protein Cereal |
| Game Bird Chow |
| Vitamycin (a vitamin-mineral supplement for birds) |

There are two major feedings of the birds, in early morning and early afternoon. Fruit-eating birds get sliced apple, orange, banana, and cherries during the afternoon feeding, with occasional addition or substitution of plums, peaches, apricots, blackberries, or blueberries. The majority of the residents of the bird house get a special formula called “rice food”:

**Recipe for Rice Food**
- boiled brown rice
- soaked raisins or boiled sweet potatoes
- Gerber High Protein Cereal
- Game Bird Chow

When there were a considerable number of hummingbirds in the hummingbird habitat, three feedings of a special hummingbird nectar were offered each day. The glass nectar feeding bottles and cork stoppers had to be sterilized after each use. Because the sweetened condensed milk used in the formula tended to curdle at warm temperatures, the formula was fed in the morning and changed in the early afternoon; the third feeding in the late afternoon substituted grape juice for milk and remained overnight.

**Formula for Hummingbird Nectar**
- apricot nectar
- tomato juice
- honey
- sweetened condensed milk or grape juice
- beef liver
- carrots
- mealworms
- thiamine chloride

Mix in blender with equal volume of water.

Flamingos are also highly specialized feeders. In the wild these birds strain out small crustaceans and other aquatic organisms from water. They take large quantities of water into the mouth and, as it is expelled, use sievelike structures of the bill to retain the living organisms which they then swallow. The substitute diet for captive flamingos is blended to a homogeneous consistency and
What do you serve an aardvark for dinner?

Fresh meat is a regular part of the Andean condor’s diet.

Placed in a large shallow feeding dish with water, so that the flamingos can strain the blended solids as they would in their natural habitat.

Flamingo mix
- beef liver
- Game Bird Chow
- Trout Chow (40% protein)
- Calf Manna
- carrots
- mealworms
- flamen oil (a carotene extract for enhancing plumage color)

Flamingos also like white bread, and, in order to get additional flamen oil into their systems, the keepers feed them small pieces of white bread smeared with this carotene extract.

Ducks, geese, and swans on the waterfowl lake and in the pond areas in other locations of the Zoo get a variety of lettuce greens, scratch grain, cracked and whole corn and high protein bird chow. A bird breeder ration is fed to those birds in the breeding period, generally from about February to July or August. In some cases, several types of swans have successfully hatched three clutches of eggs in one season. Birds have to be in ideal health to achieve a record of this kind and such reproductive success is evidence of excellent nutrition.

Birds of prey (hawks, eagles, vultures, owls and condors) get chopped and/or ground beef and, when available, mice, rats, and chickens. Rodents are also fed to storks, cranes and bustards, and form the main diet of the tawny frogmouth (an Australian bird). For many years the Cleveland State University Biology Department has been sending its surplus mice to the Zoo as feed for the snakes, small felines and carnivorous birds; laboratory rats are raised at the Zoo. These are fed, often live, to the larger birds of prey and also to the large constrictor snakes, the boas and pythons.

The large flightless birds such as the ostriches, emus, rheas, and cassowaries get a variety of foods to satisfy their omnivorous appetites, including ground meat, fruits, vegetables, and high protein dry biscuits of the dog or monkey type.

Hyacinthine macaws have a particular fondness for coconut meat, and so coconuts are purchased periodically for this one bird species. To make it somewhat easier for them, the coconuts are broken, allowing the birds to spend their time eating instead of worrying about how to get into the hard-shelled fruit.

Two other items that are supplied in copious quantities to the birds are grit and oyster shell. Grit is necessary to help birds grind their food in the gizzard; ground oyster shell is necessary for female birds to produce hard-shelled eggs during the laying season.
Reptiles: please pass the mice

Diet preparation for the cold-blooded group is not as complicated as it is for the birds. With the exception of three giant Aldabra Tortoises, which are exhibited outdoors during the warm weather, the Zoo's reptile collection is not on public display because there is no adequate display space. Nevertheless, the twenty-two snakes, seventeen turtles, and three lizards have to be fed regularly. It's rather simple to feed snakes: the small snake species get from two to five live mice each every two weeks; the large species get two to eight large rats once every three to four weeks. Snakes, because of their low metabolic rate and the ability to convert food into fat and fat into energy at a later time, do not require daily (or even weekly) feeding as do mammals and birds.

Aquatic turtles, including sliders, snappers, stinkpot (a type of mud turtle) and Reeves turtles, are predators in their natural state; in the Zoo they eat small pieces of beef and fish. Land turtles, called tortoises, generally are slow-moving and would be ineffective as predators. In the Zoo they get a mixture of fruits, vegetables, and chopped beef or liver. Monitor lizards, strict carnivores, get mice, fish, and strips of beef. All reptiles get supplemental vitamins and minerals in the form of PetDrop liquid vitamins and/or Vionate powdered vitamins and minerals. Feeding the animals is a major expense for the Cleveland Metroparks Zoo. In 1980, the food budget came to $102,000, and the cost keeps rising. The carnivores are the most expensive to feed. Each tiger consumes 12 to 15 pounds of carnivore diet per day, costing about $5.00. Fortunately they are fed only six days a week! The other large cats are also expensive to feed, but somewhat less than the tigers. But what would the Zoo be without tigers?

A zoo's animals are its primary responsibility, and they must be given the best possible care to insure long, healthy, productive lives. The art and science of animal nutrition has improved the condition of animals in zoos particularly during the last twenty-five years. With the threat that human populations may destroy certain wild animal species in their natural homes, it becomes ever more important that zoos preserve their specimens so that these species will survive at least in captivity. And their survival will depend mainly on the humans who feed, clean, and care for the animals. Nutrition is the single most important aspect of the zoos' continuing effort to insure that future generations will still enjoy the wild creatures that share this planet with us in 1982.
Winning Stories
In The Gamut's Short-Short Story Contest

FIRST PRIZE: Bruce Horovitz, “No Reason No More”

SECOND PRIZES: Donald Laurila, “Lamps”
Marcia Fear, “Behavior Modification”

RUNNERS-UP: Rose Ellison King, “Me and Mrs. Jim”
Donald R. Nichols, “Heir to the First”


John Gerlach, Associate Professor of English at Cleveland State University, where he teaches courses in literature and creative writing. He is a winner of the Ohio Best Fiction Award given by Akros magazine, and his fiction has appeared in such periodicals as The Ohio Review, Prairie Schooner, and North American Review, and The Gamut.

Diane Vreuls, who teaches prose fiction in the creative writing program at Oberlin College. Her published works include a novel, Are We There Yet; a book of poems, Instructions; a children’s book, Sums; and short stories in The Paris Review, Iowa Review, The New Yorker, and others.

One year ago The Gamut announced a short-short story contest for Ohio writers, supported by a grant from the Ohio Arts Council. Over a hundred entries were submitted from around the state before the deadline, December 31, 1981. After arduous deliberations, the three judges picked three winning stories, plus two very close runners-up and seven others that deserved honorable mention. The Gamut is proud to publish the top five stories in the pages that follow.

For the purposes of this contest, the short-short story was defined as a piece of fiction not exceeding 1000 words. The form, which thus falls somewhere between the short story and the prose poem, is a demanding one, combining the requisites of fiction — plot, character, setting, narrative voice — with the condensation, sharp focus, and tight control of language usually associated with poetry.

Each of the winning authors met the challenge in a different manner. In “No Reason No More” Bruce Horovitz evokes, through a naïve first-person narrator, the sleazy, rumpled life of a traveling salesman who grubs out a marginal livelihood hawking cheap goods. In this story everything is worn, damaged, “all messed up” — including the salesman’s own humanity and ethical sense. Donald Laurila’s “Lamps” shocks us into a recognition of how strange, even surreal, ordinary existence can be; the lamps, while they might have a perfectly reasonable explanation, remain a suggestive, open-ended symbol, perhaps for the characters’ futility or loss of illumination. Marcia Fear in “Behavior Modification” uses a deceptively simple narrative style to portray a transition in a little girl’s life, as Tallia becomes aware of herself as an individual in a world of potential threat. Rose King dramatizes a familiar modern conflict in “Me and Mrs. Jim,” while in “Heir to the First” Donald Nichols brilliantly uses flashback and a bizarre central metaphor to convey our essential helplessness before others’ suffering. What all of these stories have in common is controlled language directed to the achievement of a single coherent effect.
He drives fast, Dad does. He only holds the steerin' wheel with one hand so that if he sneezes, or somethin', he'll let go of the wheel, and the car'll swerve to the left 'cause Dad says the steerin' wheel is crooked like a politician, but I know he don't mean that kind of crooked.

The radio has only one station out here, but that's good enough for Dad. He'll hum along with anything, and the commercials, he says, keep him awake between the songs.

"We almost there?" I ask, rollin' over in the back seat, then plump my head into the samples Dad told me I wasn't supposed to let get squished. They're mostly sweaters this time, the kind that have brass buttons all the way down so that if you try to sleep on 'em, you'll wake up with a headache, or earache, or never get to sleep in the first place. Dad didn't do so well with the dresses last time, but he says the women in Chicago don't wear dresses no more, and the sweaters'll sell 'fore we get 'em out of the boxes.

"Hear that?" he says, forgettin' I said anything at all, "the man says no rain." Dad stops talkin', then turns on the windshield wipers. A light drizzle gets pushed from the windshield. He laughs some and his head shakes so that only some of his hair falls forward, and I know this must be what Mom meant when she used to say he looks like Clark Gable, and what other women say when they buy stuff from him in those big stores.

"How much longer?" I ask.
"Still gotta git back on the highway. Maybe three hours."
"We gonna stop 'fore that?"

Dad pulls a Heath bar from the glove compartment. I feel the car lug left. Dad closes the glove compartment, takes ahold of the wheel and tugs us back right. "Here he says, handin' me the candy bar over his shoulder. "What you wanna stop for?"

Dad knows I don't got no reason no more.

"Want some?" I ask, losin' the wrapper somewhere on the floor. Just about anything could get lost in the back seat of Dad's Ford. I don't bother to look 'cause I think it's way up there and I don't like reachin' where I can't see.

"Naw," Dad says. He clicks on the car's bright lights. The night looks bigger. I get to feelin' he knows the wrapper's down there, so I reach under the seat. I get way down where it smells like shoe bottoms.

The car pulls again. That's funny, because it ain't the kind of pull like when Dad's fidgetin' with the radio or reachin' for a candy bar. It's the kind of pull like Dad's done let full go of the wheel and we're headin' somewhere we ain't supposed to.

I see the wrapper now. It's kinda stuck 'tween the tool kit and the road atlas they give Dad for sellin' his first dress. The atlas don't even have no cover no more. Dad uses a paperclip to keep it together. I reach for that wrapper and I done already forgot what I did with the candy bar. Maybe it fell to the floor, too.
The car still ain’t pulled back where it should be. I worry, not because I know Dad ain’t the best driver, but because I remember what he said about the steerin’ bein’ crooked.

I rise up just a bit but not so much that I can see where we’re headin’. Just as my hand reaches the the top of Dad’s seat to pull myself upright, Dad’s whole frame comes a scootin’ down on it. He shouts somethin’. Then Dad yanks the wheel to the right so that I lunge forward then sideways.

It happens so that I remember what I remember. I mean, what Dad says what I remember ain’t right. I see we’re on a bridge. Dad’s drivin’ where the lane ain’t supposed to be his. This car comes from nowhere. Didn’t neither of us really see it. The lights hit Dad’s eyes so that they glare like a caught raccoon’s. I can tell he don’t know no more where he’s supposed to be.

Dad keeps drivin’ straight. The car passes us ‘cause its lights are gone. Dad steps harder on the gas.

Then I hear it. It sounds like a paper bag done popped. I know the other car done hit the bridge. Didn’t neither of us see it for sure, but Dad must’ve heard it too, ‘cause the radio ain’t on no more.

“They hit, Dad. They hit!”

He keeps drivin’. Dad don’t say nothin’.

“That car done went into the bridge, Dad. We gotta go back. Gotta see what they—”

“—Didn’t happen,” he says. “No car didn’t hit no bridge,” he says, his voice shakin’ like radio static. He punches the gas. I fall back against the seat where the sweaters are all messed up.

Bruce Horovitz, a Cleveland-based assistant editor for Industry Week magazine, grew up in this area and attended Shaker Heights High School. He graduated cum laude in English from Colorado State University in Fort Collins, and then pursued graduate work in creative writing at San Francisco State University. He left San Francisco to become a reporter for the Carmel Pine Cone in Carmel, California. During that time he taught a poetry workshop at Monterey Peninsula College and began publishing poetry in small literary magazines. His free-lance non-fiction writing has appeared in the San Francisco Examiner/Chronicle’s California Living Magazine, Coast Magazine, California Life, The Plain Dealer Sunday Magazine, Cleveland Magazine, and others, and his poetry has twice been aired by the Cleveland Poetry Project on WCLV-FM radio. He has recently completed a poetry manuscript, “Explaining Everything,” for which he is now seeking a publisher. (Photo: Mary Ellen Pesek)
The lady from down the hall walked by on the fire escape carrying lamps. To tro and again ... carrying lamps. Neither Helen nor Thomas knew why. They were discussing maybe living apart and watching the lady as

She passed their front windows on the iron landing outside the building. She was shaped like a bottom-heavy gourd with legs, one of which she dragged as if it had already died, and she spoke a curious tongue no one but her father understood. To Helen and Thomas it sounded like wounded animal cries. Her father, who seemed even more eloquent in the odd language (as befits an elder, Thomas had once solemnly observed), was also gourd-shaped (these things are always sold in pairs to tourists, noted Helen, who often chose not to deal in the concrete), but he had an additional large lump that flowed gracefully between his neck and shoulder, and the stiff hairs there bristled straight out like stubborn weeds on a hillside. He was nowhere to be seen this Sunday afternoon. Perhaps he was ensconced in the apartment supervising the lamp carrying. Rejecting the small brass antique, favoring the sizable ceramic with red roses on the white shade while

His daughter did the leg work. Tough on her considering the dead one she dragged. Helen and Thomas spoke of maybe living apart. Extraordinary difficulty going on outside with an aluminum floor model, difficulty Helen and Thomas noticed only because they turned their heads in unison when

The sun flickered briefly between the buildings before it vanished the way it does on Sunday, fast. Taking with it a feeling of room to move. Causing the corners to creep in a little bit. Toward Helen and Thomas who were talking about possibly living apart. Helen was drinking brandy and Thomas was aware of a rumbling in his bowels due to perhaps the laxative. He couldn't feel his hands or much else, for that matter, besides this rumbling. Helen made a scrunched face of disbelief in mid-sip. She lowered the glass and shook her head at a black plastic imitation Spanish modern with purple shade lamp. The lady and her father were also cross-eyed. More animal cries. Then fewer and fading noises as

The apartment grew totally dark except for the television which carried a soundless debate between two people of political import. Helen and Thomas were no longer talking about living apart. Helen turned on the audio portion of the broadcast. Thomas felt restless and the need for cigarettes. He zipped his jacket as he walked across the linoleum to the kitchen door that opened onto the corridor. He patted his pockets for money with one of his numb hands while undoing the deadbolts with the other, then he stepped through the door into the hallway where
All the lamps were lined up on the marble floor. According to size. This gave Thomas slight pause. After which he turned and walked into the elevator, taking it to street level. He moved quickly through the small and useless lobby, then slipped out the double glass doors to bounce, a quivering intruder, off the chill evening air cushion. He was dizzy, and as he crossed the street to the deli he found himself wondering, now

Whatever will become of all those lamps?

Donald Laurila was born and raised in Conneaut, Ohio, and now lives in Lakewood, Ohio. "In addition to writing fiction," he says, "I am also a songwriter and have been a professional musician since I was sixteen. I’ve endured the standard litany of writer/musician day jobs and am currently taking classes at Cleveland State University."

Marcia Fear

BEHAVIOR MODIFICATION

Lift her. Swing her. Throw her into the air and catch her. Tallia loved it. Any newcomer into the house was immediately set upon to sweep her upwards and away. Her mother had to restrain her when they walked in the park or through a shopping mall. If her enchanting looks were remarked on by any stranger, this four-year-old wanted hands under her armpits and an overhead relationship. Unqualified confidence seemed to have come with her birth certificate.

By the age of eight, she had gained in what used to be known as ladylikeness, though an aura of flight seemed to surround her fancies, her conversation.

“What’s ‘hardtack’?” she asked at dinner.
The question was there because Jimmy, who was six years older, had been dumb in school that day.

"That was dumb of you, son," their father said.

"If it was dumb, why'd you laugh?"

"Because dumb can be fun," their mother replied, "as long as it doesn't become chronic with you."

"What's 'chronic'?" Jimmy asked.

"I still want to know what's 'hardtack'?" Tallia persisted.

"You tell her, son."

"As I said before," he began, "we had a list of words to look up. It's called a vocabulary list to go with a story we had to read about gold mining in Alaska. I didn't look up 'hardtack' and on the test I wrote it meant having a bad pain in the heart."

"I think your brother is hedging, Tallia. He still doesn't know or he'd come right out with what hardtack is."

Thereafter, and before the dessert, there was some discussion about sustenance foods, unsavory foods, and difficult living conditions which might include the scarcity of food.

"Like chronic hunger," Jimmy said by way of conclusion.

And it was from this point in her life that Tallia sensed hazards, not so much pressing in on her—or the possibilities of same—but that she herself held certain kinds of life in her power, though there was yet no formulation of death as the other side of that power. She considered her Canary.

"If I don't cover Lemon's cage at night, what will happen?"

"I don't really know," her mother said at a low informational level. "There are drafts, of course; but maybe a bird needs some time to itself so that its heart may slow down for rest."

"What if I forgot to feed him for a week?"

"No song."

"Or forgot the water?"

"No flying around."

"Would Lemon be dead?"

"Rather certainly."

"His life depends on me then, doesn't it?"

"If I'm not here to back you up."

"Aren't you going to be here?"

"Well, should your father decide not to feed me or give me water, I might turn into a dried-up Canary."

"He wouldn't do that would he? To any of us?"

"And I wouldn't do that to him either. Have you looked after Lemon's needs today?"

Death was not really explicit in that conversation. Its presence arrived with a library book on the coffee table; for in this household there was a considerable interest in the arts, particularly in the visual arts, and specifically in that of painting. The book lying there as part of a table-scape was a new and fabulously perfect presentation of the works of Goya. The color printing was brilliant: blood was blood. Jimmy was very drawn to the scenes of war and rebellion, and to the black and white etchings of bullfights.

"Where they kill bulls for sport, would the people be more fierce and warlike?" he asked his father.

"I don't think anyone has a monopoly on being warlike."

"Goya seems to think that."

"Oh, I don't know."
"In the pages on his life, I think I read he left Spain to live in France."

"Well, the French. . . ."

Mother spoke up and said, "Now look who's hedging."

"I've learned, Caroline, what I once thought was peculiar knowledge of my own is really common knowledge, namely that the men who have all the best arguments can lose to the ones who don't have any arguments at all."

"To give you a proper answer, Jim," she filled in, "I think Goya was making general statements about all people everywhere."

"Can I see that book pretty soon?" Tallia asked without any real sense of urgency. And later, as she paged through the volume still without any sense of urgency or curiosity about those illustrations that had startled her brother's imagination, she almost closed the book ho-hum when her eye hit *The Colossus*.

She asked, "What is that giant doing up in the sky?"

"He's like. . . well, he represents. . . See all those people moving about in the valley below? The giant seems to be saying that we must be aware of danger."

"Will the giant protect us?"

"No, no. The giant is the danger, like a threat of danger. You understand 'threat'?"

Tallia did not answer, but paged along until she came to *Saturn* devouring his child. For a long time she studied the immense horror of a monstrous figure filling the page except for the small body in its hands from which had been bitten off the head, blood and vessels stringing through space. Then she closed the book at this color plate, saying only, "The same giant."

A few weeks later she said to her parents one evening, "I don't think I should be handled the way I used to be." Caroline looked at her husband and wondered what was coming next. "I don't think everyone ought to hug me."

"Not me, baby?" her father asked.

"You and Mommy, that's all right. And for a while more I would let some of my uncles and aunts, I'll make a list."

"What brought on this change of heart?" her mother asked.

"At my age I shouldn't be treated like an amusement park."

"Amusement! Whose amusement?"

"Other people's. I thought they picked me up because they wanted to have fun."

Marcia Fear was born in Youngstown, Ohio, and educated in the public schools there. She attended Ohio University and Youngstown State University, and at present is completing work toward a doctorate in Counseling and Student Personnel Work at Ohio State University. She has taught both in public schools and at the university level and has counseled adolescents and adults for career development and crisis intervention. For recreation she has climbed in the Grand Canyon and camped in Mexico. "Behavior Modification," which was written for this competition, is her first fiction to be published.
Get a divorce, it's as simple as that. She could be free. She could be Kam. She wouldn't have to tuck herself away, tuck away into dark secret corners all that selfishness and hard-nosed ambition. She wouldn't have to keep looking sideways so she couldn't see them. Hoping he wouldn't see either.

He had encouraged her to go for the promotion. He was going for it, so why shouldn't she? I'll tell you why, we're husband and wife. We work together. Only one of us can get the job. So where does that leave the one who doesn't get it? He had shrugged. We'll work it out, was all he said. Perhaps he didn't consider her serious competition.

Later on they agreed not to compete for the job. But she kept having good days, days where her production didn't go unnoticed. You're breaking our agreement, he accused. What agreement? What agreement? Oh that agreement. She had forgotten. She had been being Kam.

She was Mrs. Jim now, crying, begging him not to leave her, they'd had too many good years to let it all go now. But he didn't want a wife who competed with him, he wanted a wife to be — well, a wife. Translation: she could do her thing if it didn't interfere with his. It came out. For all his high talk that they were equals. For all his encouragement. It sat there like a lump between them.

It didn't leave though Mrs. Jim would like to think it did. She said the right things, cooked the right meals. Damn Kam anyway. Damn her continuing good days. It's all her fault. And now . . .

There was the business of his man-to-man talk with Mr. Wilson. They were going to be starting a family soon and he wanted Mr. Wilson to know that before he made a decision about the job. Perhaps he had believed it. She had agreed to it. No, Mrs. Jim had agreed to it. Kam wanted no part of it. She wished Mrs. Jim would disappear into .

Jim would love her more if she were a better wife. Mrs. Jim would be more than happy to accommodate. Mrs. Jim would have his dinner on the table, congratulate him on his promotion, and never give Kam a thought beyond a sad shake of her head. She was doing it now. Shaking her head sadly and vowing to be a better wife in the same breath. Betrayed! Kam sucked in her breath sharply. Coward! Coward! Coward!

Kam heard Mrs. Jim say she couldn't live without him, she didn't know what got into her. She wanted a baby, she didn't need any silly old job, he was more important. Mr. Jim made love to her while Kam counted the cracks in the ceiling.

Go to Mr. Wilson and tell him it isn't true. There isn't going to be a baby, a family. No matter what Jim said. Kam was having another good day. Swollen eyes, red eyes. Let Kam tell Mr. Wilson if she's so smart.

Mr. Wilson was glad she told him. He couldn't afford to lose either one of them. This would make everything easier. Easier? Mrs. Jim rebelled but of course she was
helpless. The way Jim liked her. She would simply have to hope he didn’t find out what Kam did.

But of course he found out. It was a real trip in there with Mr. Wilson, she and Jim giving each other the bad eye. Of course Jim couldn’t say anything. Only nodded when Mr. Wilson said he hoped they had worked things out between them. It wouldn’t be fair not to consider both. They smiled—at each other, at Mr. Wilson. They would have his decision Friday.

Betrayed, you betrayed me, he said. Again. How can I ever trust you now? That night she left him. Stayed with Elaine. Said she would pick up the rest of her things later. Mrs. Jim cried and wanted to go back. Kam resisted. Shut up! Shut up! Shut up!

She congratulated Jim. She was glad he got the promotion. There would be other jobs, other opportunities for her. She wasn’t upset. Oh God please help me!

He was quick to forgive her. Even generous. He would take her back. He would never bring up the subject of her betrayal. Mrs. Jim wanted to make it up to him, to put it all behind them. She would be the best wife a man could have. We’ll start over again, he said, and everything will be right this time. Mrs. Jim agreed. She followed him into the bedroom. They embraced. Kam lay counting the cracks in the ceiling. She would let him keep the furniture and the car. All she really needed was selfishness and hard-nosed ambition.

Rose King was, in her words, “born, raised, and educated in Cleveland.” For the past twelve years she has been associated with American Greeting Corporation, five years as a writer and three as humor editor, and for the past four years as a free-lance gag writer under contract. She has also written advertising copy, cartoon copy, and at present is writing a comedy script for a television show. She offers the following commentary on the writing of short-short stories:

“Many writers write a synopsis before they begin a story. My ‘synopsis’ (read first draft) of this story was 6,000 words—and all wrong. Now I knew what didn’t work. I tried ‘brainstorming’ with myself by writing new beginnings until one flowed, and after some initial floundering, I had my approach.

Perhaps the length of any short story is determined as much by approach as by the complexity of an idea. And this appears to be doubly true of the short short. Certainly I didn’t set out to write a short short. And if I had, I probably wouldn’t have considered the idea of a man and wife competing for the same job. It would have seemed far too complex.

“I see the short short as similar in some ways to a gag: the fewer the words, the sharper the impact of each word, and the sharper the impact of the idea as a whole. I don’t see the short short as a ‘cleanly edited’ short story, any more than I see a gag as a ‘cleanly edited’ humorous skit. A short short is necessarily finely honed, and the incisiveness of its impact is one thing I find that so distinguishes it from all other forms of story writing.”
“Hello, Frank. It’s Sam.”

“Sammy!” burst my uncle’s voice through the phone. “What are you doing?”

“Sammy! What are you doing?” screamed my uncle from the driveway. The neighbor whose lot adjoined my grandparents’ property had been scorching weeds. The erratic Texas wind had arisen, forcing the flames onto the acre of bamboo grass that separated the neighbor’s land from my grandparents’.

“Not much. Dad called this morning and told me what’s going on. I thought you might be a little low.”

A pause. “Yeah, I’ve felt better.” Static crackles over the long-distance connection.

“How are things in Cleveland?”

Flames roared as the fire bit into the bamboo. It hadn’t rained in weeks. Sheets of flame arose on the far side of the bamboo field as I watched from the back door of my grandparents’ house.

“Things are OK here. Is there anything I can do to help?”

“Get over here and help me!” my uncle shouted. As the fire built and approached my grandparents’ house, my uncle threw clothing, lawn chairs, and anything else rescue-worthy into my grandparents’ Ford pick-up. I started to run toward my uncle, then hundreds of turtles hunkered from the near edge of the bamboo, flaying my grandparents’ lawn as they fled the flames. They resembled an erratic flunk of armored cars racing from napalm woods, the younger turtles sprinting ahead of the older and slower. The smallest turtles clung to the backs of others. One of the smallest, scarcely larger than a buckle, crawled atop a rock at the edge of the outgrowth and would move no farther. I was six years old. I ignored my uncle and ran to the turtles, picking up the slowest. I gathered three or four in the crook of an arm, ran a dozen steps, dropped the turtles in a clatter, and ran back for more. I wanted to save them.

“It’s good of you to ask, but there’s nothing you can do for your Granpa now.”

“You can’t help those things now!” my uncle yelled. A thicket in the middle of the acreage exploded into flame. One of the oldest turtles had been knocked on its back and couldn’t right itself. It was wider than a briefcase, and I was too small to carry it. I flipped it onto its belly, but it withdrew its head and feet. I couldn’t kick it ahead of the others, and it wouldn’t move by itself.

“I know it wasn’t easy to get Granpa to move, but you didn’t have any other choice. He couldn’t stay at home alone.”

“I know, but I wish to God there had been something else to do.”

I could feel the heat on my face. I fell to my knees and began throwing turtles over my shoulder. The heavier ones I grabbed with both hands and flung as hard as I could, twisting sideways in a cross-body toss, my knees gouging divots. The smaller turtles I tossed sideward, skimming them across the grass.

“Does Granpa understand it’s for his own good?”

“He calls it ‘that old pokey.’ He says he’d rather be dead than go to ‘that old pokey. I almost had to carry him out of the house.’”
The turtles understood. They crawled toward me faster than I could throw them. Smoke crept up my jeans onto my thighs, hanging by their claws. I threw furiously, smoke and sweat stinging my eyes. I wanted to save them.

“How’s your Dad?” my uncle asks. Perhaps my imagination emphasizes “your,” or perhaps my uncle is thinking in filial comparisons.

“His back still gives him trouble, but otherwise he’s fine.”

Sparks and bits of smouldering bamboo fell onto the lawn beside me. I crawled over to the smallest turtle, still clinging to the rock, its neck whipping back and forth in panic, and tossed it underhand as gently as I could. Unlike the larger turtles, it didn’t retract its head into its shell as it sailed through the air.

“Sammy, did you hear me?”

“I’m back. What?”

“I said, ‘Does your Dad still have that ear infection that makes him lose his balance?’”

A lick of flame darted before my face. At one end of the bamboo row abutting my grandparents’ lawn a half-dozen turtles had been pinned beneath fallen and burning stalks. At the other end a score of turtles crawled across my grandparents’ driveway, their pace slackening as they thought themselves safe. The oldest turtle was still huddled within its shell.

“Yeah, from time to time. He’s taking something for it.”

The near edge of the bamboo field ignited, and the fire spread into a fence of flame. I was trying to shove the oldest turtle to safety, but my hands were slick with sweat, and soot flaked on its shell, leaving black streaks as I pushed. My uncle lifted me under the arms and dragged me from the turtle, throwing me into the back of the truck. I wanted to save them.

“Sammy? Are you there? Can you hear me?”

I heard the turtles’ shells cracking beneath the truck as my uncle sped away. Firetrucks had arrived by then, racing onto my grandparents’ lawn, mashing many of the turtles I had thrown to safety. Firemen leapt from their trucks, some hosing my grandparents’ house to prevent its burning, others spraying the bamboo with extinguishers strapped to their backs.

“I’m here, Frank. What were you saying?”

My uncle braked to let firetrucks pass. From the back of the pick-up I saw turtles plodding over the grass, flames leaping from within their shells. They did not stop crawling, and there was nothing they could do for themselves. They were on fire from the inside. The firemen didn’t waste their foam on the burning turtles. There was nothing I could do.

“I said, ‘Tell your Dad not to work so hard.’”

“I will. I’ll tell him you said so.”

The oldest turtle lay charred like a depleted smudgepot. Others lay dying, their shells ruptured. The smallest turtle, its path wavering around the turtles which had been flattened, crawled toward the road.

“Frank? Don’t blame yourself. You did what you had to. I guess I’d have done the same if I’d been in your place.”

“Well, it’s done, and what’s done is done.”

I only wanted to save them.

---

Don Nichols is senior speechwriter for The Standard Oil Company (Ohio) in Cleveland. He was born in Fayetteville, Arkansas, and educated at the University of Iowa, the University of Maryland, the Jung Institute in Zurich, Heidelberg University, and Case Western Reserve University. He holds a B.A. in journalism, an M.A. in English, an M.A. in expository writing, and an M.A. in economics. His fictions have appeared in The Yale Review, The Carleton Miscellany, WRIT Magazine, and Overseas Life.
Mary-Peale Schofield

Meade and Hamilton’s Livable Cleveland Houses

“Traditional” style houses designed between 1910 and 1920 in Cleveland’s eastern suburbs are masterpieces of taste and comfort.

In 1900 American and English houses were considered internationally as the best designed. The German publisher Ernst Wasmuth, later to be famous for the first publication (in 1911) of the early work of Frank Lloyd Wright, published a series of studies of English houses by Herman Muntheus in 1902, 1904 and 1905 and a book on American houses in 1910 by F. Reid Vogel. When G.H. Edgell wrote his The American Architecture of To-day in 1928, the “modern” house was still the house based on tradition. The work of the Prairie School was “modernist” and “interesting” but not central. Then in 1931 came the famous exhibit of the work of modern architects abroad at the Museum of Modern Art in New York, and the catalogue by Henry-Russell Hitchcock and Philip Johnson, later published as a book, The International Style. That began a new Battle of Styles, in which the “moderns” won on all sides, except in domestic design. The public refused to be sold on the early modern house. Architectural writers who have tried to explain this failure have given insufficient weight to the quality of the competition.

Today, architects are searching for new sources of inspiration. The “modern movement” is seen as a “style” rather than a moral crusade — a style, moreover, that has passed its prime. In 1977 that same Museum of Modern Art that had introduced The International Style in 1931 now mounted an exhibition of The Architecture of the École des Beaux-Arts, that French school of eclectic classical architecture that had been anathema to the moderns. Though the roots of the “traditional house” are different from the classical roots of the Beaux-Arts, the architects were trained in schools that taught according to Beaux-Arts methods. At the time these houses were built, monumental architecture and even

Mary-Peale Schofield was born in Upper Montclair, New Jersey, and attended Milton Academy, Smith College, and Columbia University, where she received an M.A. in History. She studied acting at the Dramatic Workshop of the New School for Social Research in New York and the Royal Academy of Dramatic Art in London, and has worked in summer and winter stock in a number of locations. When she came to Cleveland in 1960, she became fascinated with the fine architecture in the city and its suburbs, and was active in the Cleveland Restoration Society and the local chapter of the Society of Architectural Historians, serving as president of the latter in 1977. She assisted in the research during the early years of the Cleveland Landmarks Commission and was a member of the Cleveland Heights Landmarks Commission from 1974 to 1979. Her article on the Cleveland Arcade appeared in 1966 in the Journal of the Society of Architectural Historians and has been republished several times since, in various forms. In 1976 her book Landmark Architecture of Cleveland appeared. She has conducted tours of Cleveland for the Society of Architectural Historians, the National Trust, and the Western Reserve Architectural Historians, and has given many lectures on Cleveland architecture. Her files on Cleveland architecture, which are particularly rich in material on suburban houses, are on microfilm at the Western Reserve Historical Society. She now lives in Ames, Iowa. (Photo: Kathleen Saccopoulas)

Architectural photographs by Mary-Peale Schofield
skyscrapers were Beaux-Arts classical. So along with the returning appreciation of the Beaux-Arts architecture, the time is now ripe for an objective assessment of the early twentieth-century house, its aesthetic qualities and its means of satisfying the social and cultural desires of its time.

In 1906 Herbert Croly, socially sensitive editor of the Architectural Record, chose the Middle Western suburban house as the best example of contemporary work:

They are built by the owner from designs prepared by the best architects in the vicinity and represent the tastes and the standards of the prosperous American business man. Such a man wants a comfortable house, the looks of which are subordinated to convenience, but which nevertheless is supposed to have some aesthetic merit; and this comfortable atmosphere is largely derived from the modest and unambitious scale of the whole performance. In the big house of the East comfort and propriety are sacrificed to the “stunning” effect. In the better Western home ... the intention of the owner is to build a dwelling in which he and his family shall be both in the picture and thoroughly at home.3

Cleveland is the perfect city to illustrate Croly’s observations. A Middle Western city of Yankee origin, it was subject to influences from both the Eastern seaboard and Chicago. In the first decades of the twentieth century, Cleveland was coming to cultural maturity and expressing it in a burst of architectural activity.4 At the same time the city was spreading into new suburban developments, the most famous of which was Shaker Heights.

These activities attracted to Cleveland a large number of highly talented young architects, of which a majority came from schools deriving their methods and discipline from the École des Beaux-Arts in Paris. Preeminent among these in the domestic field was the firm of Frank Meade and James Hamilton. During the ascendancy of the firm (1911-1927) they built over 800 houses and six country clubs between Buffalo and Dayton. Photographs of their work appeared with great frequency in the leading national architectural journals, either in reports on their work or in general reports on architecture in the Middle West.

Frank Meade was born in Norwalk, Ohio in 1867. He was the son of William Gale Meade, builder of Norwalk’s finest Greek Revival houses. On graduation from the Case School of Applied Science at Cleveland in 1885, Meade went on to study architecture at MIT, from which he graduated in 1888. He worked briefly with a Boston firm, in Cleveland under Charles Schweinfurth, and in Chicago with Jenney, Mundie and Jensen during the building of the Columbian Exposition. In 1893 he returned to Cleveland with Alfred Hoyt Granger (MIT and a graduate of the École des Beaux-Arts) to form a partnership which built some of the first houses in the new “Euclid Heights” development (the first part of Cleveland Heights). When Granger returned to Chicago in 1896, Meade worked with Abram Garfield, fresh out of MIT, until Garfield formed his own firm in 1905. For six years Meade worked alone, and then in 1911 he formed a partnership with James M. Hamilton, who had been a draftsman in the Meade and Garfield firm. James Hamilton was born in Fort Wayne, Indiana in 1877. He studied architecture at MIT (1901) and traveled extensively in Europe before coming to Cleveland sometime before 1905. Between 1911 and 1927 Meade and Hamilton were the leading domestic architects in the Cleveland area. In 1927 they suffered severe financial reverses over the building of the Cleveland Club, from which they never fully recovered, though nominally they continued until Hamilton’s death in 1941. Meade died in 1947.5

Meade and Hamilton were indeed Croly’s “best architects in the vicinity,” and a study of their work can illustrate what was typical of the best of the Traditional House for Modern Living.

The decade 1900-1910 was an experimental one. It is here we find attempts at “modern” austerity, the last remnants of the Arts and Crafts Movement,6 touches of Art Nouveau7 and a few sports like Swiss Chalets. But the main development was from

---

**GLOSSARY OF ARCHITECTURAL TERMS**

**(Terms marked ** in text.)

**Prairie School:** the early work of Frank Lloyd Wright, some of his associates in the office of Louis Sullivan, and his students at Oak Park. The houses are characterized by an emphasis on horizontal lines, low-pitched, widely overhanging roofs, and strips of windows.
the chunky house, gable end to the street, tall, rather rigid and formal, to the lower-roofed, country-style suburban house with its long dimension ostensibly, if not in fact, parallel to the street.

Architects on both sides of the Atlantic restudied traditional building styles, sensitized themselves and their clients to the aesthetic qualities of the traditional handling of various materials — stone, English brickwork, natural wood, and small panes of window-glass — and subdued the extravagant exuberance of picturesque composition under one low enveloping roof, with the avowed aim of developing a house for modern living rooted in past traditions. Though the styles of these houses derive from various traditions — Colonial, Georgian, Dutch Colonial, English cottage or manor house — the basic proportions of roof to wall and the characteristic groupings and spacings of openings are so similar that a neighborhood of these homes forms an integrated streetscape.

The Meade and Hamilton house of the second decade of the twentieth century will illustrate what this development achieved in a greater formality of plan and stricter symmetry of facade than the Romantic extravagances of their High Victorian predecessors, while developing the more spacious informality in style of living that had started in the country “cottages” of the 1880’s. They found their aesthetic preferences most sympathetic to the Tudor-Jacobean tradition. Using the full range from thatched farmhouse to stone or brick manor house, they could provide the client with as much simplicity or grandeur as he wanted, and combine without solecism the homey qualities of the Medieval craft tradition with the elegance of Renaissance elements. They could achieve the elegance and repose of a formal plan and the aesthetic satisfaction of a carefully composed facade without totally abandoning the picturesque or the Romantic ideals of designing from the inside out, and the delight in textures and materials.

The Cashman house (Fig. 1), built in Shaker Heights in 1913, is representative of this fine balance between the formal and the informal. The main body of the house is one large horizontal mass parallel to the street, softened at the ends by octagonal shapes, and weighted down by the successive slopes of the roofs of these octagons, by the end porch, and by the perspective glimpse of the receding wing. The gravity of the composition is counteracted, and at the same time firmly tied to the ground, by the strong verticals of the two-story gabled bays, which nevertheless are kept within the silhouette. Only the tall chimneys, in the center and at the side of each bay, are allowed to rise above the all-encompassing roof. The whole composition focuses its strictest discipline on the center of the facade; the two bays, paired windows, the pair of finely laid brick arches of the entrance and hall window, and the use of decorative elements of the “style,” give an elegance that lightens the all-over massiveness. The ends are more freely balanced, and the wing, rounding on the octagon of the breakfast room and going off at an obtuse angle from the facade, is allowed to be rambling and picturesque.

The strict interrelation between plan, mass, and decorative elements is allowed to relax at the back of the house (Fig. 2). Any difficulties encountered in designing for interior convenience and function become manifest here. One cannot call it a garden facade. Clearly here is more an attempt to give decorative significance to an already established plan than to reconcile plan and elevation.

**Arts and Crafts Movement:** started by William Morris as a reaction to the excessive machine-carved decoration on the furniture at the Great Exhibition of 1851 in London. He and his followers stressed simple handcrafted furniture and hand crafts in dyeing, weaving, bookmaking, and fabric design. By 1900 the movement was widespread in England and America. Craftsmen and -women exhibited with architects and artists. The period 1900 to 1910 seems to have been a time of austerity. In houses it is seen in plain walls, painted white or tan or covered in grass cloth or burlap, plain skimp curtains in rough materials and artistic touches of hand crafts; stained glass, pottery, stencils, etc.

**Art Nouveau:** originating primarily in France and Belgium, this was a decorative style stressing natural forms of a sinuously curvilinear character. The major American artist in this style was Louis Tiffany.
Fig. 1: Cashman House, Shaker Heights. The composition focuses its strictest discipline on the center of the facade; the ends are more freely balanced.

Fig. 2: Cashman House rear elevation. The strict interrelation between plan, mass, and decorative elements is allowed to relax at the back of the house.

Plan: a diagram showing the horizontal layout of walls, doors, windows etc. in a building as viewed from above.

Elevation: the design of the exterior walls of a building.
It is in the interiors that the finest qualities of these houses find expression. Here is the repose of a plan that is neither over-formalized, nor so open as to lose the functional differentiation of the rooms: spacious rooms filled with light, never too large for private living, the beautiful use of wood in the hands of professional craftsmen, and a nice appreciation of the relation of style and decor to the size and style-of-living of the house. The “styles” are here, to be sure: Renaissance motifs, linen-fold paneling, leaded lights, but used most sparingly and very consciously to add delight to the architectural effect of the plan or to the subjective qualities of the rooms’ function.

Entering the Cashman house, one passes through a small vestibule into a large oak-paneled main hall (Fig. 3) forming an L with the stair hall and porte-cochère entrance directly in front. This is still a “living hall” with the staircase separated from the main hall by a doorway framed with crudely shaped brackets and a long inglenook to the left, formed by the projection of the vestibule into the hall, and set off by a heavy beam on brackets in the timber and plaster ceiling. The paneling is a square Tudor pattern with simple moldings. This type of hall, so central to the Shingle Style house, was going out. The

---

Linen-fold: a carved surface design in wood or stone resembling folded cloth.
Lights: the panes of glass in a window.
Porte-cochère: literally, “the door for the carriage.” Now a covered entrance for arrival by car.
Inglenook: originally a recessed fireplace flanked by settles, developing during this period into a variety of recesses with fireplace, symbolic of hearth and home.
Shingle Style: defined by Vincent J. Scully, Jr. in his book *The Shingle Style* (New Haven & London: Yale University Press, 1955), these houses were characterized by a very open, free-flowing, sometimes idiosyncratic plan which expressed itself on the outside in bays, angles, wings, gables and towers, all covered in dark weathered-wood shingles.
Hall was finding a new relationship with the rest of the house, still a central feature, often a source of delight, but now part of a suite of rooms whose entire style and taste were integrated.

The main axis of the house is the long succession of rooms parallel to the street (Fig. 4). To right and left, folding glazed double doors open up the vista toward ever more light. Like the contemporary Wright houses, the traditional houses also spread from central shelter to open sunny ends. The living room on the left is flooded with light from a deep bay window at the front and a tall four-light window at the rear. The architects had turned against the blank large plate glass of the Victorians but opened up their interiors to the outside with great Elizabethan bays filled with smaller panes of glass — often leaded. The focal point of the room is the Jacobean mantel rising to the ceiling opposite the door from the hall. The window moldings echo the style with a center fold from the linen-fold motif; the rest of the woodwork is confined to the cornice, flooring, and door frames. A glazed double door to the right of the mantel provides a glimpse of the even lighter glassed-in porch.

The dining room on the right is less brilliantly lit, having only the front bay window. The tone of the wood and the bay window relate it to the other rooms, but it has a more formal character. The marble chimneypiece with its pilasters and scrolls supporting shields is subordinated to the central focus of the room which is accentuated by the low groined vault of the ceiling, making a setting for the chandelier.

Beyond is the sunny octagon of the breakfast room, sited east and south to catch the morning sun, and decorated in light wood and plaster. The main aesthetic principle in the design of breakfast rooms seems to have been light. The decorative elements become confused. The overmantel and china closet have tight floral baskets and bows in a bad imitation of the late eighteenth century, but among the handsome tan matte tiles surrounding the chimney there is one picturing a sailboat in blue on tan, an odd piece of whimsy. The breakfast room and the billiard room seem to have been the last outposts of the Arts and Crafts Movement.

The library functions as a secondary reception room, so it is openly connected with both the stair hall and living room. As an ever-
Fig. 5: Cashman House second floor plan. Typical of these houses is the master suite, and at the other end there is another grouping of large bedroom with private bath and sleeping porch.

- **Tunnel-vault**: in this case the ceiling curves in an ellipse from one side wall to the opposite wall.
- **Muntin**: a member separating panes of glass in a window.

As in most houses, the second floor of the Cashman house (Fig. 5) does not have the aesthetic qualities which are concentrated on the public rooms. Privacy being the essential quality of bedrooms, upper halls often become mere corridors. Here only the upper stair hall has an open quality given it by the window of the landing, a tall window of three lights, each with a slight Tudor arch, a strong muntin pattern and lightly leaded glass. As in most of these houses the stair function is shown on the exterior by the rising pattern of the windows. However the rooms themselves are large enough to be more than sleeping rooms, simply decorated, airy and light. Most of them face the front, planned for the view of the park opposite and a southwestern exposure. The two largest share the large bays of the dining room and living room. Typical of these houses is the master suite; here, at the other end of the facade, is another grouping that consists of large bedroom with fireplace, a private bath, and a sleeping porch.

The sleeping porch is one of the surest ways of identifying the houses of this era, whether “traditional” or “modern.” It was considered far healthier to sleep in the open air — summer and winter — though in Cleveland’s climate the porches were glassed in. This is an amusing reversal of the medieval fear of night miasmas which resulted in closing all sleeping rooms tight. A physician tells me that the sleeping porch, like the hospital balcony, is related to the then current ideas about the prevention and cure of tuberculosis.

Architectural values similar to those observed in the Cashman house may also be seen in the Hayes house, built in 1916 in Cleveland Heights (Fig. 6), though here the smaller site permits only the central hall flanked by living room and dining room (Fig. 7). The stairs are very much the main feature of this house, all other decorative work being subordinated to them. They have a fine wrought iron railing on bronze bases, with a highly polished wood handrail. The stairs have polished wood treads and white
Fig. 6: Hayes House, Cleveland Heights. The thatched-cottage effect of the exterior gives no hint of the sophisticated simplicity of the interior.

Fig. 7: Hayes House plan. Though the facade gives the impression of presenting the long dimension to the street, the plan actually is an L. Reprinted with the permission of the Architectural Record, from the April 11, 1923 issue of The American Architect, The Architectural Review, copyright 1923 McGraw Hill, Inc., with all rights reserved.
painted risers creating a contrast that is carried out in the construction of the landing, forming an elegant pattern. Though the facade gives the impression of presenting the long dimension, the plan actually is an L with the service wing and garage running directly back from the dining room. The necessary long corridor to the garage was designed as a glazed arcade overlooking a formal terrace garden formed by the angle of the house (Fig. 8). The library overlooks the terrace through a large window taking up almost the entire wall. The decoration of the interior is confined to door and window frames, the living room mantel, which is a strong but serene composition of classical elements, and the decorative plaster of the dining room ceiling, a simple frame with floral motifs in low relief. The quiet and restful elegance shows the period's appreciation of the qualities of materials, the gleam of the polished wood win-
dow seats, the geometric leading of the double doors to the living room and dining room, the warm glossy tile of the vestibule, and the wrought iron grille before the front door. The simplicity of this house is extremely sophisticated. And this creates the only jarring note for the exterior is very much in a thatched-cottage style, and one expects the interior to have a more Arts-and-Crafts atmosphere.

There is a similar though lesser disharmony in the Dan Hanna house of 1919 (Fig. 9), where an English woodcarver was employed for two years on the interior. There is a self-conscious crudeness of execution in the carving, the display of handcraftedness in the machine age, that is out of harmony with the skill and mastery of architectural values of the house itself (plan, Fig. 10). From the deeply sheltered stone porch, one enters the central octagon of the hall, a jewel-box of a room, richly carved in rectangular Tudor panels, each wall separated from the next by a long narrow linen-fold with floral motif at the top. Attention fans out along the interior quadrant from the dining room on the right, the door to the terrace between, and the long vista to the living room before you.

The dining room is more formal and eighteenth-century than most, with classical moldings and overmantel, a black-and-white marble fireplace and decorative plaster ceiling of central medallion and corner motifs. The long vista is through a small stair hall interposed between the entrance hall and the living room, down two steps into the living room (Fig. 11) and down its thirty-two-foot length to the Jacobean mantelpiece flanked by windows that take up the entire end wall. Abundant light is softened by reflecting off dark wood. Rectangular panels of American walnut rise eight feet to an intricate plaster frieze in low relief. This frieze is interrupted by the depressed arch, with carved spandrels, of the great bay window overlooking the ravine and opposite by geometric panels over the French doors giving onto the terrace. Window and doors are framed with

**Spandrel:** the roughly triangular area outside the upper portion of an arch, between the arch and the rectangular area framing it.

**Corbel:** a bracket form usually produced by extending courses of masonry or wood beyond the wall surface.
Fig. 9: Dan Hanna House, Cleveland Heights. The entrance facade is scaled to the proportions of the smaller houses on the side street.

Fig. 10: Dan Hanna House plan. Attention fans out along the interior quadrant from the dining room on the right, the door to the terrace between, and the long vista to the living room.
Fig. 11: Dan Hanna House living room. The "styles" are used very consciously to add delight to the architectural effect and to the subjective qualities of room function.

Pilasters surmounted by long Jacobean corbels. The ceiling is plaster with a large central motif of Jacobean strapwork and corner rondels with floral motifs.

There is no library, but below the living room is a room typical of these houses (though not appearing in either the Cashman or Hayes house) — the billiard room. Billiard rooms were typically much simpler and more rugged. Here the fireplace is of random ashlar in gray and pink stone with a heavy plain mantel shelf in wood. The flat arch of the fireplace is of Roman tiles set in a zig-zag pattern, and the space from arch to mantel is filled with the same tiles laid horizontally. The framing of the low bay window has corbels of carved humorous figures.

The house represents considerable adjustment of the characteristic Meade and Hamilton plan to suit an unusual site. It is a corner lot on a hillside. Along the south facade (Fig. 12) is a parkway running beside a deep wooded ravine. The east facade is on a side street primarily built up in small lots. The entrance to the house, with the garage, is on this side street, placed well up toward the sidewalk and scaled to the proportions of its neighbors, showing the era's sensitivity to its environment of existing houses. The size of the house is camouflaged by the breaking up of the masses, the not-quite-central gable, the projecting porch roof, the recession of the garage. Interest is concentrated toward the intersection of the streets, the perspective from which the house is most often seen. Yet the detailing of each feature is kept broad enough to be in scale with the much broader treatment of the park facade. Here the size of the house proclaims itself in the mounting weight of masonry down the incline of the

Strapwork: a form of ornamentation employing interlaced raised bands.
Rondel: a small circle.
Random ashlar: masonry of square or rectangular-face stones with neither vertical nor horizontal joints continuous.
Parkway: in the older sense, a landscaped thoroughfare from which commercial traffic is often excluded.
hillside. The half-timber house seems almost to be perched upon a cliff of stone, strongly buttressed by the vertical rise of the stone up the stairwell, and the magnificent chimney at the end of the house. The chief decorative interest of this facade is the stonework: the fine depressed arches of the windows which are echoed in the stone arched entrance under the porch on the street front, and the beautiful precision of the angle buttresses, split by the angles of the house.

As their careers progressed, Meade and Hamilton concentrated more and more on the development of English cottage forms, leaving behind the larger Jacobean types, except in the few instances where the client's taste ran toward the manorial. The Kraus house of 1914 (Fig. 13) inverts the transitional style of the seventeenth century. It has Renaissance symmetry with Tudor details, reminiscent in its massing of Sir Edwin Lutyens'
"Middlefield" in Great Shelford, England. The John Gill house of 1915 (Fig. 14) is closer to the Tudor tradition but very much *sui generis*.

Two stone houses show which way the trend might have gone in the simplification and modernization of cottage types. In the Stockwell house of 1917 (Fig. 15), the architects concentrate on the beauty of the stonework. Decoration has been reduced to the basic architectural elements — window design, chimney massing, and the strong depressed arch of the doorway. Though Meade still calls it the English cottage type, to us it is highly reminiscent of the Pennsylvania farmhouse.

The Eaton house, also of 1917 (Fig. 16) is more sophisticated and is the chef d’oeuvre of the developmental side of their work. Here is the long horizontality preferred by the period, the height of the walls being counteracted by the long gradual slope of the roof and the heavy sheltering overhang of the eaves. Like the Cashman house, this is an obtuse-angle plan on a curved corner. The length is relieved but not contradicted by the vertical group in the center of the main facade; the two-story bay, chimney and projected entrance. The window and entrance bays are not only kept well below the roofline but strongly related to the eaves, the blind gable of the window bay minimizing its height. Four massive chimneys pin the house to the ground, their own projection above the roof having a longer horizontal than vertical dimension. The recession of the porch, the projection of the center grouping, and the obtuse angle of the servants’ wing give the house the appearance of a long slow curve similar to that of the road. Built well up toward the road, this house is planned to face toward the rear and has a true garden facade (Fig. 17). Between the projection of the side porch and the breakfast room runs a long stone-paved porch, overlooked by the inevitable bay windows of the dining room and living room. With the addition of the porch

---

Fig. 14 (right): John Gill House, Cleveland Heights, is somewhat Tudor but very much *sui generis*.

Fig. 15 (below): Stockwell House, Shaker Heights. The decoration has been reduced to the basic architectural elements.
Fig. 16: Eaton House, Cleveland Heights, street facade. This is the chef d'oeuvre of the developmental side of Meade and Hamilton's work.

Fig. 17: Eaton House, garden facade. The horizontals on this side of the house are even more pronounced, achieving that long, low, comfortable look prized by the period.
roof, the horizontals on this side of the house are even more pronounced, achieving that long, low comfortable look prized by the period. Ample, solid, comfortable, handsome but not pretentious, traditional but not eclectic, this house represents the best aims of the pre-World War I generation.

These Meade and Hamilton houses illustrate the achievements of the American domestic architects of the second decade of the twentieth century. Conscious of their vastly improved training, they brought new harmony to plan and design. Reacting against the ungainly exuberance of the High Victorian, which they blamed on too much originality, they consciously went to school to past styles to learn taste. And learn it they did. Thomas Tallmadge, reviewing "Country House Architecture in the Middle West" in the Architectural Record in 1922, pausing a moment to mourn the failure of the Chicago School to create an American style, sings a paean of praise to this new achievement:

Taste, the sense of absolute pitch in architecture, the flower on the topmost bough of the tree of knowledge, is the leitmotif of country house architecture today. Twenty years ago it was correctness of style, ten years ago fashion, but today (I am speaking only of the best work) there is no insistence on style, nor is there any sheeplike following of any latest mode. But sense and sensibility in architecture, decoration and landscape gardening is required and delivered. There is nothing here about this savor of the beautiful, this taste, but there is nothing heroic about country houses. Nevertheless, an instinctive perception of the beauty and fitness of all that goes with the building of the house is the brightest flower, the sweetest fruit, so far, of Eclecticism.

Completeness, convenience, and comfort are the aims of the suburban house, as summed up by Meade himself in his Country Club News articles. "Taste" and "refinement" are also words frequently used by him in these articles. If the struggle for the recognition of "modern" values in house design had not been so bitter, it would long ago have been recognized that the American house of the first third of the twentieth century reached a level of quality, design skill, and suitability to the client's needs that compares favorably with the achievements of the eighteenth century. And like the Georgian house, the early twentieth-century house has remained in favor to the present day. The large number of such fine houses to be found in Cleveland and its suburbs, still maintained in excellent shape, is one of the attractive features of this metropolitan area.

NOTES


4Battles of Styles. As the Gothic revivalists had battled the classicists in the nineteenth century, not only on aesthetic but on moral grounds, so the "modernists" battled the "eclectics" in the twentieth century. It was considered not just bad taste but somehow morally wrong to use decoration on a building, to develop from past tradition, or to cover up the expression of the function of the structural members of a building. The result was cubes of white concrete, long strips of unframed windows, and later whole buildings of glass with the metal construction expressed on the outside. These ideas took over urban and commercial architecture, but never made much headway with the majority of private householders.


6Eric Johannessan, Cleveland Architecture 1876-1976 (Cleveland: Western Reserve Historical Society, 1979)


From 1923 to 1929, Meade wrote more or less regularly on architecture and decoration for the Cleveland social magazine, variously titled, *Country Club News, Town and Country Club News*, and *The Brontides*. Meade's attitudes when quoted are taken from these articles.

Reported by the present owners.

"T. Tallmadge, *Architectural Record*, 52 (1922), 293.

"Houses are built to live in and not to look on; therefore let use be preferred before uniformity, except where both may be had."

— Francis Bacon, *Essays* (1625)

"The House shows the owner."

— George Herbert, *Jacula Prudentium* (1651)

"A comfortable house is a great source of happiness. It ranks immediately after health and a good conscience."

— Sydney Smith, Letter to Lord Murray, Sept. 29, 1843
David E. Sonner

America's Oasis: the Great Lakes Region

There you were, last winter, slogging through the snow from the office to the parking lot, leaning into the biting wind, dreading the ride home. You may have asked yourself: "Why do I put up with this climate? Why don't I just pack up and head for the Sun Belt?" Why not, indeed! So many others have, not only from northern Ohio, but from all the Northern states. The most recent census shows that while Cleveland lost more than 20% of its 1970 population and Ohio just barely stayed even, Houston and Phoenix grew by more than 20%. California increased its population by 13%, and Florida by 30%. For the first time in our history, more than half the population now resides in the South and West, and these regions are expected to grow by drawing off the inhabitants of the other regions.

This outflow of population has also taken away investments, jobs, and political power from the region. The eighteen states of the Northeast and Midwest lost 17 Congressional seats as a result of the 1980 census, while the Sun Belt gained 14 seats. The area also lost over three quarters of a million manufacturing jobs in the last decade. Of the ten cities likely to have the best job growth prospects, according to Money magazine, none is in the Northeast or Midwest.

Perhaps more important, enthusiasm for the region is also draining away, a sense that the Sun Belt is the boom area of the future. In gloomy contrast, the once-thriving and confident Northeast and Midwest regions are seen as hopelessly decayed. According to the President's Commission, reviving the urban centers of the Northeast and Midwest would be a waste of effort and money. The President's Commission for a National Agenda in the Eighties urges that our national policy direct its efforts and money toward the further development of the sparkling Sun Belt:

Industrial cities such as Boston, Cleveland and Detroit stand as "bricks-and-mortar" snapshots of a bygone era... Many older cities in this nation faced with declining population and economic vitality, stand as "withering monuments to the industrial age"... We cannot avoid the fact that growth and decline are integral parts of the same dynamic process in urban life... There is a fundamental problem in attempting to halt the shrinkage of a metropolitan area or to revitalize obsolete industries... In our view, the moral and material resources of government could be better expended in planning for the future.

It seems, then, that the economic outlook for northern Ohio is as bleak as its winter weather. Of course, the weather is one of the factors contributing to the decline of what is so aptly called the "Frost Belt." Each year, close to 40 inches of precipitation falls on the Cleveland area, much of it sleet and snow. In contrast, the annual total in Los Angeles is about 14 inches of rain, and summer Phoenix gets 7 inches of rain a year — no snow or sleet.

There is one aspect of these regional differences, however, that may ultimately tip the balance back in our favor — water. The lovely skies of Phoenix and Los Angeles...
azure and cloudless day after day, look down upon a desert. Southern California is part of the most arid region in the United States. Other sections of the Sun Belt, such as Florida and the Gulf Coast of Texas, have plenty of water, but most of it is salt water.

The population of the Sun Belt states is expected to grow prodigiously between now and the beginning of the next century, four times faster than that of the Frost Belt states. California alone is expected to grow from a population of 16 million in 1960 to 29 million in the year 2000, almost double. In time, this uncontrolled growth will negate many of the advantages now luring people and businesses to the Sun Belt. The sun will still shine, of course, but it will shine on cities every bit as crowded, frantic, and polluted as some of the northern cities are now.

Nor will there be enough water. No matter how the available supply is obtained, used, and reused, there will still not be enough. Every additional newcomer, every additional factory, military installation, housing tract, root beer stand, or hot tub will put more strain on water resources already utilized to the limit and, in an increasing number of instances, beyond the limit. Consider the following:

- In Taos, New Mexico, in order to obtain water for new business or industry, it is necessary to buy the water rights from another business or industry.
- In west Texas, the fields around Pecos, once bountiful with irrigated cotton, now lie empty except for tumbleweeds and dust. The water from underground aquifers has been pumped so low that the farmers cannot afford to run their pumps any more. Along the Gulf Coast of Texas, the pumping of ground water has caused the earth to sink below sea level, with the result that homes and streets once high and dry are now settling into tidewater from Galveston Bay.
- In California, more than 10% of cropland has been seriously damaged by high concentration of salts in the soil due to intensive irrigation.
- In Florida, there once seemed to be no end to the state's 20-year building boom. Unfazed by skyrocketing construction costs and interest rates which have nearly halted residential construction in the rest of the country, Florida developers could barely keep up with the demand. But now, some of that expensive real estate is disappearing into sinkholes caused by the depletion of groundwater reservoirs.

Until recently, most Americans had little occasion to consider the idea of scarcity of resources. Since the end of the second World War especially, we have operated on the principle of unlimited supply and unlimited demand, fueled by technology. The idea that progress, development, prosperity, even the pursuit of happiness can be restricted because of an inadequate supply of — not titanium, not rhodium, not even petroleum, but — WATER, requires a painful adjustment in the American psyche. After all, why did we build all those dams and reservoirs and aqueducts except to guarantee that we would always be able to grow, build, thrive?

Today, in the Sun Belt, the rhythm of development goes on. Many of its new developments will be water-intensive, such as coal mining and shale-oil extraction. One coal slurry pipeline consumes 15,000 acre-feet, or 4.8 billion gallons, of water per year. And it takes 3.6 barrels of fresh water to extract one barrel of oil from shale.

Of course, people are also water-intensive. The human body is more than 75% water. The water used by the average Ohio resident amounts to nearly 60 gallons per day per person, for residential use alone. In Phoenix, with its lawns to be watered and swimming pools to be filled, the average resident uses 160 gallons of water a day. (Compare that with an inhabitant of semi-arid Africa who uses, according to Richard Barnet in The Lean Years, less than a gallon a day.)

The southern-bound emigrants from Cleveland and Columbus and Chillicothe will expect to continue to use water in the same way they did in water-rich Ohio. They will expect plenty of water for dishwashers and toilets and washing the car. They will expect to water the lawn, even in the middle of the desert. They will expect that when a faucet is turned on, water will flow. Indications are that many will be disappointed.

Turning on the faucet in Los Angeles has been described as an "act of naive faith." This remark may seem to be simply another snide attack on Los Angeles; but consider that most of the water flowing from the faucets of the nine to ten million people who live in Southern California has had to be pushed, piped, and pumped from California's Owens Valley, 270 miles away; from the California Water Project, 490 miles away; and from the Colorado River, 240 miles away.
To better understand the need for faith, imagine for a moment that Cleveland is, like Los Angeles, located not on the shore of a 10,000-square-mile freshwater lake, but on the shore of a salt sea. Imagine that the water that slakes our thirst, supplies our industries, and irrigates our cropland is being moved by a complex system of pipelines, aqueducts, and tunnels through deserts and over mountain ranges, for a distance that is roughly equal to the distance from the Ohio River at Cincinnati to Cleveland. Now imagine that this system, this lifeline of water essential to survival, passes through the parched lands of farmers and native peoples who resent the "stealing" of the water and dream of dynamiting the aqueducts just as their forefathers dynamited them 70 years ago. Imagine that the pipelines are vulnerable to earthquakes and power failures and forest fires and all the ills that machinery is heir to. And now imagine that all the many things that could go wrong to interrupt the flow of water several hundred miles to your faucet, something does go wrong, perhaps something no more unusual than inadequate rainfall on distant watersheds for a season or two. Imagine half the state without water.

Consider how fortunate we are compared to Los Angeles, Tucson, or Tampa. We are located within reach of the world’s largest treasure of fresh water, the Great Lakes. The Great Lakes account for 20% of the whole earth’s supply of fresh water, and Lake Erie, much abused and maligned, contains enough water to keep the Colorado River running for the next 25 years.

Water is the crucial factor shaping this area’s future. We have enough of it and much of the Sun Belt does not. We have enough to supply industrial expansion, population growth, agriculture, recreational uses, and, if the Sun Belt damages itself badly enough, we have enough to come to its rescue.

Already, the Western and Great Plains states have been thinking of the Great Lakes as a possible source of water for irrigation, drinking, and for energy projects such as coal mining and oil processing. But it would be an immense and fatal folly to allow this to happen. To create the massive systems needed to move water from the Great Lakes, from Alaska, the Columbia River, the Ohio River, would required hundred of billions of dollars. The proponents of the “North American Water and Power Alliance” have estimated that the system would draw from watersheds with a total area nine times the size of California, cost over $200 billion, and require over 30 years to construct. The Northeast and Midwest, deprived of public and private capital by such a huge diversion of the national purse, would surely wither.

For more than forty years the U.S. government has devoted an important part of the national treasury to building the economic strength of the Southern and Western states. Federal tax money paid for the TVA, the Intercoastal Waterway in Florida, Hoover and Glen Canyon Dams on the Colorado River, Folsom Dam in California, and the Central Arizona Project. It was national policy to assist the state governments and people of the economically-lagging South and the undeveloped West. And it was national money, for the most part collected from taxpayers of the Northeast and Midwest, that funded this policy. Between 1975 and 1979, for example, the 18 states of the Northeast and Midwest paid $165 billion more in federal taxes than they received in federal spending. In 1978 alone, New York State received 15% per capita from the federal government for water projects. In the same year, Idaho’s per capita share came to $56.88.

Now that the South and West are catching up with and passing the Northeast and Midwest, a sensible policy for the 1980′s would avoid the twin calamities of a neglected Frost Belt and a Sun Belt crippled by the consequences of too much, too fast. Such a policy would avoid the loss of the enormous agricultural bounty we receive from California, Florida, and the irrigated lands of the Southwest. It would also prevent the destruction of the environmental and recreational values of the wilderness rivers, deserts, and mountains of the West. And foremost in this national agenda would be a water-resource program which sought to protect the Great Lakes.

Many conflicts over water are already erupting in the Sun Belt, and these can only become more damaging and dangerous. With every additional newcomer to the Sun Belt, the competition for the same fixed quantity of water grows more intense and desperate.

In New Mexico and Arizona, as the streams and rivers have been sucked dry to shift water to the expanding cities, the farmers and ranchers downstream must go without. Estimates of the amounts of water needed for the extraction of the mineral wealth of the West and Southwest add up to its entire available water supply. Electric power companies, in order to expand power
production (a large part of which will be used to move water around), are buying water rights from farmers and ranchers in Utah. The result will be lower meat and grain production. Southwestern food production has already begun to suffer, driving up the cost of meat and thereby raising the inflation rate.

The increased militancy of American Indian tribes in asserting their claims to water rights, as well as to land and mineral rights, is bound to conflict with the mounting demands of non-Indian agriculture, industry and population centers, and with the state and local governments which represent these interests. The future of Arizona is at stake in a battle being fought in the Federal courts between the state government and twelve Indian tribes over the allocation of water from the soon-to-be-completed Central Arizona Project. Arizona and New Mexico are two of the fastest growing states in the Union. Many of their cities are expected to double in population every five years during the next three decades. All of these communities are struggling for the same water that the Navahos and other tribes want. "The central question," according to a New York Times editorial of December 17, 1980, "is for whom shall the deserts be made to bloom: the Indians, who want to irrigate their lands for crops, or the burgeoning cities, which need water to continue their relentless expansion across the dry sands?"

The Colorado River is the site of another bitter controversy. Only one river, the Colorado, traverses the Southwestern American desert, and its flow becomes a trickle by the time it reaches the sea in Mexican territory. By treaty, Mexico is entitled to the first 12% of the annual flow of the Colorado, all other users being secondary, even Los Angeles or Phoenix or the Imperial Valley. What will be done in the event of a drought? Will Los Angeles be allowed to dry up? Will the United States abrogate the treaty? Mexico is no longer likely to accept such treatment from the United States, especially since it has become one of our suppliers of oil and natural gas.

Such dreadful outcomes need not occur. Clearly, the answer lies in restraint. It is not inevitable that we shall mismanage our resources and our political and economic systems and tear ourselves apart over the last dwindling supplies of water. Nor is it inevitable that the several sections of the country will contend against each other. Since we live in the UNITED States, surely we can recognize that the prosperity and security of one section of the country is tied inseparably in the prosperity and security of the next. Surely, we understand that regional cooperation is preferable to inter-regional strife.

In that spirit, we who are lucky enough to live in water-wealthy northern Ohio ought to recognize that floating over the decentralities of the Sun Belt will serve neither regional nor national interests. If we are alert enough to our long-term interests, we can stop squandering our water resources, indulging though they may seem. Not very long ago, the Cuyahoga River was a flammable setup of poisons and garbage, and Lake Erie was considered nearly dead. Recently the situation has greatly improved, but the sewage, the agricultural chemicals, and the industrial and municipal wastes that continue to pour into the Great Lakes still threaten to transform them into giant cesspools.

Recent actions in Washington are not encouraging. Federal money for water-treatment and sewage-treatment works has all but disappeared. The budget choppers have abolished the Great Lakes Basin Commission, the coordinating agency for research and planning. Its tiny allocation for 1981—$600,000—is scarcely sufficient to fund an engineering study for any one of the grandiose federal water projects in the Sun Belt.

But new life is stirring in the Great Lakes community. At a time when plant and animal life is reappearing along our lakes and streams, citizen interest in our water resources is also undergoing a renewal. In recent months, nearly 50 environmental and public interest groups, including the governments of the affected states, have joined forces to protect the Great Lakes and to battle proposals to pipe the lakes' water to the Sun Belt. Named the Great Lakes Federation, the coalition is one example of the growing awareness that each local water problem is part of a larger whole.

In our eagerness to utilize water as the elixir of progress, we must not forget the crucial difference between water and other resources. Water is the stuff of life; coal and oil are not. Though coal and oil are not renewable resources, neither are they indispensable. Water is renewable, but only if given care and reverence, and it is indispensable. Once we learn to act on that understanding, our advantage over the Sun Belt is assured.

So, the next time the weather forecaster predicts several more days of wet and gloomy weather, try not to grumble. Remember that falling from heaven is the currency of economic recovery for northern Ohio.
Daniel Jeremy Silver

A Rabbi in China

Only memories remain of the Jewish communities that once flourished in China. But a comparison of the two cultures illuminates both.

The synagogue of Kaifeng called its rabbi Wu-ssu-tu. The term appears to be a transliteration into Chinese of a Persian word, us-tad, which means master or teacher. When I found that the immigration officer of the People's Republic of China who was handling our papers at the Canton railway depot did not understand my occupation as listed on my passport, I trotted out this newly learned, old Chinese term. His eyes remained blank.

In China there are advantages to a title which no one understands. The Chinese need to know who you are or, rather, how important you are. The bureaucracy would lose face if a person were not given proper due. Since China's officials are reluctant to admit ignorance (such an admission would diminish their face), they tend not to do the natural thing and ask. A title not properly understood is inevitably magnified (better to do more than less), and we were treated with a deference to which this rabbi could easily become accustomed.

My wife and I spent a little over three weeks in China while I was on sabbatical leave. I came armed with the familiar set of romantic notions about Jews entering China centuries ago as members of the long caravans which traversed the Great Silk Road from Persia to Cathay bringing the wine, cotton and coin of the West to trade for the paper, silk and tea of the East. Once, in the Royal Ontario Museum in Toronto, I had felt myself face to face with just such an ancestor when I paused before a Tang Dynasty figurine of a foreign merchant dressed in a long traveling coat and bearing on his face unmistakable semitic features. Actually as I learned later, this merchant had probably been modeled after a Parsee or Muslim or Armenian Nestorian trader rather than a Jew. In dress and general look these men were not distinguishable, and Jews were a decided minority among the traders who banded together to form those slow-moving caravans which, a thousand and more years ago, crossed and recrossed the southern steppes of Russia between Samarkand and Tashkent and the cities of the Great Wall.

China now has no active Jewish communities, and in fact clear records remain of only a single synagogue, one that flourished from the twelfth to the nineteenth century in Kaifeng, formerly capital of the Northern Sung Kingdom and later of Honan province. The glimpses we have of the Kaifeng community and of the other Jews who penetrated China through the centuries provide a fascinating insight into the processes of cultural interchange, and permit us to make some revealing comparisons between the destinies of the Chinese and the Jewish peoples.

Daniel Jeremy Silver, Rabbi of The Temple of Cleveland, holds an A.B. degree from Harvard, an M.H.L. from Hebrew Union College, and a Ph.D. from the University of Chicago. He is author of two books, Maimonidean Criticism and the Maimonidean Controversy, 1180-1240 (Brill, 1965), and Volume I of a two-volume History of Judaism (Basic Books, 1974); he has also edited two books and written more than forty articles. Rabbi Silver has held significant executive and advisory positions in many organizations and institutions, including the Task Force on Jewish Identity CCAR, of which he is Chairman; the National Foundation for Jewish Culture, of which he is past President and currently Chairman of its Academic Advisory Council; and the Cleveland Museum of Art, of which he is Vice-President. He is Adjunct Professor of Religion at both Cleveland State University and Case Western Reserve University.
Only within this century have scholars begun to learn much about the people who lived centuries ago on the Asian steppes, and about the traders, including Jews, who passed through those regions on caravan routes. Much of this knowledge has grown out of the work of the British colonial officer Sir Mark Aurel Stein, some of whose finds my wife and I viewed in India’s National Museum in Delhi.

Our guide-curator in Delhi described Sir Mark as a British civil servant, one-time Commissioner of Education in the Punjab, who had gained academic immortality by spending his vacations unearthing Asia’s hidden history rather than hunting tigers or playing polo. Actually, Stein was not an Eton graduate but a Hungarian Jew who, like so many of his generation (he was born in 1862), abandoned the culture and ostracism of his childhood for opportunity in the larger world, a journey which ultimately led him from Budapest to Vienna to London and then, surprisingly, to India. There, while his colleagues in the Raj bureaucracy drank themselves into early graves, Stein went out into the steppes and uncovered the history of its people, the Tartars and Mongols, who periodically fell upon China, the Near East and Europe, pillaging, conquering and changing the course of history.

On one of his periodic expeditions into the high Asian wilderness, Stein discovered in Dadan-Uilqi, an oasis in Chinese Turkestan, a cache of manuscripts which included a letter, dated 718, written in Judeo-Persian, using Hebrew characters, in which a trader in China asks a co-religionist back home for help in disposing of an unwanted acquisition—a flock of rather mangy sheep. Later, at a site known as the Cave of the Thousand Buddhas at Tun-Huang, Stein discovered another sizeable manuscript deposit which included a parchment on which was written a selihah or Hebrew penitential prayer consisting of alternate lines from the Prophets and Psalms and asking God’s forgiveness for the bearer’s sins. Such small scrolls were routinely carried as amulets to protect the trader against the dangers of the journey. It was written in a script which can be dated to the eighth or ninth century. Here was proof that Jews had been among the traders.

In preparation for our trip, I had read the more recent literature and discovered that contrary to my early impressions, though
some Jews may have taken the overland route to China, the largest number of them came, as did most Westerners, by sea from Persia and Yemen via India and Sumatra. Reaching one or another of China’s ports, they sailed up her extensive river system to the important inland trading centers of Peking, Nanking, Hangchow and Kaifeng. A dedicatory stele erected in 1489 in the court of the Kaifeng synagogue describes the Jews as originating in Tien-Chu, which is one of the many Chinese designations for India, and describes them as cloth merchants, thus suggesting that the local community specialized in weaving and dyeing. The stele gives the date of 1163 for the dedication of the synagogue.

Jews traded with China and settlement followed trade. A delightful tenth-century wanderer-fraud, Eldad Ha-Dani, claimed to have ransomed from Chinese captivity by one of the leaders of the Lost Ten Tribes. The legendary river Sambatyoon, beyond which the Assyrians were said to have exiled the tribes of Israel, was believed to be in the Far East, and the identification of China’s Jews with the Lost Ten Tribes was a popular theme of medieval folklore. Marco Polo met Jews in China on his first voyage (1286). The Arab journalist, Ibn Khurdadhbih (mid-ninth century) describes the sea and land routes which Jewish merchants, whom he calls Radanites, followed from Gaul (now France) to the Great Wall. Another Arab journalist of the tenth century (Abu Zaid) reports a massacre of Muslims, Parsees, Christians, and Jews in Khan-Fu (Canton?) during a dynastic rebellion.

China’s Jews were practicing Jews. In 1722 a French Jesuit, Jean Domenges, visited the synagogue at Kaifeng, then the capital of Honan Province, and drew a sketch of a man leading services, dressed in typical mandarin fashion complete with Chinese-style skull cap and pigtail, and reading from a Torah encased in Yemenite fashion. The Jesuits who had visited Kaifeng described a community where males were circumcised, the Sabbath was observed, the liturgy was chanted in Hebrew, Biblical holidays were followed, and various dietary laws observed. Among the names by which these Jews were known to their neighbors was “those who pluck the sinew.” The Jews of China, like Jews everywhere at that time, observed the Biblical practice “not to eat the sinew of the nerve that runs in the hollow of the thigh” (Gen. 32:32).

At Kaifeng the annual cycle of Torah reading was divided into fifty-three sections, as was the custom in Yemen and Egypt. Little is yet known with certainty about the sources of Kaifeng’s special religious practices. The Torah (there were at least twelve in Kaifeng during the seventeenth century) was regularly read from an encased scroll, and apparently many could manage the Hebrew text. Textual commentaries and colophon notes, many of which miraculously survive in various museums, were written in Judeo-Persian, the lingua franca of the Jewish medieval trader in the East.

Besides the wu-ssu-tiu, or rabbi, the Kaifeng community had a synagogue personality known as a man-la. The man-las of Kaifeng filled various roles necessary to communal Jewish life including those of sexton, Overseer of Ritual slaughter, and scribe: sha-nash, shochet, and sofer, respectively. The term man-la seems to derive from the same root as mullah. The Chinese seem always to have had a problem distinguishing among the Western monotheistic faiths and often called the Jews simply “the blue-turbaned Muslims.” The Muslims wore white turbans.

The community of Kaifeng and its synagogue became an object of intense interest in Europe when various Jesuit visitors there reported on their visits in letters sent back home. The Jesuits learned of this community in 1605 when a Kaifeng Jew, who had passed the provincial level examinations, traveled to Peking to lobby for a post for which his degree qualified him. While in the capital, this man, Ai Tien, heard of the arrival of Westerners who professed a scriptural faith, and he assumed that these Westerners must be fellow Jews. His government business complete, Ai Tien visited the newly established Jesuit mission where he innocently identified an altar piece depicting a Madonna holding the infant Jesus and John the Baptist as a picture showing Rebecca with her twins, Jacob and Esau. Matteo Ricci, the senior priest, disabused Ai Tien as to the Jewishness of the Jesuits, but quickly sent a subordinate to Kaifeng to learn more about Ai Tien’s community.
The reason for this Christian interest is worth noting. During the Middle Ages the faithful believed in the Second Coming and various apocalyptic scenarios held that the world-wide dispersion of the Jews and their subsequent conversion to Christianity was a necessary prelude to the return of the Messiah. If the Jews were in China they had reached the antipodes — the dispersion was complete — and if China's Jews were to be converted, the millennium could begin.

Ricci had other reasons to be interested in these Jews. His Church had long held that Jesus' mission had been prophesied in the Torah and that the lack of proof texts to this effect was the result of a conspiracy by the rabbis who, after the emergence of Christianity, changed the Torah text so as to remove all references to the Christ-Messiah. The Jews of China were reputed, erroneously, to be the Lost Ten Tribes of Israel and to have come as early as the eighth pre-Christian century. It was possible then that the Torah scrolls of Kaifeng's synagogue might contain the original, uncensored text and, once and for all, prove the Christian claim. Needless to say, when Kaifeng's scrolls were examined, they were in all respects identical to the received text.

News of the Jews of China came at a time of bitter doctrinal dispute between the Jesuit and Franciscan orders over the question whether a formal religious renunciation was
to be demanded of Confucian converts, and the Jewish practice became an issue in that quarrel. The Jesuits, first on the scene and realists always, argued that Confucius was a philosopher, not a prophet; that Confucianism was a moral philosophy, not a religion; and that there was nothing idolatrous in the veneration of ancestors or pantheistic in the veneration of the Heavens. They sought to allow such converts to adopt Catholicism without any formal renunciation of their familiar habits. The Franciscans, on the other hand, defined Confucian thought and ritual as idolatrous and polytheistic; hence, they required the convert to separate himself completely from these forms. In their view, the Jesuits’ practice was lax and threatened the integrity of Catholic teaching.

Kaifeng’s Jews got involved in the so-called “Rites Controversy” because the Jesuits tried to reinforce their case by citing synagogue practice. Jews were known to follow faithfully the Torah’s strict rules against idolatry; yet, in Kaifeng the synagogue included an ancestors’ hall where incense was offered before memorial tablets dedicated to Confucius as well as the community’s own dead. If Jews, known for their strictness in such matters, considered Confucian practice a philosophy rather than a pagan religion, surely, so the Jesuits claimed, the Church could take a similar position.

Our itinerary did not include Kaifeng, and, in spite of the city’s historical significance, I made little effort to secure permission to visit. Reading the original study on Chinese Jews by the one-time Anglican Bishop of Honan, William Charles White (University of Toronto Press, 1942), I had learned that Kaifeng no longer contained a self-conscious community of Jews and that there was hardly a trace of the synagogue whose sizeable precincts are known from drawings the Jesuit Jean Domenge, had done in 1722. Around 1850 the impoverished remnants of this community, or some of them, had dismantled the synagogue and for a few taels of silver had sold its pillars and bricks as scrap. Before we fault these people too severely let us remember that survival is the first law of nature. The Jewish religious enterprise in Kaifeng had long since faltered and weakened. The last rabbi had died around 1800. A letter from Kaifeng’s community, written within a year.
or two of the synagogue’s dismantling, indicates that no one could any longer read Hebrew and that only one old lady remembered anything of the religious tradition. Those Jews were impoverished and could not afford to concern themselves with the needs of historians and tourists a hundred years hence.

China’s Jews have a past but no present. Their only present is represented by a few faded photographs of obviously impoverished folk, taken by travelers early in this century and regularly republished in encyclopedias and monographs, apparently to prove that, yes, China’s Jews really looked Chinese. China’s Jews did not escape the pressures of cultural assimilation. Chinese, perhaps probably Mandarin, was their everyday tongue. The honoring of parents mandated by the Fourth Commandment of the Decalogue was interpreted so as to identify Jewish family practice with the Confucian requirement of filial piety. In a novel, but thoroughly Chinese, expression of these attitudes, Kaifeng’s Jews burned incense to the Patriarchs and other ancestors in a separate hall of their synagogue. In the good years when their elders were still rabbinically learned and their religious schools effective, these Jews may have used Hebrew value terms among themselves; but inevitably, traditional norms were translated into the terms the Chinese language made available so as to explain Judaism to neighbors and to their own children — and inevitably they were transformed by such translation. Adonai, the Biblical term for God, lost some of its ability to express personality as well as life force when it became Tien, the Chinese name for Heaven. The faith of China’s Jews certainly had a philosophical cast. Halachah, of course, literally means “the way.” When halachah was translated as Tao, the Chinese “way,” it takes on new mystical and speculative levels of meaning. The dedicatory stele which once stood in the synagogue court suggests the process of cultural assimilation. It quotes from the Analects, The Doctrine of the Means, and the Book of Changes; it identifies Abraham’s search as one for Cheng Chiao, “correct religion,” that is, truth, and it clearly indicates that correct religion is based on the way (Tao), purity (Ching), truth (Chang), ritual (Li), and worship (Pai), all terms heavy with Confucian overtones. The stele stood in an open public space and was intended to identify the synagogue to non-Jews; it may actually have been written by a hired non-Jewish scholar. But one senses, nevertheless, the inescapable need which must have been felt by Kaifeng’s Jewish leaders to find common terms to explain their “way,” terms which would be understood and approved by the majority.

The Confucian religion and this religion, although they agree on essential points and differ in secondary ones, yet the principles of establishing the mind and restraining the conduct are something more than honouring the Way of Heaven, venerating ancestors, giving high regard to the relations between the Prince and his ministers, being filial to parents, living in harmony with wife and children, preserving the distinction between superiors and inferiors, and having neighbourly relations with friends. In short, these principles do not go beyond the Five relationships. (White, Chinese Jews, II, 14-15)

Our itinerary did take us to Kunming, best known to the West as the Chinese terminus of the Burma Road in World War II. Jews had lived in Kunming. Marvin Tokayer, one-time rabbi of the Jewish Center in Tokyo, in 1974 interviewed a minor Kuomintang bureaucrat, one Shih Hung-mo, who told him: “My name in Chinese is Shih Hung-mok . . . . I was born in 1924 in Kunming City, Yunnan Province (Southwest China), into the leading family among the Jewish communities in Yunnan Province who belong to the first batch [of Jews] that came to China in A.D. 620.” (The interview is recorded in Mandarins, Jews, and Missionaries, by Michael Pollak [The Jewish Publication Society of America, 1980], p. 269. Pollak’s book is a good recentsumming up of the literature and is particularly useful for its analysis of the role of China’s Jews in Western, particularly Christian, imagination). Shih Hung-mo may have been born into a family of Jewish ancestry, but it was certainly no longer involved in Jewish practice. Unfortunately, there are no records of the synagogue in Kunming. For Chinese Jewry Kaifeng is both type-site and the only known example.

One day when I passed up lunch to stroll alone through the streets of Kunming, I stumbled upon one of the city’s mosques. When I stopped to look at it, a crowd, as always, soon gathered, and in gracious sign
language I was invited inside. The simple hall, with its plain wood ceiling, undecorated columns, and low table with vases and flowers, so Chinese in character, struck me as what a Chinese synagogue might have looked like. There would have been an ark recessed into the center of the west wall suggesting the direction of Jerusalem. The Shema, Israel's declaration of faith in the One God, would have been engraved on the wall plaque. Originally, both mosque and synagogue would have included an imperial memorial tablet hung under the scriptural text. Imperial China required that all faiths kow-tow to the emperor. Jews satisfied the emperor and the Second Commandment by "bowing the head and bending the knee" in honor of both the king and the King of Kings. The royal inscription was placed on the same wall as the Shema.

That day I could have walked every street in the city of Kunming and not found a Jew. So the question I faced that noon hour was why Islam had survived in China and Judaism had not. The answer I came to gives great weight to population size. In all probability there were never more than ten thousand Jews in all of China. Kaifeng's community never exceeded twenty-five hundred. The Muslim community of China certainly numbered well into the hundreds of thousands. There are forty thousand Muslims in modern Kunming.

Other factors were also at work. Islam came to China as an imperialist faith and in China continued to reach out for converts. China's Jews came from Muslim lands where they had long experience with the cruel joys of toleration and the necessity of enduring economic, political and social discrimination. In China their small numbers and the arbitrariness of governmental authority would have suggested the wisdom of continuing to keep a low profile. Whatever missionary ambitions Jews may once have cherished had been whipped out of them by the tragic defeats of the first and second centuries.

Geography also played a role. There were large Muslim populations close by in Southeast Asia and India from which China could be easily reached. Jews had to come all the way from the Middle East. The medieval Hebrew term for China, Sin, suggests great distance. Chapter 49 of the book of Isaiah contains a prophecy of return to Zion which includes the promise, "Look these are coming from afar; these from the north and the west, and these from the land of Sinnin" (v. 12). (The Sinnin to which Deutero-Isaiah referred probably is Seyene, a place on the Nile in distant Nubia, but many commentators simply identified Sinnin with whatever place they felt was the most distant: China fit the bill.) Centuries passed in Kaifeng without a visitor from the outside Jewish world. Faith may be a private matter, but from time to time even the most loyal need confirmation that they are not alone.

I did not identify myself to the folk who opened the mosque for my inspection. After my experience at the immigration counter in Canton, I doubted that they would have understood my interest; but that was not the whole explanation. Though the Jews had come to China in the same junks and over the same silk route as the Arabs, and lived cheek by jowl in the same communities, their relationship was rarely an easy one. Muslims brought to China a sense of superiority over Jews which had been bred into them back home in Dar-al-Islam, a feeling which unfortunately continues to plague Arab-Israel relationships to this day. Since the Muslims too were alien to China's mainstream culture, they were insecure despite their sizeable numbers; and the Jews were a convenient scapegoat. It's satisfying to have someone to kick after you have taken your licks. Kaifeng's records tell of many indignities and attacks inflicted by the white-turbaned on the blue-turbaned. In the late nineteenth century an English traveler, inquiring about the synagogue, reported that he was mobbed and nearly killed in Kaifeng when a group of Muslims mistook him for a Jew.

That anxieties of this type should lurk beneath the surface of my mind I found on examination to be surprising and requiring some reflection. China was not a frightening place. The atmosphere is quite unlike that of the U.S.S.R. People on the street are helpful rather than surly. They are eager to talk rather than to create distance, but throughout Asia the Muslim population has been infected with a new sense of power. Israel is the enemy and, by extension, so are all Jews. I
had sensed this particularly in India and Malaysia and I guess I had carried these shadows into China.

Whatever the cause of my insecurity, I remember wondering how much China’s hard-line, anti-Israel stance in the international arena had to do with her national interest, how much with the Third World’s and Communist World’s predictable espousal of the Arab cause, and how much with the existence of a large Muslim minority within her borders. It is estimated that Muslims make up five percent of China’s present population. On the map China looks like a single country and we, in our innocence, tend to think of it as a homogeneous society. But in reality China is an agglomeration of various peoples and cultures still on the way to becoming unified. For example, we noticed many instances of worship — not only Muslim but also Buddhist and Taoist — taking place openly, without fear and apparently without arousing hostility. Two generations of Communist indoctrination and the Cultural Revolution have not obliterated the traditional pieties. The central government has problems not only holding a vast and disparate community together (provincialism always has been a fact of life in China), but with the task of imposing Communist ways, which are doctrinally affirmed only by a minority, upon everyone. It may have good reason to be cautious about creating unnecessary unhappiness among minorities such as the Muslims.

As a theologian I found that I had an insight into China which was useful as a complement to that of the political scientist. Communist Chinese policy is based on a messianic ideology which insists that certain irresistable economic laws determine the course of history. Maoism is no more or less than a modern apocalypse which purports to know what the course of history will be. Vice Chairman Deng sees Mao’s mistake as one of impatience. Mao was not misguided; rather, unfortunately, he became what the Jewish tradition calls a mekafetz baketz, one who forces the end, the classic error of the fervent messianist. Mao became so caught up in his dream that he tried to use the force of the state to hasten the coming of the messiah, but history cannot be rushed.

Mao was troubled by the contradictions evident in Chinese life. Despite years of egalitarian indoctrination, mind work is still prized more highly than manual labor. China was to be a worker’s paradise, but the children of the old privileged classes earned a disproportionate number of places in each university class. In every city sleek, black, nine-passenger limousines with curtained windows and Turkish rugs on the floor cross the town from the compounds of luxury apartments to government offices. The old scholar nobility has disappeared, but the elite of the Communist Party sought the familiar privileges of power and moved heaven and earth to get their children into the university. As the free market shows, the capitalistic spirit has not been lost. The Cultural Revolution was designed to resolve these contradictions and so hasten the consummation of history. But, as Jesus or Shabbatai Zvi could have told Mao, you cannot force the messianic age. If it comes, it will come in its own good time.

Today a breed of more patient, but not less doctrinaire, messianists govern China. They have not abandoned the certainties of apocalyptic Marxist messianism for a vague and uncertain vision of a perhaps never to be achieved messianic age. They are still orthodox. Relaxation is a tactic, not a conclusion. The screws of authority are being tightened. On the day we left the one English language paper in Peking reported a speech by Hua in which he spoke of the importance to China of trade with the West, but repeated forcibly the party line of the inevitability of the West’s decline and communication.

While there I found myself applying to China the title that the Zionist pioneer Theodor Herzl gave his utopian novel, Old-New Land. The past is visible and the present is being made to serve the future. I often found myself comparing the recent history of the Jewish people and the Chinese. We and they represent the world’s two oldest scholarship-prizing cultures, and in the course of the last century both of us have had to face the challenges of modernity. I find it striking that though Jews have been submerged within contemporary society, we have managed to preserve our sense of the value of the past, while China, a world unto herself, has abandoned her past and consciously adopted an alien Western ideology.
as the national commitment. Were we Jews saved by our scattering? Because of the diaspora no single power gained the authority to enforce its will upon all of us. Were we saved by our willingness to adjust our traditions to changes in the cultural environment? We had adjusted to Greece, Islam and Christendom while China remained China. It is one of history’s more poignant ironies that the Jews, who wanted so badly to be let into Europe, managed to retain feelings for the continuity of their tradition, while the Chinese, who wanted only to be left alone, now are led by those who damn the old ways as reactionary and seek to uproot the old culture, root and branch.

Preparing for the trip, I read a good bit of nineteenth and twentieth-century Chinese intellectual history and found there many a fascinating analogue to the Jewish experience. Nineteenth-century China, too had its circles of the newly enlightened: men who were so taken by the new and its manifest power that they dressed in Western clothes, sent their sons to Western universities and worked to replace old teachings with new truths. Towards the close of the last century, China’s first ambassador to Great Britain, Kuo Sung Tao, was one of these; he urged his fellow countrymen to adopt Western-style political, juridical and educational forms and institutions. Like some “enlightened” educators in Eastern Europe a century ago, Kuo called for the replacement of traditional education with a European curriculum and for the displacement of educational authority from the traditional scholar class to academics trained in modern universities. A new type of Chinese man had to emerge before China could recover her dominant role in the world.

There was a Chinese Enlightenment like the Jewish Haskalah, also called, in fact, “the New Learning”, and led, at first, by those who had been fortunate enough to have combined a traditional education with study abroad. These men produced journals like the Hebrew Haskalah periodical, Ha-Me’assef, in which they wrote of their hopes and doubts and published the results of an active translation program which made the works of Huxley, Mill, Spencer, John Dewey and Shakespeare available in China. A movement of language reform soon followed, aimed at replacing the elitist and esoteric academic languages with pae-hua, plain speech. History came again to occupy a central place in Chinese thought, and its youth fought many an emotional and philosophic battle to free themselves from the traditional veneration of age and authority. The following passage by Tse-Tung Chow, a turn-of-the-century Chinese revolutionary, might easily have been spoken at a meeting of Jewish workers in Warsaw or Cracow in the same era.

The Chinese compliment others by saying, “He acts like an old man although still young.” Englishmen and Americans encourage one another by saying, “Keep young while growing old.” Such is one respect in which the different ways of thought of the East and West are manifested. Youth is like early spring, like the rising sun, like the trees and grass in bud, like a newly sharpened blade. It is the most valuable period of life. I do not wish to waste my fleeting time in arguing with them (the old generation) on this and that and hoping for them to reborn and thoroughly remodeled. Tearfully, I merely place my plea before the fresh and vital youth, in the hope that they will achieve self-awareness, and begin to struggle. What is this self-awareness? It is to be conscious of the value and responsibility of one’s young life and vitality, to maintain one’s self-respect, which should not be lowered. What is the struggle? It is to exert one’s intellect, discard resolutely the old and the rotten, regard them as enemies and as a flood of savage beasts, keep away from their neighborhood and refuse to be contaminated by their poisonous germs.

If too much is made of them, parallels are dangerous, but the fact remains that modern China let go of the past. Proponents of radical and imported ideas defeated the evolutionary-minded reformers. Mesmerized by the dream of power, China turned to the battlefield to settle the direction of her modernization. What the West had that China lacked was power, and those who finally gave China a countervailing power were able to impose their vision. Jews and Judaism were saved, to a degree, by powerlessness. God sometimes becomes most real to me in life’s paradoxes.
Stephen R. Coleman

B.F. Skinner: Systematic Iconoclast

On the back cover of a book provocatively titled Beyond Freedom and Dignity is the caption: "We can no longer afford freedom, says B.F. Skinner." Who is this man to make such a claim? Does he really think freedom is too expensive, dispensable, perhaps even illusory? How could anyone be happy in a utopia based on the "behavioral engineering" described in his novel Walden Two? Didn't he actually place his own young daughter in an insulated chamber, a kind of "Skinner box" for humans, for extended periods of time? And how could anyone think that his laboratory experiments on rats and pigeons can provide a satisfactory basis for understanding the activities of human beings?

By holding controversial opinions and aggressively promoting them, Skinner has obtained a wide, though not uncritical, audience. On the basis of his Walden Two, he is said to be authoritarian, yet the American Humanist Association voted him Humanist of the Year for 1972, just after publication of his Beyond Freedom and Dignity. He has been pictured by some critics as devoid of human feeling, but many who have known or at least met him — I include myself in the second category — find him generous, personable, and kindly. Opinions attributed to him violate widely held views of human nature, but on examination his claims often turn out simply to be applications of the principle that reward and punishment play an important role in the lives of all organisms, including ourselves.

Skinner's outspokenness and provocativeness, apparently long-standing personal characteristics, invite misunderstanding: he has been attacking the preconceptions of a complacent public and of fellow psychologists since the beginning of his career in the late 1920's. He is often misunderstood because his views are known to many only by hearsay, or are distorted by his critics. But it is also true that Skinner's views are genuinely controversial, particularly when he extrapolates from the animal learning laboratory beyond its factual basis and his conclusions collide with deeply ingrained beliefs about human beings.

An objective look at Skinner's ideas themselves and at their background, both in his personal life and in the discipline of Psychology, should do much to dispel the misunderstanding and clarify the truly radical aspects of his work.

Human Nature: the Traditional View

In the traditional view, Man, though he has an animal side to his nature, also has a unique, spiritual side. Human beings alone are endowed with conscious thought; they alone possess a language; they can remember, plan, and make free decisions. Although the human mind is affected by the physical body in which it is lodged, and although humans share with animals certain lower neurological functions such as reflex actions, the higher mind is immaterial and exists distinct from the body; it makes the decisions that determine human action on the basis of knowl-

Stephen R. Coleman was born in Malden, Massachusetts, and lived in several suburbs around Boston before attending the University of Massachusetts at Amherst, from which he graduated with distinction. His graduate-school years were spent at Indiana University and the University of Iowa, where he combined laboratory research in Pavlovian Conditioning with excursions in philosophy. Since 1971 he has been a member of the Cleveland State University Department of Psychology, presently Associate Professor. His interests are in the history of psychology, especially in the development of American Behaviorism, on which he has written scholarly articles, and, more generally, in the historical relationship of psychology to other disciplines and to broader social and intellectual movements. He and his family live in Cleveland Heights, Ohio. (Photo: Milic)
edge, reason, and moral considerations. Human behavior, in this view, is purposeful, guided by anticipation of some consciously conceived future goal. In order to understand human actions, therefore, it has traditionally been assumed that we must understand what goes on inside a person—the subject’s ideas, wishes, attitudes, likes, dislikes and feelings, ordinarily said to be the workings of “a mind.” The degree to which this dualistic view of human nature has permeated Western thought is suggested by the complicated history of the term psychology, which F.H. Lapointe has traced as follows: “The word psychology was created in the sixteenth century to refer to one aspect of spiritual being. The whole study was called ‘pneumatology’ and psychology was the part concerned with the human soul,” in contrast to the other spiritual beings, namely God and Angels (and Devils).

The Scientific Revolution of the seventeenth century expelled this thought-system from natural philosophy; but the same dualistic system survived in other areas of philosophical discussion, notably in those concerned with moral and ethical issues, theological doctrine, human nature—including the human mind, of course—and social institutions. It goes almost without saying that the traditional view retained, and still retains, an impressive field of influence.

Skinner’s Behaviorism contradicts the traditional view in every important point. Unlike the traditionalist, Skinner treats humans, like other animals, as “organisms” and sees them as products of evolutionary selection and of a number of shared behavioral processes.

He denies the necessity of postulating a “mental realm,” and rejects the culturally established dualism of material body and immaterial spirit in favor of the assumption that human nature can be adequately encompassed in an explanatory system that includes the world of things, organisms, stimuli, and behavior. This is one of the easiest of his views to misunderstand because on the surface it seems to deny that the characteristically human activities of thinking, reflecting, planning, and so on take place. Skinnerian psychology, like virtually every form of Behaviorism, treats these as covert behavior, an interpretation which stretches the term “behavior” beyond its customary meaning of observable activity.

In what we may call the prescientific view (and the word is not necessarily pejorative) a person’s behavior is at least to some extent his own achievement. He is free to deliberate, decide, and act, possibly in original ways, and he is given credit for his successes and blamed for his failures.” Beyond Freedom and Dignity, 1971, p. 96.

Much human behavior, says Skinner, is affected by such covert activities, not by an immaterial entity called the “mind.” This assertion is not mere re-labeling, but has important implications: covert activities traditionally assigned to the mind must be learned, are modifiable and are affected by their consequences, and therefore are as “dependent upon the environment” as is overt behavior, according to Skinner. The net result is to diminish the autonomy traditionally imputed to the mind. Consequently, Skinner is in a better position to claim that no human activities are freely chosen: all are deter-
Skinner's emphasis on the consequences of behavior has prompted classifiers to include his psychology in the camp of philosophical hedonism ("pains and pleasures" psychology) going back to Jeremy Bentham and further. A term that Skinner (along with other Learning Theorists in America) commonly employs is "reinforcement": a given behavior is more likely to be repeated if, under similar circumstances in the past, it has been associated with a positive event, called a reinforcer. (What events happen to be reinforcers must be discovered, of course.) The behavior is not explained in teleological or purposive fashion, that is, as aiming toward a future goal, but in causal fashion, that is, as resulting from the present environment and past reinforcement history. The fact that the behavior achieves goals which are enjoyed by the organism is treated as a resultant of the mechanism of reinforcement, just as the adaptiveness of organ systems in present-day species is a product of evolutionary change and natural selection. In fact, Skinner has repeatedly called attention to the parallel between reinforcement and natural selection. And, just as teleology has been virtually eliminated in biological discussion, Skinner has worked for its elimination in the psychological explanation of behavior.

Skinner's opposition to culturally entrenched beliefs, which accounts for much of his unfavorable public image, has been telescoped here to emphasize the contrast. But these matters are not cut-and-dried: the issues are philosophical, and discussion, often heated, continues. That Skinner's views remain at odds with persisting traditional attitudes on psychological matters will become evident if we look briefly at the history of Psychology in America.

Psychology in the American College

As a subject taught in American colleges, "Psychology" is only about a hundred years old. Of course, American writers before the 1870's frequently discussed the intellect, the five senses, the passions, and the will. But the term "psychology" was probably not used in the title of an American book until 1840, when Frederick Rausch, a professor of Biblical literature at the German Reformed Theological Seminary in York, Pennsylvania, published his Psychology, or a View of the Human Soul including Anthropology.

Rausch's philosophical and religious-ethical treatment of psychological material is typical of the period before the Civil War. After that watershed, evolutionary theory and discoveries in the biological sciences undermined philosophies which put too much emphasis on the "spiritual" side of human nature. Moreover, as the nineteenth century approached its end, American colleges and universities accepted a greater role in vocational and professional training, and this decision led to large changes in the curriculum.

The static and tightly interlocked traditional curriculum was slowly replaced by a system of "concentration" in a preferred subject area, with various courses chosen from a "distribution" of other subjects taught in the university. The modern professorial role of teaching-and-research was gradually developed, as Americans who went abroad to study at the European universities (particularly in Germany) returned with an enthusiastic commitment to increase the fund of human knowledge through original research, and in their teaching to communicate this knowledge and the methods for finding it. The graduate school, first inaugurated in 1876 at the new Johns Hopkins University, was rapidly adopted by other American institutions. It was during this period of change in
higher education that Psychology became established as a discipline and profession, with all the associated institutional machinery.

Though Psychology escaped from its religious-ethical ties and self-consciously adopted the methods of the laboratory sciences, universities took a while to decide how the accepted subject matter of Psychology — the human mind and its intellectual, sensory, and emotive faculties — was to be disposed between the traditional "armchair" approach of philosophers and the newer scientific-laboratory approach, imported primarily from Germany. In newly forming disciplines, a great amount of ground-clearing is ordinarily called for: definition of the field and its subject matter, clarification of the main concepts, and especially its relation to contiguous disciplines. These matters take time, and they may generate heated controversies over fundamental (i.e., "philosophical") issues.

**Conflicting Opinions on the New Science of Psychology**

Such controversies produced a variety of mutually opposed general approaches, called the "Schools of Psychology," in the 20-year period roughly covering 1915 to 1935, during which time B.F. Skinner entered the field (see Fig. 1). There were a number of Schools to choose from in this argumentative period: Functionalism, Gestalt Psychology, Behaviorism, Freudianism, Structuralism, and others, each one itself subsequently dividing during the 1930's into various competing camps. All of these Schools except that of Freud agreed that Psychology must be a laboratory science, though there was strong difference of opinion as to the proper subject matter, the suitable method of study, and the correct theoretical interpretation.

Agreement on the laboratory-scientific model served to unify the new scientific Psychology emerging first in the 1870's and ultimately splitting off from its institutional parent, Philosophy. In most American universities, the break was complete by the 1920's. Naturally the scientific approach was applied to the traditional subject matter of Psychology, which in the late nineteenth century was "the phenomena of the human mind" and its various faculties of reason, perception, and will. For the study of these mental phenomena, a variety of objective and subjective methods was used.

In the study of the faculty of sensation or perceiving, the human subject might be asked by the experimenter, for example, to judge which of two tones was higher in pitch, and a series of such responses could be tabulated and analyzed. Thus sensory capacity — sensitivity — could be measured in all the sensory departments.

Even more objective observations were devised, which dispensed with the subject's verbal report, and measured such quantitative aspects of judgment as the reaction time. Scientific apparatus for such observations was actively developed and much prized in this period — for example, the "chronoscopes" which precisely measured the reaction times and could be rigged up to present and remove stimulus materials automatically.

Subjective measures were also developed: subjects were specially trained to observe and describe accurately their conscious mental content — sensations, images, and bodily feelings — during the process being investigated. The technique was called "introspection," for it presumably involved the person's looking into his own mind and communicating a verbal description to the experimenter. Introspection was extended by analogy to the study of the animal mind, which, it was reasoned, must resemble the human mind to the degree that the animal body and its behavior resembles the human body and behavior. A mentalistic Comparative Psychology came into being.

By the time of World War I, the new scientific psychology of the human (and animal) mind had succeeded in (1) fixing a specific and recognizable modern identity to the term psychology; (2) getting Psychology established among the American academic disciplines; (oddly enough, in Germany, Psychology fared much less well, not achieving institutional independence until some time in the 1930's, and then largely as a technology); (3) partially separating Psychology and Philosophy institutionally.

In the period from about 1904 to 1913, a number of more or less prominent American psychologists began to express growing doubts whether introspective methods were sufficiently like already established scientific methods to qualify as truly scientific. "Be-
behaviorists" recommended the elimination of all introspective methods as unscientific and unreliable. Going further, they recommended that the subject matter of Psychology be redefined so that Psychology would no longer be designated the "science of mind or consciousness" but rather the "science of behavior," a redefinition that would firmly place Psychology among the biological sciences. Early Behaviorists — Watson, Hunter, Guthrie, and others — typically had obtained training in some branch of Biology (as Skin-

LANDMARKS IN THE ESTABLISHMENT OF PSYCHOLOGY AS A DISCIPLINE AND A PROFESSION IN THE UNITED STATES, WITH OTHER DATES OF INTEREST"

1870
1880
1890
1900
1910
1920
1930

[first Psychology Ph.D.]
[first laboratory of Experimental Psychology (Johns Hopkins Univ.)]
[first professorship of Psychology at Johns Hopkins Univ.]
[first Department of Psychology at Johns Hopkins Univ.]
[first Psychology journal (The American Journal of Psychology)]
[first national professional organization (American Psychological Association)]
[first Psychology clinic (at the University of Pennsylvania)]
[Sigmund Freud visits the United States]
[J.B. Watson’s "Psychology as the Behaviorist Views It"

1915 - 1935

Figure 1
ner would also do, later in the 1930's) and looked to that field for its key concepts: the organism, the environment, learning and instinct, the reflex and the tropism, and so on. There arose a variety of American Behaviorisms, conventionally tied to the landmark date of 1912 and well established by the 1920's not only in the psychological literature but also in most American universities.

Thus when B.F. Skinner finally decided on a career in Psychology and entered graduate school at Harvard University in the fall of 1928, Behaviorism was one of several Schools of Psychology to which a willing disciple could declare an allegiance in this very argumentative period. What predispositions Skinner may have had at that point will be of interest to us as we examine his personal and family origins.

Regional and Family Background

Skinner was born and grew up in Susquehanna Depot, a small railroad town tucked in a narrow valley of the Susquehanna River in northeastern Pennsylvania. Like most of the townfolk, Skinner's family was involved with the Erie Railroad, the town's main industry. Paternal grandfather James Skinner worked in the paint shop of the Erie repair facility, and maternal grandfather Charles Burroughs was a foreman in its carpenter shop. For a couple of years after graduation from high school, Skinner's father William worked in the repair shops, before he decided to "read law." In his first autobiographical volume,25 Skinner's recollections suggest a great deal of competition among social, religious, and ethnic groups in a small, socially hierarchical city. A major portion of the Skinner family efforts was directed toward rising socially and economically, and his recollections are full of the social anxieties of his parents and their strategies for success. His father carried on the family pursuit of success by studying law and passing state examinations in New York which enabled him to set up a not particularly lucrative practice as an attorney in Susquehanna. The Skinners certainly were not poor, but the family of William, Grace, and their two children did not enjoy the kind of life which they — particularly B.F. Skinner's mother, born of a social class above that of her husband William — badly wanted. William seems to have been capable and hardworking as an attorney, but his eventual successes came belatedly and apparently as a result of unexpected appointments to positions with greater income and influence. Such was his appointment as legal counsel for the Hudson Coal Company, which permitted the family to leave cramped Susquehanna in 1922 and relocate in a more comfortable home and social status in Scranton, Pennsylvania.

The reader finds in Skinner's autobiographical description of his father a socially uncomfortable person who "never quite understood how to get on with people." Having "married up," he was eager to make his
way up the social ladder, yet was really at ease only with his own family (of origin). His wife seems to have been the vocational taskmaster, pushing William to succeed and to look upon his small successes as forever insufficient; she was eager to please socially and to be accepted, and this was expressed in her readiness to detect failures on the part of her two children to live up to proper standards of deportment, that is, the perceived standards of the group to which she desperately wanted to belong. B.F. Skinner writes that his mother “was always quick to take alarm if I showed any deviation from what she called ‘right’.” In this practice, his parents were consistent with the more pervasive methods of social control that seem to have characterized the social world of Susquehanna: corporal punishment was rarely used, according to Skinner, but one’s deportment was carefully scrutinized, with deviations punished by ridicule or disapproval. This method of establishing proper public deportment could only work in a small town, in which one was known everywhere, a condition fully satisfied in Susquehanna. This method of social control required two skills of the child who was to be a successful pupil of this teaching method: first, the capacity to discriminate what is approved in himself and others, what is expected or required of him; second, the habit of controlling impulsive or emotional behavior.

“The behavior of the individual has been shaped according to revelations of ‘good conduct,’ never as the result of experimental study. But why not experiment? The questions are simple enough. What’s the best behavior for the individual so far as the group is concerned? And how can the individual be induced to behave in that way?” Walden Two, 1948, p. 105.

It is tempting to think that here are the personal attributes that would make Behaviorism attractive to Skinner later on as a philosophy of life. There is the primacy of the (social) environment. There is the large (social) importance attached to one’s observable behavior, one’s public conduct. There is the necessity for dispassionate or objective observation of the exact social requirements which apply in particular situations; the scientific method, of course, makes analogous demands on the observer to get the (nonsocial) facts right. Finally, there is the devaluation of the inner life of emotion and feeling, which is particularly marked in Skinner’s Philosophy of Mind.

No doubt, such apparent correlations between Skinner’s early life and his later work are too simple to explain his entire Psychology. Equally important is the intellectual milieu in which he found himself as a young man, in which his early leanings, whatever they may have been, had to find expression.

Through Literature to Psychology

In 1922, shortly after his family moved to Scranton, Pennsylvania, Skinner became an undergraduate at Hamilton College, in Clinton, New York; judging from his autobiographical account, he was rather sensitive about his small-town origins. The new experiences, ideas, people, and places of the next four years—and the two years between graduation in the Hamilton class of 1926 and enrolling at Harvard in 1928 for graduate study in Psychology—were inevitably formative in the young man’s development. Hamilton’s emphasis on public speaking and debate outfitted Skinner with the skills for a lifetime of polemical activity, beginning with his earliest papers in Psychology and continuing up to the present. But Skinner found very little Psychology at Hamilton, which was typical of most small colleges in the 1920’s in leaving the teaching of psychological topics within the Philosophy curriculum. In his Particulars of My Life, Skinner speaks disparagingly about his limited exposure at Hamilton to the scientific psychology of the mind.

As a matter of fact, it is not easy to find the seeds of enduring intellectual commitment in his years at Hamilton and in the year (which he calls “the dark year”) he spent living with his parents in Scranton trying to become a writer of novels, poetry, and literary criticism. He read broadly, but he had not yet discovered Behaviorism. In the spring of 1927, he worked as a landscape gardener in Scranton until he contracted an allergy; thus ended his “dark year” in Scranton. He had saved enough money to allow him to go to New York City, where he clerked in a bookstore and tried his hand at a slightly bohemian existence. Judging from his autobiographical account, this seems to have been a
To attempt to identify the sources of his commitment to such broader beliefs as determinism, environmentalism, and the fruitfulness of applying science to social problems would be quixotic and irrelevant. The Table makes no pretense at exhaustive coverage. The reader acquainted with turn-of-the-century scientific and literary work will probably recognize most of the “influences” on B.F. Skinner at the point where he chose and moved into his new field of professional training and identification.

To this set of beliefs, Skinner has added others, largely the result of his own extensive research, reflection, and life in teaching and before the public. As his career progressed, his own findings, experience, and conclusions became the more important contemporary sources for the trajectory of his life work, and he was therefore less dependent on “external” sources, particularly those which were influential in his earlier days. Of course, this is not to say that he has rejected those earlier views and models, but only that by themselves they cannot account for the present form of his Behaviorism, some 40 to 50 years later.

A casual study of this Table should leave the impression that most of the writers who influenced Skinner were criticizing (“debunking”) the received wisdom of some arena of presumed knowledge or of life itself, on the ground that the claims were incompatible with the facts. The received views were built on unacceptable philosophical speculation (Crozier); or they were based on mistaken preconceptions inherited from religion (Pavlov); or they missed the mark because they tried to answer pseudo-problems which ought to have been immediately dismissed as questions without possible answers (Poincaré, Bridgman); or they were based on disguised special interests and therefore were secretly self-serving and hypocritical (Wells-Lewis). The root failing of the inherited wisdom, according to these writers, is that they were not scientific; that is, not objective.

Personal sources for the appeal of iconoclasm to B.F. Skinner were certainly not lacking. His dark year at Scranton involved some antagonism between him and his parents, who judged their son’s hopes and plans to be a writer unrealistic but did not wish to rob him of the opportunity to discover that truth for himself. By this time his father, William,
# TABLE OF EARLY INFLUENCES ON B.F. SKINNER

<table>
<thead>
<tr>
<th>Idea or Belief</th>
<th>Influence or Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. That among human activities, science alone enjoys enduring progress.</td>
<td>H.G. Wells [e.g., preface to <em>The World of William Clissold</em> (1926)] George Sarton’s course in the History of Science at Harvard; and his monumental <em>Introduction to the History of Science</em>. 3 vols. (1927 — 1947)</td>
</tr>
<tr>
<td>2. Monism: there is only one kind of “stuff” in the universe. Materialism: that “stuff” is matter. Opposition to the idea that there are “mental entities.”</td>
<td>J.P. Pavlov, chapter 1 of <em>Conditioned Reflexes</em> (1927) J. Loeb, e.g., <em>The Organism as a Whole</em> (1916)</td>
</tr>
<tr>
<td>3. Behaviorism</td>
<td>J.B. Watson, e.g., <em>Behaviorism</em> (1924)</td>
</tr>
<tr>
<td>4. Reflexology: the complex activity of the normal organism is a complex assembly of “simple” reflexes.</td>
<td>C.S. Sherrington, <em>The Integrative Activity of the Nervous System</em> (1906)</td>
</tr>
<tr>
<td>5. “Objective, descriptive writing is worth more than ever-changing, faddish interpretation.”</td>
<td>Novels of Theodore Dreiser, Sinclair Lewis, James Joyce, H.G. Wells, and others</td>
</tr>
<tr>
<td>7. Opposition to the search for physiological explanations of behavior.</td>
<td>The anti-speculative writings of Jacques Loeb and the personal influence of W.J. Crozier at Harvard The negative example of E.G. Boring’s polemical writings — see p. 62</td>
</tr>
<tr>
<td>8. Operationism: scientific concepts should be completely defined in terms of the results of the scientist’s operations . . .</td>
<td>Percy Bridgman, <em>The Logic of Modern Physics</em> (1927)</td>
</tr>
<tr>
<td>9. . . . or else they should be dispensable “summarizing” or “grouping” terms, mere abbreviations.</td>
<td>Ernst Mach’s notion of the “economizing” role of scientific concepts in: <em>The Science of Mechanics</em> (1883)</td>
</tr>
<tr>
<td>10. The ultimate goal of the scientist is to discover quantitative regularities in the phenomena he investigates.</td>
<td>W.J. Crozier, in most of his writings (The idea has been expressed by many scientists, particularly those in the quantitatively developed sciences.)</td>
</tr>
</tbody>
</table>
had attained some local prominence in Scranton through business connections, and was in demand as a speaker, typically representing the Kiwanis organization. Such boosterism evoked from Skinner the kind of young man's contempt for the humbuggery of his elders which one finds in some of the novelists of the Table.26

Admiration for science was such a widely shared attitude among the informed and the intelligentsia in Skinner's time that we should limit ourselves simply to pointing to it and to remembering that in Psychology it was Behaviorism which appeared to be, and never tired of announcing in those years that it really was, the most scientific among the conflicting Schools of American Psychology. Armed with these expectations of a pursuit of the new, fashionable Behaviorism, Skinner enrolled at Harvard in the Fall of 1928.

**Skinner at Harvard, 1928 - 1936**

Harvard Psychology was to be a disappointment to him; not only was Psychology institutionally subordinated to Philosophy within the combined Department of Philosophy and Psychology — within the higher administrative unit called the Division of Philosophy; but in addition Psychology was presided over by E.G. Boring, whose mentor, E.B. Titchener at Cornell, had been the most prominent American spokesman for an introspective psychology of the type described above. Though Boring's scholarly interest in the History of Psychology gave him an unusual tolerance and perspective toward the loudly disputing psychological Schools, his background left him philosophically very antagonistic to Behaviorism. As the senior psychologist at Harvard, he was able to put his convictions into practice. Behaviorism and behavior studies — at this time well established in American Psychology — were poorly represented in the graduate Psychology curriculum at Harvard.27

By now the reader can vividly imagine Skinner's disappointment, and the resulting attractiveness of study in any other Department which would regard behavioral research seriously. His choice was the Department of General Physiology, chaired by W.J. Crozier (whose name appears in the Table) in Harvard's Division of Biology. Here was an opportunity to criticize the Harvard Psychology "establishment," and to acquire a habit and enduring taste for polemics. And it may have been an inducement for Skinner to isolate himself from Harvard Psychology, though still enrolled in that Department, and to pursue on his own whatever research projects happened to interest him, quite apart from what was declared important by the rest of the Department.

As a child growing up in a town of mechanics, Skinner had developed the skills and a liking for mechanical invention. Armed with these skills, alienated from the Harvard Psychology establishment, and guided by the findings of Pavlov and his courses in General Physiology, he ended up, as he says, "doing exactly as I pleased."28 He was free, once he had satisfied the minimal requirements in his first year of graduate study, to follow his hunches, to satisfy his curiosity, and to profit from accidents. In these years, he built up a foundation of research on rats (and later, on pigeons) from which he developed various extrapolations, including his well-known ones concerning the social world of humans. Given Skinner's current fame (or notoriety), it is important to see clearly what it is he accomplished in his eight years at Harvard.

"Preparations"

Every laboratory science sacrifices "naturalness" in the interest of achieving "control" over the factors that influence the phenomenon being investigated. The standardized procedures for carrying out controlled experiments are called "preparations," and they undergo improvements with repeated use. The preparation is only a vehicle for studying a phenomenon that is important in that science. Pavlov's salivating dog-in-harness is an example: Pavlov was not interested in dogs as such, but rather in a very simple kind of learning (later called Pavlovian, or classical, Conditioning) which occurs throughout much of the animal kingdom. He studied conditioned salivary reflexes in his canine preparation because he had perfected this preparation over many years so that it "cleanly" revealed the interesting and fundamental facts about conditioning, facts which were presumably true of conditioning in other species. Whether these facts actually are of such generality is of course an empirical question, which requires further experimentation and especially the
development of preparations using other organisms and other response systems.

In his years at Harvard, Skinner developed the rat lever-press preparation, which has now been in extensive use for 50 years. One such “operant chamber” (popularly called a Skinner box) with lever-pressing rat is illustrated above. By a rather hit-or-miss and inventive process, Skinner developed this preparation as a vehicle for studying the influence of reward and punishment on mammalian behavior. The rat presses the lever and the scheduled consequence (food, shock, etc.) alters the subsequent rate of pressing. Later, after leaving Harvard, he developed a similar preparation in which a pigeon could pick a plastic wall-mounted disc or “key.” That these preparations could generate further questions and research is attested to by the volumes of The Journal of the Experimental Analysis of Behavior, several anthologies and handbooks.

Skinner devised the rat lever-pressing preparation in his years at Harvard, almost single-handedly pursuing research with it, improving it in various ways, and discovering many interesting properties of the behavior of lever-pressing. He took this behavior as a representative instance of that kind of behavior which is sensitive to its consequences, modifiable according to what it brings about. This behavior sensitive to reward and punishment he called “operant behavior” to distinguish it from reflexes — conditioned and unconditioned — which were investigated in preparations like that used by Pavlov.

At this time, in the 1930’s, Behaviorists were enthusiastically committed to building up in the laboratory a science of behavior, starting with the simpler behavior of simpler organisms, such as small rodents, and systematically — but slowly — moving on to more complex behavior; the first task at hand was the intensive laboratory study of the simpler kinds of learning, before the complex kinds could be tackled fruitfully. This was the scientific ideology of Behaviorism. Skinner, of course, pursued his laboratory research very diligently and in this sense participated fully in the guiding vision of American Behaviorism. But he did it all his own way in the years from 1928 to 1937, as Psychology graduate student and as post-doctoral member of the recently formed and prestigious Society of Fellows at Harvard University. In his autobiography, he candidly admits of his Harvard period: “I had made no effort to relate my work to that of others in the field, and others had had no reason to relate their work to mine. I had published a good many papers
Skinner's basic preparation was distinctive: rats pressing levers, and later, pigeons pecking a small plastic panel mounted in the wall of a similar operant chamber. The devices he created and by which he is at least casually known outside the field of Psychology — the "Skinner box" or operant chamber, and the "cumulative recorder" which he devised to record the lever-pressing of his rats — were his own creations, without parallel in the psychological literature of the time. These inventions had the unfortunate side effect of isolating him from the mainstream of behavioral research in the United States. Though a wave of enthusiasm for statistical methods spread through American Experimental Psychology in the 1930's and 1940's, Skinner used statistical tests very infrequently.

Moreover, his research topics — for example, complex schedules of reinforcement and the like — were different from those of other Behaviorists. Even his terminology was foreign. Because his research lent itself to the intensive study of the individual organism — as opposed to the statistical averaging of the behaviors of a group of organisms treated similarly — he became interested in the "control" of behavior, and eventually in a technology of behavior, an interest few of his contemporaries in American Behaviorism shared. "The result of many small differences was a distinctive kind of Behaviorism, casually called "Operant Conditioning," and more officially known as The Experimental Analysis of Behavior (TEAB).

The Experimental Analysis of Behavior: "Skinnerian" Research

Skinner's divergence from the mainstream was well established by the time he left Harvard University in 1936. His first book, The Behavior of Organisms, was published in 1938, not long after he arrived at the University of Minnesota with an appointment as a junior faculty member in the Department of Psychology. The book was to serve as a bible for those who followed him into his idiosyncratic version of Behavioristic Psychology. It was variously admired and criticized by reviewers, but it did not sell particularly well in the next several years, and it certainly did not start a groundswell of interest in Skinner's behavior theory and method.

As a matter of fact, Skinner was greatly overshadowed by others in the field of Learning Theory during the 1940's and early 1950's. Dominance in Learning Theory was to come to B.F. Skinner belatedly and as a result of personal connections and the gradual building up of a following among students and colleagues at Indiana University (1945-1948) and Harvard (since 1948). The accompanying time-line lists some of the milestones in this process.

This time-line in Figure 2 should suggest a rather slow process of institutionalization, in comparison to the first time-line (Figure 1), that for Psychology in America. There is a 20-year gap between the major TEAB research book (Skinner's Behavior of Organisms, 1938) and the first issue of a journal devoted to the same topics (journal of the Experimental Analysis of Behavior, 1958). At Harvard in the 1930's Skinner was a Fellow, not a member of the faculty, and therefore had no students who could have constituted a following. At Minnesota he seems to have been overshadowed in the Department of Psychology, and interest in TEAB did not blossom until Skinner arrived at Indiana University. (That he was the Psychology Department chairman may have had some bearing on the strong interest and annual conferences which began at Indiana.) His lifelong friend and former Harvard graduate student, Fred Keller, was influential in getting TEAB established at Columbia University; and he and William Schoenfeld wrote an important and widely read textbook, Principles of Psychology, for the introductory Psychology course at Columbia in 1950. By the time Skinner had arrived at Harvard, the "movement" was well underway, and the time-line is filled with landmarks after 1950. By contrast, the first twenty years were largely a solo effort.

The time-line is useful in representing mostly the development of the scientific portion of B.F. Skinner's life work. It suggests strongly, with TEAB established in the American Psychological Association (Division 25, 1964) and with journals for publication of laboratory research as well as applied research, that TEAB is here to stay. What the time-line does not show is that Skinner's popular fame depended less on his scientific accomplishments than on his popular and applied writings. It is instructive to compare the
Figure 2. Milestones in the development of The Experimental Analysis of Behavior (TEAB).

time-line with a graphic display of Skinner's publications. Figure 3 is a bar-graph which counts his publications in four different categories, in 10-year periods. 

Figure 3 indicates that his involvement in laboratory research — which had been and continued to be the heart of the Behaviorist enterprise — was intensive in his first professional decade (1928 - 1938), as shown by the dark bars in the graph; and that it declined in subsequent decades. He shifted his energies to the speculative extension of his Behavioristic approach to Psychology's traditional subject matter, to popularization (for example, his *Science and Human Behavior*, published in 1953), and to a criticism of alternative and non-scientific approaches, such as

Freudianism, as the second category in the Figure shows. And he turned the application of his Behaviorism to problems in education, in human services, and in society at large (for example, his work on programmed instruction and his *Beyond Freedom and Dignity*, published in 1971), as the trajectory for the third category in this Figure reveals. In fact, it is these ventures which were to "make him famous."

**Behavioral Technology**

Skinner's involvement in the application of his Behaviorism to "real-world" problems is not surprising for someone with a personal history of tinkering and mechanical invention. He had designed and built all of the ap-
paratus used in his laboratory research. The logical next step was to build apparatus which would embody the findings of the laboratory and solve problems outside the laboratory. But the matter goes beyond simply the inventive employment of manual skills. There is a problem-solving attitude, an objective and rigorously pragmatic matter-of-factness.

For example, at a certain point in his graduate student career, Skinner found he was losing hair. (He was using open cups of mercury to stop switch chatter in the operant-conditioning chambers he had constructed, and the electric current made the mercury vaporize slightly into the air which Skinner was breathing.) To ascertain whether a prescribed ointment was having its desired effect, he kept an exact daily count of the number of hairs he found in his wash basin after brushing his hair in the morning. Though the cure did not work — and he soon changed his apparatus for other reasons — what is striking about this minor incident is how rigorously factual he was about the matter, how distrustful he was of mere impressions.

In his first year as a graduate student in the Harvard Department of Philosophy and Psychology, Skinner took a course which was team-taught by the famous American process-philosopher, Alfred North Whitehead, and a young instructor named Ralph Eaton. In class, Whitehead stuttered on occasion. Rather than imagining psychoanalytic causes of the stuttering, Skinner simply jotted down in his class notebook the topics that made Whitehead stutter. Skinner was mildly surprised to find that the provocative topics were student grades and the co-teacher, Ralph Eaton. Again we find Skinner's conviction that sheer quantitative description will reveal an underlying orderliness which escapes one's casual impressions.

Concerned to be a productive researcher and writer, Skinner kept a tally of his writing output from his earliest days. Able to see an unequivocal chart of his day-by-day literary productivity, he found it substantially easier to identify the circumstances which were present on days of low output. They might include distractions, insufficient sleep, hangover, obsessive thoughts that are the result of procrastinated tasks, and so on. Having identified them and having experienced their deleterious effect on one's work, it is a small
step to arrange for their absence and to substitute the circumstances which will lead to measurable, visible success. The self-disciplined life can be constructed from such small, discoverable, but not always obvious arrangements.

“When a man controls himself . . . [or] thinks out the solution to a problem . . . he is behaving. He controls himself precisely as he would control the behavior of anyone else — through the manipulation of variables of which behavior is a function . . . The variables which the individual utilizes in manipulating his behavior . . . are not always accessible to others, and this has led to great misunderstanding. It has often been concluded, for example, that self-discipline and thinking take place in a nonphysical inner world . . .” Science and Human Behavior, 1953, p. 229.

Skinner’s approach should need little further illustration. It is very pragmatic, for it accepts without question a certain goal — or the values which make that goal valuable — and seeks whatever methods happen to hasten one’s success in bringing about that goal. This approach has been castigated as a “factory mentality”; as amoral, since it does not necessarily question the objectives; as alienating, since it involves treating oneself as an object.

Yet effective procedures can be used for good or for evil purposes. Skinner’s critics have typically assumed the worst, and often on the basis of defective information or none at all. Nowhere is this better shown than in the case of Skinner’s notorious device, the baby-tender.

Few inventions have caused the inventor as much misunderstanding as Skinner’s baby-tender. While the B.F. Skinner family was awaiting the arrival of its second child, in 1944, B.F. was constructing an enclosed air-conditioned crib that had a volume of about 25 cubic feet for the child (plus space to house the air-conditioner and assorted other conveniences). It contained a glass window that constituted almost one entire side, through which the baby could see and interact with visitors. During the child’s nap, a shade could be drawn to screen out unwanted light. In a short article written for the Ladies’ Home Journal, Skinner said its purpose was, first, to increase the comfort of the child and, second, to save the mother a variety of ordinary time-consuming routines. Debbie slept in it for a couple of years, and would spend periods of an hour or two in it during the day; in the article, Skinner reported excellent health and unimpaired development of the child, and his wife was better able to control demand and use of her time.

The device has routinely figured in popular appraisals of his Behaviorism as a kind of proof that Behaviorism harbors an intrinsic core of unfeeling and inhuman attitudes toward persons. Most people who adhere to such an opinion have not read Skinner’s description of the baby-tender; I have even heard it asserted, with apparent confidence, that his daughter had to be and in fact still is confined to a psychiatric institution as a result of the failure of Skinner’s “experiment.” The fact is that his daughter was and continues to be healthy, both mentally and physically. That such rumors have been taken seriously is a sign of a deep-seated mistrust and misunderstanding of Behaviorism in general and of Skinner’s version in particular.

The Criticism of Psychology

In general, Skinner has been an influential and speculative excess in Psychology, and this critical attitude has often placed him in opposition to various psychological mainstreams. For example, Freud’s theory of personality and the associated therapeutic procedures (psychoanalysis) enjoyed a substantial popularity in the United States, both in the larger artistic and literary culture and among psychologists, reaching a peak perhaps in the 1950’s. Skinner’s strongly positivistic attitude toward psychological theorizing predisposed him to be critical of Sigmund Freud’s explanatory apparatus of id, ego, and super-ego, and the vicissitudes of the life-energy (“libido”) as its natural path toward “cathexis” (investment in particular objects of desire) is blocked by repression, sublimation, displacement, and a host of other psychic obstacles. Skinner’s principal objection is not that these entities are fictitious — though that shortcoming is an important basis for his criticisms, as one would expect of anyone with intellectual roots in Positiv-
This cartoon is adapted, with permission, from the Columbia College humor magazine, The Jester, in which it first appeared.

ism"—but rather that the search for explanation along these lines distracts attention from the troublesome behavior of the patient and from procedures that could change it.

The Skinnerian answer is a "behavior therapy" based on findings in carefully controlled study of behavior in the lower organisms and in children. Its philosophy is that what we call "mental illness" is actually a repertoire of ineffective, learned behaviors (strategies, routines, habits, mannerisms, cognitive operations, and so on) that is troublesome to the person—who therefore suffers emotionally—and to the family and associates of the person. Effective behavior, often rather rudimentary social skills, should be established, and the ineffective routines eliminated by being replaced with more effective ones. This kind of psychotherapy becomes a kind of piecemeal re-education.

Skinner's criticism of Freud is a subtype of his more general impatience with what he calls the "inside story." This approach offers to explain some observed activity by envisaging an inner event or operation—thought, emotion, mental process, or speculative physiological mechanism, or psychoanalytic process. In his many articles and books, Skinner has presented a variety of complaints against the "inside story." First of all, he argues that appeal to an inner event cannot constitute a satisfactory explanation because the inner event must itself be explained by accounting for its operations or existence in terms of identifiable and relevant circumstances. That is, the final resting place in explanation is usually a more or less environ-

mental factor, something independent of or anterior to the person whose behavior we wish to explain. The following quotation illustrates the argument and shows considerations Skinner takes to be important: "A man does not neglect his business because of anxiety or worry. Such a statement is at best merely a way of classifying a particular kind of neglect. The only valid cause is the external condition of which the behavior of neglect, as part of an emotional pattern known as anxiety or worry, can be shown to be a function [i.e., a predictable result]. A similar neglect which might be attributed to a preoccupying love affair would not be 'due to a different emotion,' it would simply be the effect of a different set of circumstances."

This first argument seems arbitrary in its assertion as to what types of explanation are legitimate, but Skinner has a pragmatic rejoinder: he claims that too much attention is ordinarily paid both to real and to fictitious inner states, and that relevant, identifiable, and controllable circumstances (the "environment") thereby escape notice. When one looks in the wrong place for explanations, one will fail to find explanations that are productive of the means to improve behavior. For Skinner, strongly committed to a pragmatic criterion in judging the activities of scientists and those who use psychology, this means that the inside story is the "wrong" story.

Finally, Skinner treats inner states (feelings, thoughts, and the like) as generally having a small causal role in behavior, although they are considered very important in the traditional view of human nature. Particularly in his most recent philosophical extrapolation, About Behaviorism," Skinner treats feelings and other inner states as by-products associated with behavior and produced by the same (environmental) factors that produce the behavior. This version of the philosophical theory of Epiphenomenalism he uses very frequently as a basis for rejecting the inside story: though emotions are real internal phenomena, they play little causal role in human behavior; they are also, in our culture, more "visible" than the relevant environmental factors which, while our attention is turned elsewhere, escape notice and therefore escape corrective action. (The pragmatic and other criteria are mutually supportive in most of Skinner's writings.)
Education

The animal-learning laboratory contains many a lesson about the circumstances that foster efficient human learning, but one's impressions, reinforced culturally in a variety of ways, are that humans are so much more complex than animals that whatever one may discover about animal learning can have very little to tell us about human learning. Skinner has spent a lifetime combatting this common prejudice.

"Yesterday Lisa, almost ten, was opening a new jar of mixed nuts. The metal cap was sealed with a tight plastic tape. She got a knife and began to pry one edge of the tape free of the glass on top. I was on the point of saying, 'Here, let me help you,' but I caught myself in time and she got the top off — and would no doubt do so even more effectively in the future because I stayed out of it.

Suppose now she had been frustrated, getting mad at the top, jabbing it ineffectively with the knife, muttering or swearing. Should I then have helped?

Definitely not! I should then have been teaching Lisa to display anger, to swear, and eventually to exaggerate these behaviors because someone then helps." Notebooks, B.F. Skinner, 1980, p.63.

In any learning process, the desired behavior or performance should first be identified, so that the educational objective is unambiguous and so that successful performance can clearly be identified. In the case of complex performances, it may be necessary to distinguish separable parts and train them separately, as in the case of leg-kick, arm-stroke, and breathing pattern, in swimming.

Secondly, incentives or rewards greatly facilitate learning, and the reward should occur with little delay after the appropriate performance has occurred. Delay of reinforcement is an obstacle to efficient learning.

The difficulty of the material to be learned should be so graduated that the person is more often correct than incorrect, since continued failure can produce discouragement which seriously interferes with further learning. (This is not surprising, since humans and other animals will avoid occasions of punishment, dissatisfaction, failure, or frustration.) In order to maximize the opportunities for correct performance, the task should be broken down into manageable units of gradually increasing difficulty, subsequent units making use of the skills already acquired in mastery of the earlier units of instruction. In the animal laboratory, the process is called "shaping" through the reward of successively better approximations to the desired performance. In the field of human educational technology, "programmed instruction" is the analogous arrangement.

Finally, difficult tasks often involve very fine and not particularly obvious discriminations. Mastery of these tasks is aided if the discriminations can be made easier. A first step in the process is to expose the existence of the discrimination by calling attention to it, and by making the difference initially large enough so that the learner can react differentially. The problem should be so constructed that subsequent learning occurs with progressively finer differences; the procedure maximizes success and the appropriate carryover of what has already been learned into each new problem or new stage of a problem of progressive difficulty.

Utopias

Skinner is probably alone among psychologists in having published an imaginative Utopia, his Walden Two, which appeared in 1948. This novel describes the conversion of the fictitious main character (Professor Burris) to the ideas propounded by Frazier, the "behavioral engineer" who has designed the Walden Two community. In this small community, the circumstances of life are deliberately arranged so that inhabitants experience a minimum of displeasure and pursue the very things which the community needs in order to survive. For example, necessary but distasteful jobs are paid for with a large enough number of "work-credits" to guarantee an adequate supply of persons to carry out these tasks. In general, inhabitants come to pursue what is necessary for community survival. Consistent with Skinner's enduring conviction that, compared to "positive reinforcement" (reward) techniques, punishment is an inefficient and ultimately less ef-
ffective method of controlling behavior, there is virtually no reliance on controlling behavior through aversive, painful techniques such as punishment and related methods. It cannot exactly be said that the book was unanimously welcomed. Life magazine editorialized almost hysterically against it as a "slur" upon the Utopian attitude and as a "menace" in which Pavlov is king. "Skinner's Beyond Freedom and Dignity," published in 1971, occasioned a larger number of reviews but the same mixture of reactions, including a blast which then-Vice President Spiro Agnew made during a Farm Bureau speech he delivered in Chicago.\footnote{Beyond Freedom and Dignity, published in 1971, occasioned a larger number of reviews but the same mixture of reactions, including a blast which then-Vice President Spiro Agnew made during a Farm Bureau speech he delivered in Chicago.}

"The problem is to induce people not to be good but to behave well." Beyond Freedom and Dignity, 1971, p. 63.

A number of Skinner's views are provocative. For example, he claims, implicitly in Walden Two but explicitly in Beyond Freedom and Dignity, that it is not good character — another "inside story" — that is needed, but good behavior. What is good behavior is that which benefits the group, the society. The behavioral engineering of Walden Two is intended to bring about this socially valued, socially necessary behavior.

The idea of social engineering collides with the traditional veneration of individual freedom in American culture. Criticism of Walden Two often proceeds from a defense of personal liberty to the charge that Skinner's utopia is authoritarian and that its inhabitants are robots, and to the claim that a Walden Two could never work. In fact a community deliberately organized on Walden Two principles was developed at Twin Oaks, Virginia, and as far as I know is still intact; it is described in Kathleen Kinkade's A Walden Two Experiment.\footnote{Beyond Freedom and Dignity, published in 1971, occasioned a larger number of reviews but the same mixture of reactions, including a blast which then-Vice President Spiro Agnew made during a Farm Bureau speech he delivered in Chicago.} If we remove the metaphorical content from the criticism — human beings cannot become robots — we find the principal objection to be that Walden Two affords less human freedom than other societies. Skinner's reply draws attention to the following distinctions:

Freedom from aversive control must be distinguished from (1) freedom from less easily identified forms of "appetitive" control such as wages, rewards, praise, pleasure, flattery, attention and so on; and it must also be distinguished from (2) the absolute freedom in the traditional notion of the free will of the autonomous individual. Skinner contends that aversive control is, on the whole, less effective than "appetitive" control, control by the use of reward; but that control of behavior — that is, absence of complete freedom — is involved in both cases.

Failing to distinguish punitive control from other modes of control, defenders of freedom criticize all types of control and assume that the abolition of all types of control — the achievement of complete freedom as a political ideal — is both possible and desirable. Skinner contends that the removal of one form of control simply delivers the individual over to another source of control. Consequently he denies the absolute freedom which the traditional notion of free will involves.

"The behavior of an organism is an exact, if involved, function of the forces acting upon the organism." Beyond Freedom and Dignity, 1971, p. 446.\footnote{Beyond Freedom and Dignity, published in 1971, occasioned a larger number of reviews but the same mixture of reactions, including a blast which then-Vice President Spiro Agnew made during a Farm Bureau speech he delivered in Chicago.}

When he makes such claims as these, Skinner sounds like an old-fashioned nineteenth-century determinist. Recalling his intellectual inspirations, we see the appropriateness of that characterization but would add that his determinism is largely expressed in a twentieth-century perspective based on evolutionary biology and his own research in operant conditioning. That is, according to Skinner, the individual is always controlled because the individual's behavior is the product of the phylogenetic history of its species and of the "history of reinforcement" that belongs to the particular life history of that individual. Since "all control is exerted by the environment," "it is illusory to seek absolute freedom. Complete freedom is an illusion that stems from ignorance: "few people understand the behavioral processes exhibited in their daily lives."\footnote{Beyond Freedom and Dignity, published in 1971, occasioned a larger number of reviews but the same mixture of reactions, including a blast which then-Vice President Spiro Agnew made during a Farm Bureau speech he delivered in Chicago.} But of course, it is appropriate to design into a society freedom from aversive social control, and that is why Skinner regarded the fictitious society of Walden Two as better than any existing soci-
ety, as more likely to survive, as containing healthier, happier individuals, but paradoxically as not involving less freedom.

"The triumph of democracy doesn't mean it's the best government. It was merely the better in a contest with a conspicuously bad one. It isn't, and can't be, the best form of government, because it's based on a scientifically invalid conception of man . . . It fails to take account of the fact that in the long run man is determined by the state . . . [It] is incompatible with the observed fact that men are made good or bad and wise or foolish by the environment in which they grow." Walden Two, 1948, p. 273.

Reputation
To some extent, Skinner's contemporary reputation has resulted from his literally outliving his opponents in the field of Learning Theory: Clark Hull at Yale University died in 1952; Edwin Guthrie at the University of Washington died in 1959, and Edward Tolman died in the same year after a long career at Berkeley; Kenneth Spence, carrying on Hull's kind of Learning Theory at the University of Iowa, died prematurely in 1967 at the age of 60. S. Watson, founder of American Behaviorism, was not really a competitor, for he had gone into the world of commerce and advertising in 1920, and by 1930 had lost touch with advances in the laboratory study of learning.
To be sure, his opponents had a variety of professional flaws; but it is also a well-established fact that - except for a few enduringly eminent scientists - the visibility, the impact, the "influence" of an important scientific figure diminishes after the person dies.
A quantitative indicator of this impact of the individual scientist is the frequency with which the publications of that scientist are cited by other writers. The annual Social Science Citation Index (SSCI) counts citations in a representative pool of social science publications. By this measure, Skinner's importance surpasses that of all but a handful of the best-known social scientists.
It will come as no surprise that Sigmund Freud is the most widely cited psychologist, with a resounding total of 2359 citations in 1980, quite a bit beyond the upper boundary of Figure 4. The important French developmental psychologist, Jean Piaget, was also cited heavily in 1980, with 1460 separate citations. Within the range of the figure, there is Pavlov, with almost 200 citations, roughly half of which are to his Conditioned Reflexes, published in English translation in 1927, and still a touchstone for conditioned-reflex experimentation. Nobel Prize winner in Economics in 1978, Herbert Simon, has been an important contributor to decision theory in Psychology and to the fields of Artificial Intelligence, Simulation, and Cognitive Psychology generally. His 1980 total is slightly less than Skinner's. The two Humanistic Psychologists, Carl Rogers and Abraham Maslow, are known to a large portion of the populace; their citation totals are nearly the same, and rather below that for Skinner in the same year. Skinner's total for 1980 is slightly exceeded by the important post-Freudian life-span developmental psychologist and personality theorist, Erik Erikson. These totals reflect factors other than the sim-

Fig. 4: Frequency of citation of nine psychological theorists tabulated in the annual Social Science Citation Index (S.S.C.I.) for years 1969 to 1980. (The x-axis is the year of publication of that volume of the S.S.C.I.)
ple eminence of the individual — for example, Developmental Psychology has enjoyed a great expansion within the last decade, and so has the Experimental Analysis of Behavior and its technological spin-offs — but the comparisons allow one to rank theorists in terms of how often they are appealed to, referred to, and therefore generally "influential" in the literature. B.F. Skinner is clearly in the small group of the most influential writers in the social sciences today.

Professor Skinner, now retired from active teaching at Harvard, is diligently working on the third volume of his autobiography. Having recently entered his seventy-eighth year, it is to his credit that he continues the work he began over 50 years ago . . . Or perhaps we should give credit to the complex social environments which he has inhabited and which have shaped his skills, goals, and activities. Yes, I'm sure he'd prefer it that way.

NOTES


2 A very amusing and revealing character sketch of Professor Skinner has been published in a not particularly accessible journal: M.J. Willard and R. Epstein, "Our Most Unforgettable Character," The Behavior Analyst, 3 (Fall, 1980), 35-39.

3 Skinner is the outstanding contemporary polemicist in Psychology, and has been for a number of years. The role of "purely personal" factors in such a public role is always a matter of interest. Whatever the personal sources of his involvement in public debate may be, it is worth keeping in mind that as an undergraduate Skinner attended Hamilton College, in Clinton, New York, a school which emphasized public speaking. Skinner took 18 of his 138 undergraduate credits in public speaking courses, and he was the Salutatorian, Class of 1926. The most careful analysis of the rhetorical style of his writings was provided by the noted philosopher of science, Michael Scriven, in his contribution to volume 1 of Herbert Feigl and Michael Scriven, eds., Minnesota Studies in the Philosophy of Science (Minneapolis: University of Minnesota Press, 1956), 88-130.

4 Skinner has published two volumes of autobiographical accounts that are noteworthy for their reliance on primary sources (correspondence, newspaper accounts, laboratory notebooks, reports) and for a de-emphasis on retrospective interpretation. The first volume, Particulars of My Life (New York: Knopf, 1976), covers the period from birth to his decision to enroll in graduate school at Harvard University in 1928. The second volume, Shaping of a Behaviorist (New York: Knopf, 1979) takes the account up to 1948, when Skinner was called to Harvard as Professor of Psychology. At present, Dr. Skinner is at work on a third autobiographical volume.

5 There has been much interest in the possibility that nonhuman primates can be taught a sign language which qualifies as "true language." The interest seems to spring largely from the prejudice that only humans are capable of "true" language.


7 A psychology which had to exclude a significant portion of human activity (e.g., thinking, planning, feeling) as outside its scope would be regarded as fatally incomplete. Consequently every Behaviorist has been obliged (and strongly tempted, of course) to extend the concept of "behavior" from overt, visible activity to unobserved, "covert" actions. Thus the timeworn interpretation of thought as "involving language," or as speech-like, that is, talking to oneself. This notion was vigorously promoted by J.B. Watson, for example, in his popular book Behaviorism, and it has been used by many other Behaviorists. The Achilles' heel of this notion was the small amount of actual laboratory research which it inspired, therefore failing to deliver on the promise of successful and factual extension of "behavior" to encompass the realm of "mentality." These dissatisfaction seem to have been most intense in the area of language; and it is likely that the sudden rise in popularity of Noam Chomsky's theory of language within Psychology had much to do with perceived lack of success of Behavioristic efforts. The issue is complex and has yet to be adequately explored historically. Skinner's enduring interest in the world inside the skin (the "mental" realm) can be sampled in chapters 16 and 17 in his Science and Human Behavior (1953), chapter 9 of Beyond Freedom and Dignity (1971), and in the final 100 pages of his Verbal Behavior (New York: Appleton-Century-Crofts, 1957)

For example, the journal *Behaviorism* has relevant articles in every issue. Many of the philosophical journals have one or two articles per year on the topic, particularly *Philosophy of the Social Sciences: Philosophical and Phenomenological Research, Journal for the Theory of Social Behaviour*, and occasionally *Philosophy of Science*.


These dates come from "the standard sources" in the History of Psychology. There is some disagreement over the date of the first professorship, and there has been a long-standing dispute over whether C. Stanley Hall's laboratory at Johns Hopkins University was the first or whether a laboratory intended principally for instructional demonstration set up in the mid-1870's by William James at Harvard University should qualify as the first laboratory in Experimental Psychology in America. Oddly, the date of establishment of the first Department of Psychology is not given in any of the standard sources. In fact, the establishment of a Department was regarded by early psychologists themselves as a minor event; it was the creation of a psychological laboratory which enabled the psychologist to engage in the (scientific) activity which distinguished him from the ("armchair") philosopher, no matter what institutional arrangement of the two fields happened to be in vogue at the time.


The psychological literature from the 1890's through the 1920's (and beyond) includes a large number of brief articles describing a new commercially available apparatus or a reconstructable device or electric circuit for certain kinds of experiments. A short article which notes the importance of technological development in the early psychological laboratory is: M.M. Sokal, A.B. Davis, and U.C. Merzbach, "Laboratory Instruments in the History of Psychology," *Journal of the History of the Behavioral Sciences*, 12 (1976), 59-64.

The promotion of Behaviorism rested largely on the claim that its methods were the only truly scientific ones for psychology, and that other methods, collectively put into the category of "introspection," were unscientific. In the battle for disciples, the term "introspection" acquired qualities of evaluative simplification typical of political slogans. The subsequent victory of Behaviorism therefore was accompanied by a derisive historical attitude toward the methods of the Science of Mind which Behaviorism had displaced. There is some current interest among writers in the History of Psychology to recover a more accurate picture of introspective methodology. For example, Kurt Danziger, "The History of Introspection Reconsidered," *Journal of the History of the Behavioral Sciences*, 16 (July, 1980), 241-262.

An example of the argument in Skinner's early years is Harvey Carr's article, "An Interpretation of the Animal Mind," which appeared in *Psychological Review*, 34 (1927), 87-106. Like all Harvard Psychology graduate students, Skinner carefully read E.G. Boring's *A History of Experimental Psychology*, which was published in 1929 and almost immediately became the authoritative history of the subject. He would therefore have been very familiar with Boring's presentation and defense of the argument from analogy on pages 549-555 of the 1929 edition. The classic philosophical example is in chapter 12 of John Stuart Mill's *An Examination of Sir William Hamilton's Philosophy* (London, 1865).


Though it is impossible to fix the beginning and high point of a phase of growing doubt concerning the methods of psychology, landmarks are useful tools. As the first landmark, I have chosen James McKeen Cattell's much discussed address, "The Conceptions and Methods of Psychology," published in *Popular Science Monthly*, 66 (1904), 176-186. The second item is John B. Watson's classic argument for Behaviorism, "Psychology as the Behaviorist Views It," published in *Psychological Review*, 20 (1913), 158-177.

The date of publication of J.B. Watson's article, "Psychology as the Behaviorist Views It."

The borough of Susquehanna Depot was incorporated in 1853 and made its first appearance in the Census of 1860, with a population of 2080; it grew rapidly in subsequent decades, cresting at 3872 inhabitants in the Census of 1890. Today the town shows all the signs of having always been a mechanics' town. There are
few relics of old grandeur, the Starrucca House, a large hotel dating back to the Civil War years, being a notable exception. The homes are typically modest in size and are wedged into small parcels of land lining the hillside.


30*Particulars*, p. 61.

31*Particulars*, pp. 193-200.

32*Particulars*, p. 216.


35In several instances in the Table, p. 61, Skinner has identified the sources of certain of his opinions, in his two autobiographical volumes; in other cases, the original writings by Skinner contain appeals to the established writers included in the Table.

36Although there is a core of persisting beliefs and attitudes in Skinner’s psychological system, he has changed his mind about a few theoretical issues. Reflexology is the thesis that the behavior of the freely moving organism is a complicated ensemble of simple reflexes. Skinner initially endorsed this view, which Watson, Pavlov, and Sherrington promulgated; in the 1930’s Skinner rejected this view in postulating a realm of “operant behavior,” which he then made the object of his laboratory research. Since the 1960’s he has relaxed his earlier strictures against the search for physiological explanations of behavior. Also since the 1960’s he has shed his earlier silence about or inattention to the importance of biological inheritance in determining behavior, and has assimilated evolution into his behavior theory. In the process, he has accommodated the usually opposed viewpoints called Nativism (importance of inherited features) and Environmentalism (importance of the environment of the individual organism). These changes involve a number of technical matters that would require lengthy elaboration and are not central to this survey. The interested reader may consult a brief recent example of Skinner’s unified view, his “Selection by Consequences,” which appeared in *Science*, 213 (31 July 1981), 501-504. His *Beyond Freedom and Dignity* and his *About Behaviorism* are good nontechnical expositions of his incorporation of evolution.

37Mr. Frank Lorenz, Curator of Archives and Special Collections at Hamilton College, was helpful in calling to my attention a portion of Skinner’s correspondence during the “dark year,” deposited at Hamilton College, and in making it available for my perusal. The casual quality of the correspondence allows certain enthusiasms to stand out, and this information was useful in constructing the Table.

38Boring’s role in this matter is ambiguous. Keep in mind that Psychology was administratively subordinate to Philosophy at Harvard. Philosophy had never been very hospitable to behavior studies in animals, as the renowned primatologist Robert Yerkes discovered in the years prior to the First World War. He left Harvard after the War, and behavioral research within Harvard Psychology/Philosophy languished.


41*The Shaping of a Behaviorist*, p. 178.

42These differences which separated him from the mainstream of Behaviorism in America are not a hodgepodge of unrelated differences but are mutually supporting. If a researcher makes a commitment to “real-world” application of his laboratory research, he can easily be drawn into the public discussion and
populization needed to prepare the public and institutional autonomies to accept these applications of practices. If he remains in the lab, he will of course safely avoid such affairs. Once drawn into the public arena, however, issues with which the researcher had very little reason to be concerned must be addressed by the popularizer. In turn, then, the popularizer must acknowledge and deal with sources of misunderstanding—often the residue of scientifically discredited but still popular ideas about psychology or about the mind or what have you—which the laboratory researcher looks upon as rubbish and, more to the point, not worth the time and effort to combat. A number of unintended consequences flow from this difference in attitude toward popular psychology. The popularizer may be excluded in subtle ways from full professional acceptance by researchers in the same field, who otherwise would be more kindly disposed. In the extreme case, his scientific credibility may seriously be damaged. Ironically, this was the fate of John B. Watson, founder of Behaviorism.

The figure is based on Robert Epstein, “A Listing of the Published Works of B.F. Skinner, with Notes and Comments,” which appeared in Behaviorism, 5 (1977), 99-110.

The Shaping of a Behaviorist, pp. 86-87.

Shaping, p. 30.

The original description is contained in a short article which appeared in the October, 1945 issue of Ladies Home Journal, pp. 30ff.

Skinner offers an interesting diagnosis of the resistance to his Behaviorism in chapter two of his Beyond Freedom and Dignity.

This is not the place to describe Skinner’s distinctive variant of a Positivist philosophy of science. Sufficient to say that in the contemporary “post-Positivist” intellectual scene, many of the standard reasons for rejecting Positivism may not be applicable to Skinner’s version.


One suspects that the author of this editorial did not fully read Walden Two, because Pavlov and the conditioned reflex play no role at all in the novel. It is obvious that Skinner was being tarred, unthinkingly, with the same brush that was applied to John B. Watson about twenty years earlier.

A portion of Mr. Agnew’s speech is reprinted in Psychology Today, Jan., 1972, p. 3.


E.g., Beyond Freedom and Dignity, p. 96.

Beyond Freedom and Dignity, p. 77.


B.F. Skinner and Kenneth W. Spence were born within three years of each other, Skinner in 1904, Spence in 1907; they received the Ph.D. in 1931 and 1933, respectively. Both were elected to the same prestigious scientific societies (e.g., National Academy of Sciences; Society of Experimental Psychologists, etc.). Both received acclaim for their research; for example, both received the Distinguished Scientific Contribution Award from the American Psychological Association, Spence in the first year the award was given, 1956, and Skinner two years later. Their scientific styles were similar: both were “hard-headed” Behaviorists, rigorously Positivist researchers in the same field of Learning and Behavior Theory. Interestingly, both were concerned with scientific method in Psychology, and wrote extensively in that area.
Robert P. Lawry

Justice in Billy Budd

The focus of this essay is upon a single question: was justice done in the case of The Croton v. William Budd? The case is a fictional one, known to us solely through Herman Melville’s novella, Billy Budd. The question is a philosophical one, with implications in ethics, politics, rhetoric, law, theology, and art. I have been seeking a satisfactory answer to the question for several years. My tentative conclusion is that no injustice was done; yet the absence of injustice is insufficient to warrant the further conclusion that justice was done. This paradox demands further explanation. But first, a summary of the facts is in order.

The Plot

Billy Budd, a young sailor, is impressed into the British Navy and set to work on a man-of-war, the Bellipotent. The time is 1797, less than one year after mutinies have occurred at Nore and Spithead. The tension caused by these mutinies is exacerbated by the fact that Britain is at war with France. The young impressed man is a fine physical specimen, cheerful, naive, and generally well-liked by the many crew aboard the ship. In fact, this Billy Budd, or Baby Budd as he is called, brings the same kind of simple joy to the men as does the presence of a newborn in a roomful of adults. But the ship’s police chief, the Master-at-Arms, John Claggart, is “down on Billy Budd.” His hatred is instantaneous and deep, and he causes Billy troubles of various sorts. Despite warnings from an old “Dansker,” Billy does not believe Claggart is “down on him,” because he seems incapable of understanding the mystery of iniquity that is the source of Claggart’s evil disposition. When Claggart falsely accuses him of mutiny, to his face and in front of the ship’s captain, Edward Fairfaxe Vere, Budd delivers a single blow to Claggart’s forehead, which kills him. Billy has a recurring speech problem that renders him dumb or causes him to stutter in moments of emotional crisis. As Billy puts it: “Could I have used my tongue I would not have struck him.” Captain Vere, a bookish, introspective man, judicious but a strict disciplinarian, is terribly agitated by the event. Nevertheless, he proceeds forthwith to call a drumhead court-martial, unusual under the circumstances. At the trial Vere acts as witness, prosecutor, defense counsel and co-adjudicator, finally persuading a reluctant three-judge court to render a guilty verdict against Budd. The death penalty is carried out the next morning, after Vere and Billy have been reconciled. Before the execution, the boy shouts, “God Bless Captain Vere.” Remarkably, the men echo Billy’s words, murmur after his death, but do not mutiny. Vere never recovers from the anguish of his role in the death of Billy Budd. He is wounded shortly afterward and dies with the lad’s name on his lips. A newspaper account distorts the facts badly. A sailor’s poem lifts Billy into legend.

A native of Pittsburgh, Pa., Robert Lawry was graduated magna cum laude from Fordham University and holds a J.D. degree from the University of Pennsylvania and a Diploma in Law from Oxford University. He practiced law for eight years in Pittsburgh; in 1974-5 he was a Harvard Fellow in Law and the Humanities, and in 1975 came to Case Western Reserve University in Cleveland, where he is Professor of Law. Professor Lawry is co-author of Institutions and Methods of the Law (West Publishing Co., 1982) and has written a number of articles on law, ethics, and teaching. He is also a published poet and a member of the Academy of American Poets. Since 1978 he has devoted much of his time and energies to the Center for Professional Ethics at CWRU; he is co-founder and Chairman of the Center.
Obligation and Aspiration

Whoever is unwilling to say that justice was done in a case, while simultaneously arguing that no injustice was done, is obliged to clarify his terms. I will begin by explicating a rather commonplace distinction between the morality of obligation and the morality of aspiration. This distinction typically envisions a continuum, clear enough at the poles. A parent is obligated to provide minimum food, shelter, and clothing for his or her child; but heroic sacrifice, i.e., doing without basic necessities or working at two full-time jobs to put a son or daughter through medical school, is clearly aspirational. Not all can give so generously. More important, no one is condemned for a decision not to try to scale such heroic heights. Whereas obligation is presumably within everyone’s reach, aspiration requires special effort and special virtue. Heroic sacrifice for another is praised but neither required nor expected of the ordinary good or decent person.

If the obligation/aspiration distinction is valid and encompasses all moral situations, then it is not unreasonable to conclude that a case was decided without injustice being done (moral duties fulfilled) but that justice itself was not necessarily realized (the practice fell short of the aspiration). I suggest this is what happened in Billy Budd.

The distinction between a morality of obligation and a morality of aspiration should not be confused with another oft-made distinction between public and private morality. It has been argued at least since Machiavelli that acts of “princes” in the public realm are governed by the principles of expediency and good order only. Often the case of Billy Budd is viewed as an exemplar of this public/private distinction, law being the will of the public authority and justice being the private virtue sacrificed to the common weal. But Billy Budd should not be read as one more dramatic example of the clash between law and justice, power and right, the state and the individual, public and private moralities. These clashes do occur, and the history of civil disobedience from Thoreau through Gandhi to Martin Luther King, Jr., provides innumerable examples of that kind of problem. I do not minimize the dilemmas often treated by unjust laws; I only say the problem facing Captain Vere was different. I suggest further that the problem facing Vere is more common than we have so far realized. Moreover, it is not a question of choosing between two good things or choosing the lesser of two evils. Rather the issue is: how often in our concern not to do wrong do we refuse to risk our settled self in pursuit of the Good? What I want to advocate is a shift in our moral focus from rule-breaking toward the pursuit of virtue, or from decision-point ethics to character ethics. This shift can take place only if we conduct our moral analysis on the basis of the distinction between obligation and aspiration, and care more for the latter than we currently seem to do.

Justice: the Formal Rule

Aristotle observed that the ordinary sense of the word justice refers both to the lawful and to the fair. For the Greeks both words meant the equal. He who obeys the law is just; he who takes only what is his due is just; he who treats others equally, in accord with accepted standards, treats them justly. But what does it mean to treat others fairly or equally? Is not each of us a unique personality with a history and characteristics that make each one precious and inimitable? But the test of justice is treatment of all persons as equal because they are similar or identical in the relevant particulars. Though this formal rule of justice is universally accepted, when we begin to specify under what conditions two or more persons may be said to be alike and how to treat them, all the agony erupts. Law is clearly allied to justice because it is under law that these specifications are made; and the more they reflect society’s values and its common good, the more reason there is in the routine case to claim the coincidence of law and justice. Accordingly, a powerful presumption attaches to the justice of the laws at least in societies where the Rule of Law is a fundamental social postulate. This is not to say there is no criticism of the law in those societies, or, indeed, that there are no cases where the citizenry complains that a particular law is unjust. Such criticism is a normal part of the political life of every society, for justice has never been fully achieved. Certainly, no citizenry has ever been in accord in thinking so. Nevertheless, much social conflict is resolved justly in the eyes of its citizens.
simply by an appeal to an even-handed, impartial application of the law. At this point, let us examine the law operative in the case of Billy Budd.

The Law of the Case: Procedure and Substance

We must be careful at the outset to distinguish the law that would have governed an incident such as the one described in Melville’s story, if it had really occurred, from the operative law of the story itself as set forth by the author. They are not necessarily the same. Whatever the reality might have been, we know only so much law as Melville enacts for his fictional world.

Captain Vere’s initial formal act after the death of Claggart was to call a drumhead court. The ship’s surgeon and the three officers called to be judges were surprised and concerned about Vere’s decision to call this court because it was “at variance with usage.” All four men thought that Billy ought to be confined until the Bellipotent rejoined the fleet, and the matter then referred to the Admiral. Beyond this significant procedural point, the case itself was tried under the Articles of War, which, as Captain Vere says, provide that the striking of an officer by one lower in grade is a capital offense, apart from the effect the blow has. In other words the substantive law in Melville’s narrative was probably meant to read as Article 22 of the British Articles of War actually did read in 1797:

If any officer, mariner, soldier, or other person in the fleet, shall strike any of his superior officers, or draw, or offer to draw, or lift up any weapon against him, being in the execution of his office, on any pretense whatsoever, every such person being convicted of any such offence, by the sentence of a court-martial, shall suffer death.

From Melville’s text that is all the law we know, and Melville does not quote the particular language of the law. Although legal historians tell us that an actual case like the one described in Billy Budd may have called for the application of additional provisions of law in ways at variance with what was done on the Bellipotent, it is clear from Melville’s text that he chose only those features of the law that would set up the moral dilemma that the artist wanted to dramatize.

On the procedural and jurisdictional point rests the first, perhaps even the most important, moral problem. Vere called a drumhead court, which the others who knew about it thought inadvisable and at variance with usage. It was not, however, illegal. Clearly the Captain had authority to call such a court, particularly for the purposes for which he intended it. Vere wished to share the moral responsibility for the decision—a wish that can be viewed either as cowardice or becoming modesty.

Very far was he from embracing opportunities for monopolizing to himself the perils of moral responsibility, none at least that could properly be referred to an official superior or shared with him by his official equals or even subordinates. So thinking, he was glad it would not be at variance with usage to turn the matter over to a summary court of his own officers, reserving to himself, as the one on whom the ultimate accountability would rest, the right of maintaining a supervision of it, or formally or informally interposing at need.  

To call such a court under such circumstances was a matter of discretion. Conduct of this kind is usually reviewed by an appellate court only for clear abuse, clear unreasonableness. Discretion is often given because a “situation sense” is needed that cannot be caught in straightforward rules. Fact, value and circumstance often combine in obscure ways, requiring judgment in the face of exigencies. Judgment of this kind is not confined to legal matters. It is at the heart of the moral tragedy of Billy Budd. After the trial scene and the condemnation, which cannot be divorced from the Captain’s initial choice to proceed, Melville cites “a writer whom few know” (presumably himself):

Forty years after a battle it is easy for a non-combatant to reason about how it ought to have been fought. It is another thing personally and under fire to direct the fighting while involved in the obscuring smoke of it. Much so with respect to other emergencies involving considerations both practical and moral, and when it is imperative promptly to act. The greater the fog the more it impels the steamer, and speed is put on the hazard of running somebody down. Little ween the snug card players in the cabin of the responsibilities of the sleepless man on the bridge.

Why did Vere exercise his discretionary power to call a drumhead court? Because he feared mutiny if he did not dispose of this case with firmness and speed. Forget for a moment what we, as readers of the “insider’s narrative” know of Claggart, Budd, the ship,
Vere himself. Consider first what Vere may have considered. I suggest he focused on two things: the aftereffects of two recent naval mutinies and the make-up of the crew aboard the Bellipotent.

The smoke of mutiny could be smelled on board every ship in the British Navy. Early in the narrative, Melville says this about the Nore (or Great) Mutiny of 1796:

It was indeed a demonstration more menacing to England than the contemporary manifestoes and conquering and proselyting armies of the French Directory.

To the British Empire the Nore Mutiny was what a strike in the fire-brigade would be to London threatened by general arson.  

Melville's narrator goes on to recount the lingering effects of the Great Mutiny:

At sea precautionary vigilance was strained against relapse. At short notice an engagement might come on. When it did, the lieutenants assigned to batteries felt it incumbent on them, in some instances, to stand with drawn swords behind the men working the guns.

Moreover, Captain Vere's reason for quick action after the death of Claggart was to extinguish "any slumbering embers of the Nore among the crew." This sense of "urgency" and the Captain's harried frame of mind were directly connected to the threat of mutiny "well-warranted or otherwise."

The causes for the mutinous atmosphere that hung over the British Navy — bad food and little of it, scanty cloth for clothes, the impressment of unwilling men — were still largely uncorrected. The men impressed into the Navy were not usually innocents like Baby Budd, but society's marginal types: vagabonds, "promiscuous lame ducks of morality," perhaps even criminals "culled direct from the jails." Claggart himself it was rumored "had volunteered into the King's navy by way of compounding for some mysterious swindle whereof he had been arraigned at the King's Bench."

Melville subtly and ambiguously suggests that a spirit of mutiny was abroad on the Bellipotent herself. In Chapter 14 another impressed man, described only as an afterguardswoman, awakens Billy from a deep sleep to propose if not mutiny, at least "help — at a pinch" to a "gang" of other impressed men. Two coins are offered to Billy for such "help." Billy chases the tempter away, but discloses the episode only to the old Dansker, a wise, veteran seaman, who ties the incident to Claggart. But unlike previous disturbing incidents created by one of Claggart's "more cunning corporals," one Squeak by name, there is little textual evidence to support the Dansker's assumption. If the afterguardsman was not Claggart's man, then mutiny may not have been far from occurring on the Bellipotent. Melville's characteristic ambiguity is at work here. In describing the reality of making choices in the "fog" of action, he was not likely to allow the reader the comfort of solving the moral problem simply by solving a literary puzzle. What is significant is that it would not be unreasonable for the Captain to think that mutiny aboard the Bellipotent was a real possibility. Later, in arguing against clemency for Billy Budd, Vere explains:

To the people the foretopman's deed however it be worded in the announcement, will be plain homicide committed in a flagrant act of mutiny. What penalty for that should follow, they know. But it does not follow. Why? they will ruminate. You know what sailors are. Will they not revert to the recent outbreak at the Nore? Ay . . . They would think that we flinch, that we are afraid of them — afraid of practising a lawful rigor singularly demanded at this juncture lest it should provoke new troubles.

Believing as he did, Captain Vere knew from his first reflections what had to be done. He sums it up in these early words of judgment over Claggart's lifeless body: "Struck dead by an angel of God! Yet the angel must hang."

Discretion was exercised for the most fundamental reason: to preserve the society.

Whether the determination to call a drumhead court was itself unjust (because illegal) depends upon what criterion is used to determine abuse of discretion. Personal hatred of the accused would not be a justifiable motive; but clearly Vere acted from a desire to maintain discipline on the ship. It is doubtful that an appellate court would reverse for abuse of discretion in this matter. One of the actual cases that Melville considered when writing Billy Budd was that involving the decision of the commander of the U.S. brig-of-war Somers to execute three crew members as mutineers, even though the incident occurred in peacetime, 1842, and within a few days' sail of home. As reported in Billy Budd, this execution, carried out under laws similar to those governing Billy's case, was "vindicated by a naval court of inquiry subsequently
convened ashore.” The Somers affair requires its own analysis, but the case should demonstrate how a reviewing court would be likely to sympathize with a commander beset with fears of mutiny. In any event, a ship’s captain can hardly be faulted for exercising his discretion to preserve the safety of the ship and its crew.

There is some difficulty for the average reader in the fact that Captain Vere represents more than one branch of government on board the Bellipotent. It is axiomatic in our system that the executive, legislative and judicial branches are to operate separately, so that a concentration of corrupting power cannot occur. Practically, this idea leads to inefficiencies and complexities, but these seem a small price to pay to preserve our liberties. Nevertheless, let a state of emergency arise — war, for example — and the necessity for quick, bold action demands a concentration of power. Captain Vere is the commander of a ship in a time of war. He has great executive powers, but the extent of his judicial powers depends upon circumstance. Ideally, he should not judge Billy Budd — he should turn the matter over to the Admiral. But this is wartime; not merely war between England and France, but civil, internal war — mutiny — existed in potentia for the non-democratic society of the ship. Under such circumstances ideals give way to the pressures of reality; to consider only the ideals is to risk losing everything.

Another reason that Vere called a drumhead court was to seek the help and counsel of others. He was “no lover of authority for mere authority’s sake,” but wanted to share the moral responsibility. Nevertheless he accepted the ultimate responsibility that he knew was his as Captain.

We have already noted the straightforward language of Article 22: “If any person in the fleet, shall strike any of his superior officers . . . every such person being convicted of any such offence . . . . shall suffer death.” Captain Vere refers to the plain meaning of the statute: the mere striking of a superior officer by his inferior is a capital offense. At one time in judicial history it was common to read the language of statutes in the belief that it contained a “plain meaning.” Vere himself, it can be argued, was therefore acting as a good judge should have acted in reading the command of the legislature.

Increased sophistication in the philosophy of language in the twentieth century has caused the demise of the “plain meaning” approach to legal interpretation, replacing it with a variety of techniques. Still, these new techniques have the same goal as the old: to determine the true intention of the legislative branch in passing the statute in question. Even under the new techniques, the place to begin is with the language. But more must be done than to give the words their dictionary definitions and to examine the syntax of the provision in question. The court must examine the whole statute so that the provision may be read in context; and it must study extant debates contemporary with the law to find what questions of social policy were at issue. Although these techniques are not available to us in the case at hand, we must still ask the same questions that the English court in Heydon’s Case asked in reading a statute in 1584: what mischief was the legislature trying to remedy? what precise remedy did they choose? why did they choose that particular remedy?

The mischief was clearly related to problems of discipline, which is needed for effective functioning in the military, and to the danger of mutiny. The remedy was also clear: death to anyone who even strikes an officer no matter the provocation. But why so harsh and sweeping a penalty, which damns acts that are not mutinous along with those that are? Captain Vere gives us a partial answer. He says, “No child resembles his father more than the Mutiny Act resembles in spirit the thing from which it derives — War looks but to the frontage, the appearance. Intent or non-intent is nothing to the purpose.” We do not ask the combatant’s position on the war. The combatant obeys. If he does not, he must answer for it. Discipline is everything.

From the text of the story it is unassailable that Melville wanted to make the law both clear and harsh. He wanted it to be based on the possibility of mutiny and the Navy’s concern that sailors in wartime not be allowed to think that they could strike an officer with impunity even under conditions which might otherwise excuse the act.

It is true that Vere reached his decision in a flash, both as commander and as judge.
mediately upon confirmation from the surgeon that Claggart was dead, Vere thought hard but quickly, and he uttered the judgment: “The angel must hang.” Nevertheless, this does not mean it was an impulsive or unjustified decision. It was made by him as Captain, but it was shared, not only by the drumhead court (however reluctantly), but clearly and overwhelmingly by the British Navy whose servant he was.

**Human Justice**

I have taken so much time with the defense of Captain Vere because I want to make the best argument I can for him. I want to try to explain why such a decision so at odds with instinctive human sympathies can yet be justified. My guess is, however, that I have not done enough. Even if I have convinced readers that legal justice was done, this notion of justice seems inadequate; to many, including Vere himself, Billy Budd is innocent before God. Before we examine such a notion of higher justice, however, there remain some additional issues of human justice to confront.

First of all, a fact many people like to ignore is that Billy Budd killed another man. That he was provoked is not in dispute, but how provoked? Was he struck, so as to call out claims of self-defense? No. Claggart merely charged him with a crime he did not commit. Is that — better yet — _should that be_ a justification under any law, man’s law or God’s, for striking another or for killing another? Tort law would not excuse. Criminal law would not excuse. Only, perhaps, the law of a different society, one that could be imagined and perhaps existed in the dawning days of Homeric heroes and gods. Could a reasonably civilized society exist without rules against conduct like Billy Budd’s? Billy was prone to use his fists when even slightly provoked. On his former ship, the _Rights-of-Man_, when a sailor called Red Whiskers “under the pretense of showing Billy just whence a sirloin steak was cut ... insultingly gave him a dig under the ribs,” “Billy “quick as lightning ... let fly his arm,” and “gave the burly fool a terrible drubbing.” Of course, Red Whiskers did not die, and in fact came to love Billy, at least in the perception of the Captain of the _Rights_.

Billy clearly was a “peacemaker” on the _Rights_; but his innocence, his beauty, his naivete called out something of the worst in certain men. This latter point is examined carefully in Rollo May’s book, _Power and Innocence_. Psychologically, the victim, who is innocent and childlike, has much to do with making himself the victim. For May, the “tragic flaw in Billy Budd” was that “he blocked off his own awareness of the effect he was having on Claggart, despite the endeavors of the old Danish sailor to point out Claggart’s growing hostility toward him.”

He was protecting his innocence, but he was also refusing to grow up. He not only invited evil to murder him, he also was quick to violence himself; although a child, he had the strength of a man, and one of his blows could kill, _and did kill_. Societies cannot function with men acting as children. Perhaps in some sweet moment of repose, we sigh and wish it were otherwise. But it is not otherwise, and justice in this world cannot be conceived as if the world were otherwise.

But this punishment: death? For this offense? Under these circumstances? One’s sense of justice is outraged. What meaning do we give to “justice” in this context?

There is within the concept of justice a strong element of proportionality — in Aristotle’s terms, not only the lawful but also the equal and the fair. Strict equality is often identified with prescriptions like the Biblical “eye for an eye.” Yet fairness usually means that we look to motivation, the peculiar circumstances. Aristotle himself introduced the idea of equity as a corrective for law and as a kind of justice tempered with mercy. In modern criminal law we refer to degrees of homicide. Premeditated murder requires the harshest penalty. Unintentional manslaughter falls lower on the list. Both result in death. Strict justice, understood as “an eye for an eye,” would not distinguish. But not to distinguish is to be somehow unfair. Motivation counts. Only primitive man thinks otherwise. It is therefore our sense that justice involves proportionality which is offended by the Captain’s sentence of death. Nevertheless, justice as proportionality cannot be examined in a vacuum, as if only the offender and the one offended were involved. Justice is preeminently a social virtue, and it cannot be analyzed outside the context of the rules.
and institutions of the body politic. In the world of Odysseus murder was still a problem for the clan or family to handle. In more advanced societies the state assumes the responsibility for determining guilt and punishment. Unless one accepts a view of natural law that decrees how every social problem should be handled (a view no great thinker ever held), society’s rules, values, social conditions, and exigencies have to be central to any judgment about justice or injustice.

This is not pure relativism, because I do not advocate the proposition that every decision within a community is just so long as it reflects that particular society’s values and its own understanding of the common good. What I do advocate is that any discussion concerning justice is unreal, inhuman and hopeless abstract unless it is understood within a meaningful historical and cultural framework. For example, if we were to decide that capital punishment is unworthy of our society — as France has recently decided — does it follow that previous executions by the guillotine or otherwise were unjust? Even those who accepted so iniquitous an institution as slavery cannot be considered unjust at all times and all places, although I cannot imagine an argument that could persuade me now that holding slaves is just. Why? Because history has proven that slavery entails a kind of murder of the individual’s personhood. But for Aristotle, economic and social conditions made slavery seem natural and necessary for the well-being of society as a whole.

This way of putting the question reflects the central debate about value that is at the heart of momentous decisions like the one Captain Vere faced. If we accept the nature of the dilemma as Melville presents it to us, we cannot say Vere’s decision was unjust. The law and policy of the state damned Billy Budd for the reason it thought fundamental: the survival of the society in question (the ship) and the continued strength of the navy in its fight for self-preservation. But let us be more concrete. Other people were aboard that ship. If chaos had erupted, many other innocent lives might have been lost.

The Argument Against Captain Vere

We have seen that Captain Vere could have decided not to try Billy Budd but instead to turn the matter over to the Admiral. He did not do so because he was afraid, and he was afraid because his strict sense of duty, his pedantry, his introspective mental habits, and the recent mutinies all combined to “unhinge” him. He did not become clinically insane, but he went mad as the world goes mad every day, as Harry Truman went mad in ordering Hiroshima and Nagasaki blasted with atom bombs. Truman’s “madness” was based on a rationally justifiable fear of the loss of many additional American lives through a prolongation of the war. Winston Churchill made a similar decision during World War II when he allowed “surprise” bombings on English cities rather than risk disclosure to the Germans that England had cracked their secret intelligence code. In both cases innocents were sacrificed to save future lives. I cite these examples not to justify or condemn these particular acts, but to remind us that decisions involving the life or death of many people have about them an air of unreality resembling madness. Even thinking about matters so terrible may be a form of insanity.

Such pressures seem to have precipitated Captain Vere’s decision. Justifying a choice to confine Billy for the Admiral’s review of the case would be easy. It was the accepted practice. Ordinary practice does not have to be justified until someone challenges it, and then the burden is on the challenger. No one on the Bellipotent would have challenged Vere’s decision had he merely confined Billy. Everyone believed Budd to be honest and Claggart a liar, and no one believed Budd capable of actual mutiny. If the judges feared mutiny at the beginning of the case, they did not evidence it, and they feared it at the end only because of Captain Vere’s relentless rhetoric. Thus, Vere could have easily satisfied the demands of strict justice, and at the same time served a higher justice or fairness that takes circumstances into account, if he had held Billy for the Admiral.
The language of the act that I first quoted — "being in the execution of his office" (referring to the officer struck) and "on any pretence whatsoever" (referring to the offender) — contains further grounds for criticism of Captain Vere. Those who would challenge Vere's actions might focus upon these words and argue that Claggart was not in the execution of his office when he lied foully to Billy Budd's face in the presence of the Captain. The act of lying put Claggart outside his role as Master-at-Arms just as in the famous constitutional law case, Ex Parte Young, a government agent's acts were considered not the acts of the government because they were illegal — and the government as government cannot act illegally. A neat argument if one ignores the difficulty of determining when an officer does something "outside his office," and further ignores the policy consideration underlying the rule that wants no breach of discipline for fear of mutiny. Nevertheless on land, without the actual threat, it is an argument I would surely accept in order to avoid the harshness of the penalty. And I would accept it with the firm hope, belief, conviction that surely the legislature did not mean this case. Moreover the words "on any pretence whatsoever" are different from what the strict logic of the underlying policy seemed to demand. If one did not want a possible "out" for people at least like Billy Budd, instead of "any pretence", would it not have been better to use the words "for any reason whatsoever," meaning good or bad, otherwise appropriate or not? That is a reasonable argument I might also accept under less pressured circumstances. Only, of course, with the caveat: surely that statutory language was adopted not to encompass those acts which are allegedly done in self-defense or for any other good reason, but are really subterfuges for mutiny. Billy Budd was not indulging in pretence when he lashed out against Claggart. Of course Billy was capable of lying. He denied knowing anything about any possible mutiny. His conversation with the afterguardsman was about mutiny and Billy knew it. Other noble motives rose to stop his speaking the truth on the occasion of the question, but Billy was surely also one caught in a moral dilemma with no clear answer. Lying is wrong. Exposing a shipmate to possible peril on ambiguous words is ignoble. In any event, the difficulty of getting at "pretence" is akin to getting at "execution of his office." In light of the underlying policy against mutiny, efforts to discriminate act from act would have caused delay, uncertainty, a gap in the fabric of discipline that a mutinous band of cutthroats could have easily crawled through. Moreover — and this is crucial — Melville does not actually quote Article 22 and never hints that his statute contained language so subject to different interpretation. He seems to have wanted to set up a situation in which "condemn or let go" was the only legal choice.

But even without these arguments about the language of the act, Vere could, in the circumstances set up by Melville, still have avoided injustice had he followed ordinary practice and held Billy for the Admiral.

**Higher Justice: Heroes and God**

Melville suggests that Admiral Nelson would have behaved differently from Captain Vere. In raising this point, I touch on a deeper level of analysis than we have so far undertaken. The theme of the great hero, embodied in the person of Nelson, is central to the novella. It was Nelson who was transferred to the command of another ship because his mere presence was thought to be a deterrent to mutiny. Nelson exposed himself to the peril of gunfire, foolishly perhaps, but in keeping with his noble, heroic nature. So Vere could have, had he been a Nelson, protected the innocent sailor, believing mutiny would not occur because of who he was. But Vere was not a Nelson. And though we rank Nelson's character stronger, more heroic, braver than Vere's, are these attributes relevant to the decision that Vere made and had to make? It would be different if Vere had acted out of an evil motive; but he did not. He acted conscientiously under the circumstances as he saw them. A more heroic figure might have chosen another path. The virtue of courage more deeply implanted in Vere might have made him another Nelson. Nevertheless, Nelson's heroics perhaps foolishly cost him his life; and ideas aside, human experience tells us that heroic acts do not often succeed. Heroes are few enough, and Socrates, Jesus, Martin Luther King, Jr., and Gandhi are but examples of heroes whose lives
were taken by men who hated to stand in the shadows while a magnificent light brightened the world.

Now it may be argued that the risk of loss of life, his own and many members of the crew, and the loss of the ship for use by Great Britain in her war against France was what Vere should have risked. But in the name of human justice? No. The argument has to be raised to a higher level, namely the most exalted spiritual or moral level imaginable to man. That is often where the argument goes. Does not Vere himself invite it? He says that God “At the Last Assizes” shall acquit. That a just God would “forgive” Billy Budd his act of spontaneous violence under the circumstances is not an argument I should try to refute. Let us assume such a God would; but that does not answer the question whether justice was done in this human case by Captain Vere. For God’s criteria for dispensing justice are not known to us and are generally conceived to be intertwined with His overwhelming love. For example, was it just to order Abraham to slay his son, Isaac? No human idea of justice could conceive that it was. Yet Abraham was prepared to carry out Yahweh’s command, until stopped by an angel of the Lord. Perhaps God’s ways are not our ways, as the Scriptures tirelessly tell us.

From the Christian perspective, Anselm of Canterbury argued that God Himself had to find a way to escape the consequences of His justice which damned all men via the sin of Adam’s first disobedience. This justice conflicted with His merciful love. But love itself is subject to justice. The solution? the undeserved substitutional death of His Son, the God-Man. Whatever its theological weaknesses, Anselm’s theory of atonement has had a rich life in Western Christianity, partly because it satisfies psychologically anyone who believes in a God of love who is also a God of justice.

The above examples were not chosen randomly. Melville invites the Abraham-Isaac analogy himself: “The austere devotee of military duty, letting himself melt back into what remains primeval in our formalized humanity, may in the end have caught Billy to his heart, even as Abraham may have caught young Isaac on the brink of resolutely offering him up in obedience to the exacting behest.” And literary critics have traditionally read Billy as a Christ-figure. Christ’s plea, “Father, forgive them,” reverberates in Billy’s last testament: “God bless Captain Vere.”

Paul Tillich has urged that the concepts of love, power, and justice be looked at as interconnected at the ontological level. His argument is basically that love is the drive toward the reunion of the separated; that power is the possibility of self-affirmation in spite of internal and external negation; and that justice is the form in which the power or being actualizes itself in the encounter of power with power. For Tillich, the absolutely formal principle of justice in every personal encounter is to treat each person as a person; the contents of justice are to be found in laws, traditions, authorities, and individual conscience. Finally, the relation of justice to love occurs through the three functions of creative justice: listening, giving, forgiving.

Whatever we may say about the Abraham-Isaac story or Anselm’s theory of atonement or Tillich’s ontological speculations about love, power, and justice, one must be struck by the constancy of repeated themes: innocence, sacrifice, forgiveness, reconciliation. Clearly, religious ideas about justice do not correspond to mathematical proportions, nor even to more nuanced versions of philosophical proportionality. Something larger and more tragic animates the heart of this dimension of reality. That “something” is the pervasiveness of evil. All human endeavors are marked with its sign, infected with its poison. Indeed, the “mystery of iniquity” that pervaded Caggart’s heart was the root of the tragic story of Billy Budd. Caggart’s evil heart was silenced by “an avenging angel.” However, evil lurks in more hearts than one. Thus, divine justice must be satisfied by the willing sacrifice of an innocent, by the victim’s forgiveness of the one(s) responsible for the decision, and by the reconciliation of those previously separated. Captain Vere, according to this view, played a providential role in the workings of divine justice, which culminated in Billy’s death and in the strange, involuntary reconciliation of the crew with its Captain and of that society with lawful authority. From all of this perhaps the answer is yes, from the religious perspective, justice was done in the case of Billy Budd.
Justice and Virtue

Although Billy Budd has been called Melville's "testament of acceptance," it is not clear that the author believed that justice was done. Cosmic inevitability is not necessary justice. There is reason to think Melville's story is radically anti-Christian, negating any theory of justice based on atonement. Nevertheless, Captain Vere acted conscientiously within the framework of obligation and circumstance. He might have waited for a trial before the Admiral. He might have exonerated Billy altogether. He might have followed the option suggested by one of the adjudicators: conviction and mitigation. Whatever legal and political arguments would have to be marshalled to support any of these choices, the fact remains that Captain Vere was incapable of seriously considering them because of his sense of duty and because of his fear of mutiny. Any other outcome would have required more courage, more perception, more virtue than Captain Vere possessed.

It is here that life and works of art like Billy Budd become subtler than philosophy. One can talk reasonably well about rules and duties. I have argued that Vere cannot be criticized for failing in his obligation as Captain; but we withhold our praise. We suffer with Vere; we sympathize; but we do not applaud. We aspire to something better: we want justice. For a utilitarian, Vere was no doubt right because he insured the greatest happiness of the greatest number. For a Kantian, strict duty might also have demanded Budd's death. But even if a utilitarian or a Kantian would analyze the case to an opposite conclusion, the point I want to make is that any such decision-point model of morality is deficient because it does not take into account the "fog of circumstance" that actually pervades the moral life.

Such a model is reductive, and focuses on duty but not on character. It is in character that Vere was ultimately deficient: he lacked courage and moral imagination. A bold stroke was needed and he did not have the capacity for it. Moral imagination transcending duty is what Jesus had in abundance; that is why He is so towering a figure on the moral landscape.

True criticism of Vere would sound like a parent's baffling and utterly lame chiding of a child in difficulty: "you should not have gotten yourself in this mess in the first place." But Vere did; and who can really blame him? Like Vere, we are taught to do our duty as we see it, to abide by rules and roles we have chosen or which have been assigned to us by the Fates. As a lawyer, I am taught that confidentiality is the linchpin of my professional role. But if a client told me in confidence that he killed the man another person has been convicted of killing, and the person convicted is now sentenced to life imprisonment or to the gas chamber, am I to allow this innocent to suffer so grievously because duty demands it? I do not know what I would do in the circumstance described above; but I hope I would have the courage to do something to save the innocent person.

I do not disparage moral analysis. I only say it is not enough. It can usually provide us with the tools we need to perform our obligations. But to achieve our aspirations, we need help from a higher source—if not directly from God, because He is so inaccessible even with the help of theologians, then perhaps from a luminous work of art. In his sonnet Torso of an Archaic Apollo Rainer Maria Rilke describes the mysterious inner radiance of a statue, coming from an unseen "candela-brum set / before his gaze which is pushed back and hid, restrained and shining." So we might wish that Captain Vere had put his pedantry aside and heeded Rilke's powerful and unexpected last few words: "You must change your life."

Justice, it will be said, does not come from the contemplation of art. I will not argue. Instead, I ask that you read or re-read Billy Budd. There will then be no place left for you to hide. You will have to change your life, aspire to something other and better. Justice may then simply occur.
NOTES

1Herman Melville, *Billy Budd*, ed. Harrison Hayford and Merton S. Seals, Jr. (Chicago: University of Chicago Press, 1962). Although Melville did not produce a final, authoritative text of the novella, the Hayford and Seals edition has become a standard one. A handy paperback version is published by Bantam Books as a Bantam Classic, *Billy Budd, Sailor, and Other Stories*.


4Chapter XXXIII, Acts of George II (1749), 19 Statutes at Large, p. 330.


6*Billy Budd*, p. 104.

7*Billy Budd*, p. 114.

8*Billy Budd*, p. 54.

9*Billy Budd*, p. 59.

10*Billy Budd*, p. 65.

11*Billy Budd*, pp. 112-3.

12*Billy Budd*, p. 101.

13The Supreme Court of the United States did not definitively overrule this plain-meaning approach to the interpretation of statutes until 1940, in the case of *United States v. American Trucking Association*, 310 U.S. 534.


15*Billy Budd*, pp. 111-2.

16*Billy Budd*, p. 47.


23209 U.S. 123 (1908).


26*Billy Budd*, p. 115.


28Duty was paramount in a case like this for lawyer, later Judge, Arthur Powell. Powell felt easier in his conscience about the dilemma because the unjustly convicted man was "only" sentenced to life imprisonment. Later, however, he man was hanged by a mob. Arthur Powell, "Privilege of Counsel and Confidential Communications," *Georgia Bar Journal*, 6 (1944), 333.

The Origin and Meaning of *GAMUT*

It is appropriate that a journal of the scope and range of *The Gamut* have as its title a musical term. I thought it would be interesting for readers to know the origin of the word *gamut*.

*Gamut* is a contraction of *gamma* *ut*, which was the name of the lowest note in the medieval musical system. This note, at the bottom of what we now call the bass clef, was called *g* because it was one step lower than the lowest note of the Greek scale, which began with *a* (termed the prosplauites). The Greek letter *gamma* (*γ*) was used to distinguish this particular *g* from other octaves of *γ*; the name *ut* was used because it was the first note of the hexachord system. Codified by Guido of Arezzo (c.991-c.1033), this system gave a syllable to each of six scale notes — *ut, re, mi, fa, sol, la* — with a half-step determined between *mi* and *fa* and whole steps between each of the other adjacent tones. The syllables were taken from a hymn to St. John the Baptist, each phrase of which began on the next degree of the scale:

> Ut queant laxis
> Resonare frisiv
> Mira gestorum
> Famuli tuorum
> Solvet polluti
> Labii reatum

_Sancte Johannes._

When the scale system was expanded from the hexachord to the octave, the name used for the seventh degree of this new system was *si*, taken from the first letter of each word in the last line of St. John’s hymn.

According to David Fallows’ article in _The New Grove Dictionary of Music and Musicians_ (6th edition, edited by Stanley Sadie; London: Macmillan, 1980), the letter *gamma* was first used in the anonymous Lombard treatise, _Dialogus de musica_ (c. 1000). The note may have been introduced because it was being used already in the current, expanded Gregorian chants, or perhaps the *g* was needed to explain the lowest *a* and *b* within the emerging hexachordal system. In any case, from that time on, *gamma*, *gamma* *ut* or *gamma* _grancum_ was described in music treatises as the lowest note of the scale.

*Gamut* also came to be used to refer to the hexachordal system, or, more broadly, to any system. Still another musical use of this word was as reference to the musical range from *gamma* *ut* up to the highest *e* *la* (at the top of our treble clef). This was the ambitus of most sacred and secular music until approximately the middle of the 16th century.

These last-mentioned meanings of the word *gamut* lent themselves to broader usage. Hence, the word was adapted into the vernaculars — English, French, Italian — as early as the 12th century. It is still used today in Italian (*gamma*) and French (*gamme*) as the normal word for the musical scale. In English, *gamut* has come to mean variety, diversity, breadth, and depth, which is just what this publication represents.

Beverly Simmons earned her Doctor of Musical Arts degree at Stanford University. She is active in professional arts management, is a member of the Music Department at Case Western Reserve University, and has served as radio producer and staff announcer for WCLV-FM.
Concrete Poetry: 
Medium Awaiting a Masterpiece

In this issue The Gamut announces its sponsorship of a national Concrete Poetry Contest (see inside front cover). The term "concrete poetry" has sometimes been used to indicate any literary work combined with a nonverbal element — sound, two- or three-dimensional art, or some sort of performance; occasionally it has even been applied to works that are not verbal. But most commonly, and for the purposes of this contest, "concrete poetry" means a work of literary art that involves a necessary visual component. The visual element should do more than just indicate how the poem should be read, or reinforce a meaning already in the words; it should constitute a new dimension, without which the poem would be incomplete.

Thus a comic strip, if it has the richness and complexity characteristic of poetry, might be considered a concrete poem. A rebus, a piece of writing that substitutes pictures (often punning) for some of its words, is a familiar form of concrete poetry. Another common form is the shaped poem, in which the outline of the type suggests an object, such as a bottle or a bird. George Herbert's "Easter Wings" (Fig. 1) is perhaps the best-known example of this device.

Concrete poetry goes back over two thousand years in Western literature, one of the earliest examples being an egg-shaped poem by the Greek Simias (300 B.C.). A great many concrete works were produced in the Renaissance; again in the 1950's and 60's interest in the form increased around the world, particularly in Brazil, the U.S., and Western Europe, to such a pitch that it might be called a movement. Several good anthologies of concrete works were published in the 60's; they were dominated, however, by artists who were more interested in graphics than in language, and the literary content tended to be rather thin. Many of the works were small experiments with single typographical effects or puns. Visual literature continued to be published during the 1970's, but now some of the excitement seems to be waning. Has the potential of this medium been exhausted? The editors suspect not; and to stimulate further exploration we are initiating this contest.

Our definition of concrete poetry has specified a necessary visual element. But the primary medium of language is sound. All natural languages were spoken long before they were written down. So, not surprisingly, poetry was originally and still most often is an art for the ear rather than for the eye. Since the invention of writing, poetry

ACKNOWLEDGMENTS

Grateful acknowledgment is made to the following publishers, in whose publications some of the illustrations for this article have previously appeared.

The Arion Press, San Francisco. Fig. 5 "r-p-o-p-h-e-s-s-a-g-r," by e.e. cummings; and Fig. 7, "Fisches Nachtgesang," by Christian Morgenstern, are reproduced by permission from Shaped Poetry, 1981.

Assembling Press, Brooklyn, N.Y. Fig. 8, "Sunday Mornings," by Leonard Trawick, first appeared in Tenth Assembling, 1980.

The Chicago Review, University of Chicago. Fig. 2, "Stream, Bank," by Seiichi Niikuni, and Fig. 10, "Geranium," by Mary Ellen Solt, appeared in a special issue of the Chicago Review, Vol. 19, No. 4 (1967), edited by Eugene Wildman. "Geranium" reprinted with the permission of Mary Ellen Solt.

Indiana University Press. Fig. 6, "wind," by Eugen Gomringer, is reproduced by permission from Concrete Poetry A World View, ed. Mary Ellen Solt, 1970.

Luna Bisonte Prods., Columbus, Ohio. Fig. 9, "The Shirt," by John M. Bennett, reproduced by permission of the author.

Lord, who createdst man in wealth and store,
Though foolishly he lost the same,
Decaying more and more,
Till he became
Most poore:
With thee
O let me rise
As larks, harmoniously,
And sing this day thy victories:
Then shall the fall further the flight in me.
My tender age in sorrow did beginne:
And still with sicknesses and shame
Thou didst so punish sinne,
That I became
Most thinne,
With thee
Let me combine
And feel this day thy victorie:
For, if I imp my wing on thine,
Affliction shall advance the flight in me.

Fig. 1: George Herbert, "Easter Wings," from The Temple, 1633.
has also had a visual dimension, but this has usually been subordinate to the spoken word. In written language, the temporal linearity of sound is represented by spatial linearity. Sound patterns such as rhyme and meter can be seen on the page. Thus, for example, when we see language represented on a page like this—

```
\text{\small xxxxxxxxxxxxxxxxx}
\text{\small xxxxxxxxx}
\text{\small xxxxxxxxx}
```

we can guess that we are looking not at prose but at poetry. In fact in this case we are probably looking at ballad stanzas, a form based on auditory patterns: lines containing alternately four stresses and three stresses are divided by the rhyme scheme into stanzas or groups of four lines each.

In the past few centuries our culture has become so print-oriented that the word poetry now tends to evoke first of all a visual image, that of lines written or printed like those above, with an uneven right-hand margin, and usually grouped into bunches (stanzas). Yet these visual qualities are still graphic representations of auditory effects. The typography even of modern free verse is usually described in terms of auditory effects it represents—breath groups, pauses, and other rhythms. The task of the concrete poet is to elevate the visual component above the ancillary function of mere notation of sound, to a role equal in importance to the auditory component of the poem.

The subservience of the visual to the auditory is less sharp in languages like Chinese whose written representation is ideographic (based on pictures) rather than phonetic (symbolizing sounds). Chinese and Japanese calligraphy has traditionally been closely associated with painting: pictures and poems are often combined in Oriental literature. The contemporary concrete poem in Figure 2 by the Japanese Seiichi Niikuni shows how easily ideographic characters are adapted to this medium: here the characters for stream (川) and bank (川) combine to produce a construction like a giant word, that both says “bank of a stream” and looks like one.

Of course in the West written language has also, almost since the beginning, been accompanied by illustrations, either purely decorative designs or graphic depictions of the verbal content. From the illuminated manuscripts of the Middle Ages to the coffee-table books of the 1980’s, text and pictures have been combined. But such combinations cannot be counted as genuine concrete poetry or “visual literature” unless the pictures and text have a vital connection, like Siamese twins for both of whom separation would be fatal.

There is a long tradition of referring to the descriptive power of language as “painting with words.” Indeed, one of the fundamental resources of poetry is the use of an image (i.e., a verbal representation of a sense impression) to represent something else metaphorically; thus Robert Burns uses a flower to represent a woman when he writes, “My love is a red, red rose.” A whole literary genre, the emblem book, which combined written and graphic images of symbolic significance, became popular in the sixteenth and seventeenth centuries. In Figure 3, for example, from Geoffrey Whitney’s emblems, the verbal idea of a wasteful wife is elaborately represented both in verse and in a visual design by the image of an ass eating a grass rope that has been laboriously woven.

Renaissance emblems often elaborated the implications of visual images extensively, but they were usually one-shot affairs—single pictures accompanied by various sorts of texts, all developing a single idea. Virtually the only artist to combine pictures and words successfully in a complex manner over a substantial body of work has been William Blake (1757-1827), who never had his poetry printed in the usual way, but engraved and printed it all himself, so that the works would...
be truly unified. For this reason Blake’s poems should never be read except in his own composite plates. In every plate of Songs of Innocence (1789), for instance, Blake incorporates some variation of a twining vine design, which he develops through the work as a symbol of the incarnation of spirit in the physical body. “The Blossom” (Fig. 4), like several other poems in Songs of Innocence, would be puerile or incomprehensible were it not for the larger theme carried out by the visual element. The usual interpretation of this lyric is that it is a poem of sexual conception: the blossom is the mother’s womb, and the sparrow and the robin represent the impregnating male. But this significance is indicated only through Blake’s visual design of the “flame plant,” a variation of the twining vine motif, which encloses in its loops winged figures that suggest unborn spirits about to take on physical bodies as infants.

Pictorial representation and symbolism are not the only ways in which the visual element can contribute to a poem. One of the most important is the spatial patterning in which the type is arranged on the page — patterning which does not necessarily have anything to do with the sound. In the 1890’s the French avant-garde poet Stéphane Mallarmé applied a visual structure to his verse, creating what may be called the first modern concrete poetry. Mallarmé’s typographical experiments culminated in Un Coup de dés jamais n’abîme le hasard (“A throw of the dice will never abolish chance”), which became a prototype of twentieth-century typographical constructions. In this poem words and phrases in print of different sizes are disposed on the page so that they make sense whether one reads just the words in the same type, or the whole text together regardless of type size. The result is a sort of poetic fugue, with several levels of meaning conveyed simultaneously by visual means.

Mallarmé influenced many twentieth-century poets, among them e.e. cummings, who frequently organizes his poems for visual effect. Cumming’s’s “Grasshopper” poem (Fig. 5), for example, one of his more successful pieces, is almost impossible to read aloud; it produces not an auditory but a visual effect, that of trying to follow the camouflaged insect, whose parts are difficult to put together until it gathers itself for a leap. The reader’s eye moves around the page searching for a coherence in the letters as one

Fig. 3: “Wasted Labor,” from A Choice of Emblemes by Geffrey Whitney, 1586.

Fig. 4: From Songs of Innocence, by William Blake.
searches the grass for the grasshopper, now
mistaking a leaf for a wing, a leg of the insect
for a stalk of grass.

Cummings's poem makes use of one of the primary resources of the concrete poet:
the Western reader's habit of reading type
left to right, top to bottom. Eugen Gomringer's little "wind" piece (Fig. 6), one of his collection called Constellations, also capitalizes on these habitual "lines of force" that the Western reader imposes on a page. By writing the word "wind" diagonally, sometimes slightly athwart the habitual left-to-right eye movement, Gomringer suggests the pulling and tugging and eddying of a real wind.
Concrete poets have exploited other typographical conventions that are basically visual. Christian Morgenstern's "Fisches Nachtgesang" ("Fish's Nightsong" — Fig. 7) consists of an arrangement of the signs normally used to represent long and short syllables in versification — but without any words to go with them. The effect is to suggest the wordless "song" which one might imagine a dumb creature to "sing" — that is, to feel. This poem almost falls outside of our original definition of concrete poetry, since, strictly speaking, it lacks literary (i.e., verbal) content; but it is literary in that it alludes to conventions of written language.

My own rebus sonnet "Sunday Mornings" (Fig. 8) begins with some conventional comic strip symbols (such as a light bulb to represent a sudden bright idea), and moves on to less traditional marks to convey feelings without words. Such use of visual elements as a kind of emotional punctuation is a useful resource for the concrete poet; the special lettering that comic strips often use for words like "crash," "pow," or "gasp" are familiar examples of this device. John Bennett uses such stylized lettering to create an atmosphere in his poem "Shirt" (Fig. 9); the crude, labored letters produce an uneasy feeling of disorientation — in this case probably from drunkenness.

The besetting weakness of concrete poetry is triviality. The artist shows off a gimmick — an acrostic, a pun, the word doughnut written in the shape of a doughnut: so what? Once we have seen it and gotten the joke, the work is exhausted. A successful work of art, on the other hand, has an element of mystery or at least of complexity, something to draw us back to it, to "tease us out of thought." Herbert's "Easter Wings" avoids triviality first because its verbal content is substantial, and second because the visual effects work together in several ways. Not only do the stanzas suggest wings, corresponding to the idea of "rising," but the lines become visually shorter and then longer again as the words convey ideas first of diminution, then of expansion.
The works in Mary Ellen Solt's collection *Flowers in Concrete* achieve such a desirable complexity, simple though they seem. Her geranium poem (Fig. 10), at first glance merely a shaped poem in the form of a composite geranium blossom, is much more fascinating than that. In the center of the flowers an acrostic on "geranium" conveys a cryptic message: "God's exit resounds a capella no one interprets umbral measures"; then there is a second acrostic based on the last letter of each of the preceding words: "summer times summer answers each seen red silence." The circularity of the acrostics suggests cyclical repetition. The work invites repeated contemplation; it is not something one can put away quickly with the feeling that one has exhausted its possibilities.

Like any work of art, a good concrete poem should have some intellectual or emotional substance, even if it is on the surface humorous; it should touch some human experience or insight, rather than being merely decorative or clever. Even if no concrete poem ever reaches the pinnacle of poetic art, the medium still has its own integrity. Those who submit works to The Gamut's contest are urged to avoid the familiar (bottle-shaped poems, for example) and the epigrammatic (exploitation of a single pun or gimmick), and instead to strike out inventively toward new integrations of word and image, particularly in more extended, more complex creations.

— Leonard Trawick

BIBLIOGRAPHICAL NOTE


*Shaped Poetry*, a sumptuous portfolio of thirty typographic prints on fine papers (two of which are reproduced in greatly reduced size with this article) was issued in a limited edition of 300 (at $600 each) by the Arion Press in San Francisco, 1981.

A valuable, though uneven book of essays on this medium, by twenty-four different critics and artists, is *Visual Literature Criticism: a New Collection*, ed. Richard Kostelanetz (Carbondale: Southern Illinois University Press, 1979). Kostelanetz has done a great deal to promote visual literature in the past decade, through lectures, exhibits, and publications, including the more or less annual volumes which he and various co-editors have put out, called *Assembling: A Collection of Otherwise Unpublishable Manuscripts*, of which eleven numbers have so far appeared.


Kantor, Carol. See Rubenstein.


Lawry, Robert P. "Justice in Billy Budd." S&S 1982 (#6), 76-86.


This issue of The Gamut is set in Palatino type face. Typography by the Cleveland State University Graphic Services, Marian E. Sachs, Manager of Composition Services. Printed in Cleveland, Ohio, by the Schaefer Printing Company.

The Gamut logo was designed by John Pressello.
IN REPERTORY JULY 7 - OCTOBER 3

The Life and Adventures of
NICHOLAS NICKLEBY
by Charles Dickens/adapted by David Edgar (two parts)
London and Broadway dazzer!
40 actors in 250 roles tell an unforgettable tale

AS YOU LIKE IT
by William Shakespeare
A romantic comedy brimming with make-believe
and perpetual innocence

THE PLAYBOY OF THE WESTERN WORLD
by John Millington Synge
The masterful Irish comedy of great wisdom
and gorgeous language

PIAF: LA VIE! L'AMOUR!
A world premiere musical with Cleveland's own Gay Marshall
direct from Broadway's "A Chorus Line"

TICKETS NOW ON SALE
CHARGE BY PHONE: 771-3999; TTY 781-3146

GREAT LAKES SHAKESPEARE FESTIVAL
OHIO THEATRE / PLAYHOUSE SQUARE / CLEVELAND
Vincent Dowling, Producing Director