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Cleveland State University

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The Thin Man—p. 34

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William Powell and Myrna Loy with Asta in MGM's film, *The Thin Man*, based on Dashiell Hammett's book. See article by Dennis Dooley, p. 34.

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Dick Goddard

Weather Forecasting and Folklore

Noah might well be called the first of the weather forecasters. Ever since he built his gopherwood ark and sailed away in the deluge, man has been trying to duplicate his prognosticating feat—with limited success.

While you may not care about such things as isobars and the winds aloft, weather is something that will affect you almost every day of your life. Love it or curse it, you cannot ignore the weather.

It is also becoming increasingly apparent that the weather does not just play a part in how you will dress for the day. Medical researchers are discovering that the meteorological distribution of positive and negative ions in the atmosphere will determine the mental disposition of one out of four people. Such weather-sensitive people are subject to gigantic mood swings, from depression (caused by an overabundance of positive ions) to euphoria (when negative ions proliferate).¹

Contrary to conventional wisdom, some progress has been made in the business of trying to figure out what tomorrow's weather will be. But even the most dedicated and computerized meteorologist must admit that weather forecasting today is still as much art as science. The best forecasters frequently choose intuition over complex computer printouts. Such choices often come from the simple fact that computers don't have to answer letters from people who have just shoveled six inches of "partly cloudy" out of their driveways. While today's

weather computers spit out 50 million instructions each second, and one-half trillion computations are needed to produce a 10-day forecast, the immensity and complexity of Earth's constantly changing atmosphere can cause even a 24-hour forecast to come a cropper—as we all know.

A meteorological truism has it that the farther ahead the forecast predicts, the less accurate it will be. In places where there is a busy weather traffic pattern—such as north-eastern Ohio—the accuracy rate for a 24-hour forecast is close to 85 percent. Two-day reliability is about 75 percent. After the third day, unless there is an unusually persistent and dominant weather pattern, accuracy approaches the 50-50 probability of outright guessing. (To be considered accurate, a forecast calling for rain must be confirmed by the finding of "measurable" rain.)

Surveys taken by local television stations say that the public demands a 5-day forecast. To any dedicated meteorologist the 5-day forecast is as popular as a raspberry seed in a wisdom tooth, because such an extended forecast is subject to continual revision. Each day is predicated on the success of the previous day's forecast, so if the first day of a 5-day goes astray there is an excellent chance that the remainder of the forecast will also be off-target. So, while weather predictions today might still be categorized as little more than an educated guess by some, short-range reliability is high.

Dick Goddard is familiar to Cleveland television viewers as the weather forecaster on the WJKW-TV8 evening news. His training as a meteorologist came during the four years he spent in the United States Air Force (1951-1955), at the USAF Severe Storms Forecast Center in Oklahoma. He was also selected to forecast for the first hydrogen bomb test with the Atomic Energy Commission at Eniwetok. After his Air Force stint he worked for the National Weather Service at the Akron-Canton Airport, before becoming a Cleveland television meteorologist in 1961.

Goddard's original ambition was to be a cartoonist; to that end, he took a degree in art at Kent State University in 1960. He has not completely abandoned this first love. As is clear from the illustrations in the following pages, he has managed quite successfully to combine his dual interests in cartooning and meteorology.





Frankly Senator, we are on the verge of a major breakthrough.

The location of the forecaster, of course, has a great deal to do with his accuracy. Meteorologists in Yuma, Arizona, for example, can claim the highest accuracy rate in the United States. It's difficult to miss a forecast in Yuma, since the sun shines an average of 92 percent of the time during all daylight hours. If you're a meteorologist sensitive to public response, Yuma is the place for you.

Public acceptance of those who try to probe and predict the weather has been as painfully slow as the art of forecasting. As recently as 1916 a congressman proposed that the United States Weather Bureau (now National Weather Service) be abolished on the grounds that a man using a "sourwood stick" can be more accurate.²

The first to write scientifically about weather was Aristotle in about 350 B.C. His "Meteorologica" and the "Book of Signs" of his student, Theophrastus, served as the main texts on the subject for nearly two thousand years.

Like many ancient scriptures, the Bible contains a number of weather admonitions. Perhaps the oldest and most reliable of all is the familiar saying, "Red sky at dawning,

sailor take warning; Red sky at night, sailor delight." This is as valid today as it was nearly 2,000 years ago when (in Matthew, 16:2-3) it appears as "When it is evening ye say, It will be fair weather; for the sky is red, And in the morning, It will be foul weather to-day: for the sky is red and lowering."

Red skies, or blue, the key to precise weather forecasting will eventually be found in weather control. And therein lies the meteorological Catch-22. Progress in the control of weather (cloud seeding to augment rainfall, for example) has been slow and economically prohibitive. This is probably fortunate, for if any nation should gain such expertise, the ability to flood or make arid a rival country would become a weapon as pernicious as any nuclear device.

In lieu of weather control the success of long-range forecasting depends on the computer and its ability to match current conditions with previous weather patterns. The difficulty is that the National Weather Service was not founded until 1871, and complete weather records date only from the last few decades.

Now that we've established the limits of professional weather forecasting today,

where can we turn for even the slightest clue about the weather a year ahead? Or, just one season ahead?

Realizing that the American Meteorological Society casts a gimlet eye on such things as almanacs and woollybear caterpillars, should we disregard the art of folklore forecasting? How accurate are the almanacs? Certainly the average caterpillar exudes more charm than any computer!

As we shamle through the snows of another interminable northern Ohio winter, the autumn admonitions of the folklore forecasters are still fresh. In late September, Leon "Bad News" Bates, the sage of Birmingham, Ohio, warned that the woollybear caterpillars were abnormally dark, with the sable hues crowding the orange middle section into a thin, tight band. "A sure sign of heavy snow," lamented Bad News. To top it off the caterpillars were unusually fat and fuzzy, signaling a "hard, cold winter" (last winter, while most forecasts called for a relatively normal season, Bad News was one of the few who correctly presaged a long and abnormally cold and snowy winter).

This winter's edition of the *Old Farmer's Almanac*, using the arcane wisdom of a never-seen New Hampshire character named Abe Weatherwise, suggested that those who were preparing for a long, tough winter needn't waste their time.

"Not all that bad," prophesied Abe. Meanwhile, down East in Maine, the *Farmers' Almanac* (bitter rival of the *OFA*) proclaimed last autumn that this winter would be even worse than last. Caleb Weatherwise, the *Farmers' Almanac* answer to *OFA's* Abe, called for a rugged, abnormally cold and snowy winter across the entire northern por-

tion of the United States. For the record we should point out that the National Weather Service in late November offered its computerized, hedged estimate on a variety of winter weather conditions around the country. (For Ohio, above-normal temperatures were forecast along with above-normal amounts of rain and snow.) With so much of the winter still remaining, it's too early to determine whether the caterpillars or computers won this year's winter weather lottery. We should always remember one Paul Godfrey's warning: Nature bats last.

In considering the facts and fables of weather folklore, we should have a look at the vehicle that has preserved those pithy weather sayings and adages over the centuries: the almanacs.

Almanacs date almost from the invention of writing. One has been traced as far back as about 3000 B.C. in Egypt. The word *almanac* is apparently from an Arabic word meaning "calendar," but the first almanacs dealt primarily with astronomical calculations and seasonal changes. The heavenly happenings were combined with notations of feast days and even magic. Christopher Columbus used an early German almanac to aid his navigation to the New World. The second piece of literature printed in America (1639) was *An Almanack Calculated for New England*. Since then, hundreds of almanacs have come and gone. Benjamin Franklin was responsible for the most famous of American almanacs when he printed the first edition of *Poor Richard's Almanack* in 1733. For the next 25 years the almanac presented poems and sayings recommending that life be lived on what Franklin perceived as a high moral plane. Franklin invented an author, Richard Saunders (Poor Richard), and patterned his annual publication after England's famous *Poor Robin's Almanac*.

While Franklin's almanac was full of preaching, it was written with wit and general good humor. By the fifth edition, however, Franklin decided to answer critics who scolded the almanac for its inaccurate weather forecasts. In the 1737 publication, *Poor Richard* asked for "favourable allowance of a day or two either way" on his forecasts and, tongue-in-cheek, put a portion of the blame on the printer, saying that since he had a part in making the almanac he should at least share some of the criticism.



Perhaps the benchmark of weather-hedging was established in the 1664 edition of *Poor Robin's Almanac*. Poor Robin's forecast for February of 1664 read as follows:

We may expect some showers of rain this month, or the next, or the next after that, or else we shall have a very dry spring.

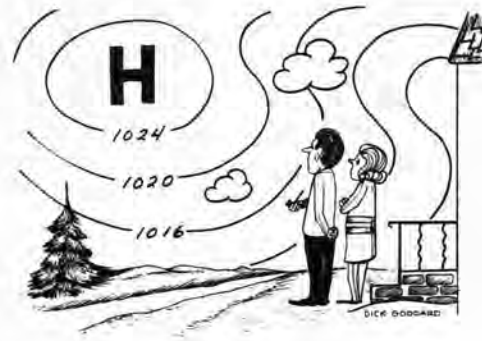
Robert Bailey Thomas founded the most enduring of the American almanacs, the *Old Farmer's Almanac*, in 1792. This year's edition is its one hundred and ninety-third. The *OFA* is supposed to have gained immortality by an incident which took place in 1805. The story goes that Thomas somehow neglected to fill in the weather for July 13, 1806, when he sent his copy to the printer. With the printing deadline at hand, and with no way of contacting Thomas, the printer decided to put down the most ridiculous weather he could imagine for that summer day: "Rain, hail and snow." The rest is legend. When people received their copies of the 1806 *OFA*, they no doubt chuckled at the absurd weather that was forecast for New England on July 13th. They couldn't wait for that snowstorm in the middle of summer. You guessed it. An incredible, freak storm struck Boston and New England on July 13, 1806, dropping rain, hail AND SNOW! And the *Old Farmer's Almanac* gained undying fame.

Many almanacs have accrued great reputations on just one such memorable forecast. Patrick Murphy, in his *Irish Almanac*, predicted that January 20, 1838 would be England's coldest day that winter. It was.

Murphy has a weather eye,
He can tell when'er he pleases
Whether it's wet or whether it's dry,
Whether it's hot or whether it freezes.¹

While most almanacs jealously guard their formulas for making weather forecasts, many admit to a combination of earthly and heavenly considerations.

Astronomical weather forecasting interested the seventeenth-century German scientist, Johann Kepler, and he advanced a number of theories for "predicting" the weather based on the alignment of planets. An astro-meteorologist, for example, would consider the planet Neptune to be "wet," Mercury "windy" and Jupiter "cold." When the three had an appropriate conjunction, that day on Earth would be wet, windy and cold. Although some astro-meteorolo-



gists have made astonishingly accurate forecasts far in advance, most of the time the planets have not cooperated.

In my early search for meteorological truth, I wondered why anyone with enough sense to pick a stone out of his shoe would want to slave over a 500 millibar chart when a forecast could simply be lifted from an almanac. So, for one year, with larceny in my heart, I plotted the accuracy of the almanac forecasts. The problem, of course, is that almanacs seldom deal in specifics, but use nebulous terms such as "changeable," "unsettled," "unseasonable," etc. It can be very difficult to pin down an almanac forecast. It soon became apparent to me that the almanac tends to be as accurate as you would like it to be.

A definitive study of almanac reliability was made a few years ago. In 1981 John Walsh and David Allen, research meteorologists at the Laboratory for Atmospheric Research of the University of Illinois at Urbana, issued the results of their 60-month study of the *Old Farmer's Almanac*.⁴ Forecasts of precipitation and temperature for thirty-two cities in the contiguous United States were analyzed from November of 1975 through October of 1980. Walsh and Allen concluded that the almanac's precipitation accuracy for the 60-month period was 51.9 percent. On temperature estimates the *OFA* guessed correctly 50.7 percent of the time. Considering that the rate of accuracy by outright guessing—e.g., whether it will rain or not—is 50 percent, the accuracy figures were unimpressive. An old Scandinavian saying seems to put things in proper perspective:

The almanac writer makes the almanac,
But God makes the weather.

Regrettably, a meteorological verity is that no one can infallibly forecast the winter, or any season, for that matter. The validity of that statement lies in another simple truth, for if anyone could regularly predict the onset and severity of winter, that person would be as rich as Croesus. Governments would be pounding on the infallible forecaster's door. He would be a constant companion at White House dinners. He would be a counsellor to kings. And you can bet your barometer that the infallible forecast would not be given away in almanacs, in the newspaper or on radio or television. The effect of weather on the national economy is staggering. To know in advance the degree of severity or mildness of winter would be worth billions to government and private interests.

In summary, your friendly, local meteorologist can regularly out-guess anything that flies, creeps or crawls. And those venerable almanacs, even though they might win on any given day, will also come in a poor second on short range, 1- to 3-day forecasts. It also follows that if you need a long-range forecast you might as well turn to an almanac, or to your neighborhood squirrel.

While we have not been able to evaluate the ability of flora or fauna to assay the weather a season in advance, we would be much the poorer if we neglected those folklore forecasts that have shown at least some short-range reliability.

Early man searched for the key to the prediction of storms and fair weather and drew conclusions based on the actions and appearances of animal and plant life. The belief was that animals and plants were much closer to nature than Man, thus more sensitive to weather changes.

Here are some of the more popular "signs" that supposedly portend a hard and snowy winter:

- Thicker than normal corn husks, or onion skins.
- Woodpeckers sharing a tree.
- Early arrival of the snowy owl.
- Early migration of the Monarch butterfly.
- Thick hair on the nape (back) of a cow's neck.
- Heavy and numerous fogs during August.
- Raccoons with thick tails and bright bands.

- Mice eating their way ravenously into the home.
- Early arrival of crickets on the hearth.
- Spiders spinning larger than normal webs and entering the home in great numbers.
- Pigs gathering sticks.
- Early seclusion of bees within the hive.
- Muskrats burrowing holes high on a river bank.
- Unusually abundant crop of acorns.
- Squirrels hyperactively gathering nuts in autumn.
- Woollybear caterpillars with tiny orange bands and abnormally thick and lush spines.

Such "rules" for weather based on animals or plants or the appearances of the skies were passed along from generation to generation, and many of the more popular took the form of rhymes or jingles:

**Ring around the sun or moon,
Expect the Earth to puddle soon.**

While a saying or rhyme simply resulted from repeated observations of nature, there was often a sound scientific basis for the conclusions. In this case, a ring or halo around the sun or moon is caused by sunlight, or moonlight, being bent, or refracted, as it passes through an ice crystal cloud, a cirrostratus. This type of cloud frequently appears in advance of a weather system known as a warm front. Rain and snow often follow within 12 to 18 hours after the ring develops.

Earlier we touched upon one of folklore's earliest, and most popular and reliable, aphorisms:

**Red sky at dawning,
Sailor take warning;
Red sky at night,
Sailor's delight.**

This maxim owes its scientific accuracy to the fact that a red-colored sky indicates dry weather to your west (dust particles in the atmosphere are filtering out the red spectrum). Since weather in the middle latitudes of the northern hemisphere moves from west to east, there is an excellent probability that the dry weather over the western horizon will be directly over you the next day.

Here are some other weather adages that hold more than a kernel of truth.

**When the wind is in the east,
'Tis neither good for man nor beast.**

South and east winds often precede a storm center that brings foul weather. North and west winds usually bring clearing skies and fair weather.

**Cow's tail to the west, the weather's the best.
Cow's tail to the east, the weather's the least.**
An animal grazes with its tail to the wind. This allows it to scent a predator from one direction and see it from the other direction. Remember, easterly winds often bring foul weather, westerly winds bring fair weather.

**When the glass falls low,
Prepare for a blow;
When it rises high,
Let your kites fly.**

A falling barometer foretells an approaching storm. A rising barometer indicates clearing skies.

**When teeth and bone and bunions ache,
Expect the clouds to fill the lake.**

Within our bodies there is a certain level of pressure. When atmospheric pressure lowers (ahead of a storm) our body pressure expands, causing sensitive areas to swell and hurt.

**When ditch and pond offend the nose,
Look for rain and stormy blows.**

Low, or light, air pressure that accompanies a storm releases ground odors that had been held against the Earth by high, heavy air pressure.

**The sharper the blast,
The sooner it's past.**

A sudden, unannounced storm often ends just as quickly. A storm long-foretold is slow to pass.

**It's a sign of rain or snow
When birds and bats fly low.**

The thinning air that precedes a storm makes it more difficult for winged creatures to fly. They tend to stay nearer the ground.

**When soot begins to fall,
The weather soon will squall.**

Chimney soot that had been held in place by high pressure becomes loose and falls as the air pressure lowers. Chimneys were the barometers of the early-American home.

**When dew is on the grass,
Rain will never come to pass.**

Heavy dew at night will occur under a clear sky. Rain is unlikely the next day.

**Trace in the sky the painter's brush,
The winds around you soon will rush.**



When wispy, feather-like cirrus clouds give way to lower and heavier clouds, rain or snow often follows.

**When clouds appear like rocks and towers,
The Earth's refreshed by frequent showers.**

In summer the towering cumulus (cotton ball) clouds frequently build into afternoon rain showers.

When high clouds and low clouds do not march together,

Prepare for a blow and a change in the weather. Clouds moving in different directions signal the advance of a weather front, or line of weather change. Foul weather follows.

**Near the surface quick to bite,
Catch your fish when rain's in sight.**

Fish tend to bite more readily before a storm than after, when the water becomes roiled.

**Pimpernel, pimpernel tell me yet,
Whether the weather be dry or wet.**

The pimpernel plant closes its petals when the humidity nears eighty percent. Such high, or rising, humidity often precedes rain.

Even with the help of folklore and modern scientific know-how, we must conclude, alas, that there may never be anything such as a "guaranteed" weather forecast. In spite of radar, satellites and computers, a forecast today can only be an estimate of probability. And we will continue to occasionally awaken to that six inches of partly cloudy. The following quatrain (by Grantland Rice) sums up the dilemma of the weather forecaster:

And now among the fading embers,
These in the main are my regrets:
When I'm right no one remembers,
When I'm wrong no one forgets.

One of the most charming and perceptive poems about the folklore of weather was composed in the eighteenth century by Dr. Edward Jenner, the English physician who formulated the first successful vaccination for smallpox:

SIGNS OF RAIN

The hollow winds begin to blow,
The clouds look black, the glass is low;
The soot falls down, the spaniels sleep,
And spiders from their cobwebs peep.

Last night the sun went pale to bed,
The moon in halos hid her head;
The boding shepherd heaves a sigh,
For see, a rainbow spans the sky.

The walls are damp, the ditches smell,
Closed is the pinkeyed pimpernel.
Hark how the chairs and tables crack!
Old Betty's nerves are on the rack.

Loud quacks the duck, the peacocks cry,
The distant hills are seeming nigh.
How restless are the snorting swine,
The busy flies disturb the kine.

Low o'er the grass the swallow wings,
The cricket, too, how sharp he sings!
Puss on the hearth, with velvet paws,
Sits wiping o'er her whiskered jaws.

Through the clear streams the fishes rise,
And nimbly catch the incautious flies;
The glowworms, numerous and bright,
Illumined the dewy dell last night.

At dusk the squalid toad was seen,
Hopping and crawling o'er the green;
The whirling dust the wind obeys,
And in the rapid eddy plays.

The frog has changed his yellow vest,
And in a russet coat is dressed;
Through June, the air is cold and still,
The mellow blackbird's voice is shrill.

My dog, so altered in his taste,
Quits mutton bones on grass to feast;
And see yon rooks, how odd their flight!
They imitate the gliding kite,
And seem precipitate to fall,
As if they felt the piercing ball.

'Twill surely rain, I see with sorrow,
Our jaunt must be put off tomorrow.



We never had this kinda weather till they started sending those rocks up!

NOTES

¹Richard Wolkomir, "Weather: The Powerful Influence It Has on Us All," *Family Weekly*, April, 1977.

²Dwight Boyer, "Dick and Those Weather Woolies," *The Plain Dealer Sunday Magazine*, Nov. 3, 1974, p. 34.

³Albert Lee, *Weather Wisdom* (New York: Doubleday, 1977), p. 161.

⁴John E. Walsh and David Allen, "Testing the Old Farmer's Almanac," *Weatherwise*, October, 1981, p. 212.

Arthur H. Benade

The Evolution of Woodwinds

Woodwinds—the family of musical instruments that includes the oboe, bassoon, clarinet, saxophone, flutes, and recorders—can be traced back in history for thousands of years. An abrupt and revolutionary change took place in their acoustical design, however, in the course of just a few years around 1700. As a result, woodwinds attained a condition of excellence that has proved to be remarkably stable over the past three hundred years. They have served as models for the evolution of all wind instruments that have since been invented.

After the first revolution in design, there was a period of refinement and stabilization during the eighteenth century; a certain amount of mechanical elaboration took place in the thirty-year span straddling 1800, but this did not radically change the basic nature of the instruments. In the mid-nineteenth century, however, a second and very significant revolution led to an extensive “rationalization” of the air columns of all the woodwinds along with a considerable revision of the key mechanisms used to control an increased number of tone holes. These

new designs gave players considerable advantages without introducing serious new problems, and with little or no cost in responsiveness and musical flexibility.

All of our present instruments turn out to be the direct descendants of those developed by the mid-nineteenth-century revolutionaries, but many of them have, regrettably, suffered from a certain amount of “negative evolution” as the result of well-intentioned but ill-informed modifications. Consequently, many passages that performers find taxing on today’s instruments were considered perfectly straightforward or even pleasurable by the players for whom the music was originally composed. It is only very recently that some composers have come to feel that they need not concern themselves with the problems a musician meets when actually performing their works. In an earlier era, it was brutally necessary to the composer’s livelihood that a musician should be able to perform dependably and with a certain degree of elegance!

Today, following half a century of near-stagnation in instrument development, re-

*Arthur Benade describes as a sort of revelation his discovery, at the age of fifteen, of a book called *The Science of Musical Sounds* by Dayton C. Miller (then head of the Physics Department at what was the Case School of Applied Science). From that time on he would combine his two great interests: physics and music.*

*Though born in Chicago of American parents, he grew up in Lahore, India (now Pakistan), where his father taught physics at the university. After serving in the Air Force during World War II, he received an A.B. from Washington University in St. Louis, and went on to earn a Ph.D. there with a thesis on cosmic rays. In the same year (1952) he joined the faculty of Case Institute as a nuclear physicist. He is now a professor of physics at Case Western Reserve University and for the past twenty-five years has devoted himself to research in acoustics. An internationally-known expert on the physics of musical sounds, he was recently awarded the Silver Medal of the Acoustical Society of America. Benade is a Fellow and past vice-president of the Society and a past president of the Catgut Acoustical Society (for stringed instruments); and he serves on the technical advisory committee for Pierre Boulez’s Institut pour Recherche et Coordination Acoustique/Musique in Paris. He plays several musical instruments and has himself designed and constructed a number of instruments embodying his insights. He is author of numerous articles and two books, *Horns Strings and Harmony* (1960), and *Fundamentals of Musical Acoustics* (1976). (Photo Herbert Ascherman, Jr. The diagrams are by Professor Benade.)*



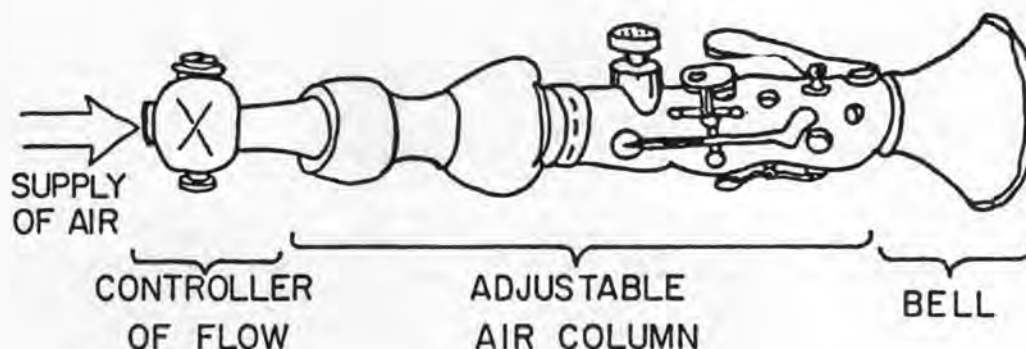


Fig. 1. Schematic, "generic" woodwind, showing main parts.

cent acoustical research has begun to elucidate the nature of the original revolution and of the later evolutionary processes. Scientists, musicians, and instrument makers have begun to collaborate to find practical ways of bringing more of the virtues together in a single instrument than had been heretofore considered possible.

What Makes An Instrument Excellent

Before discussing improvements in instrument design, we need first to ask just what virtues are required in an excellent instrument. According to the musician, then, an excellent wind instrument

1) must "sing" with a full, clear, "centered" tone that carries well in an ensemble and yet blends with other instruments.

2) must permit a variety of clean and easily controlled ways to start and end notes.

3) must possess a readily controllable range of dynamics (from soft to loud).

4) must have a playing pitch that remains reasonably stable over a wide range of dynamic levels and during player-controlled variations in tone color.

5) needs to have a well-defined pattern of intonation and yet permit flexibility of pitch so that the player can adjust his notes to agree with the ever-changing chordal requirements of the music.

6) should respond with good "resistance," which means that it will require large muscular movements to achieve small musical effects, in order to give the player easy control of nuances and to protect him from small accidents caused by maladjustments in

his embouchure (lip position) when he is playing under stress.

7) ought to have a suitable tone color to match the stylistic purposes of the composer and music.

Our list is arranged in order of decreasing importance: it starts out with qualities that a good instrument *must* have, and it ends with an item that it *ought* to have. These are all virtues that permit the musician to concentrate on the music itself, liberating him from the task of fighting with an untrustworthy or recalcitrant instrument. It is perfectly true that a fine player *can* give a beautiful performance on a poor instrument. But the high prices performers pay for instruments remind us that, even for professionals, music-making is an exacting task. The additional burden imposed by a poor instrument must inevitably take a toll on even the most skillful performance.

What Is a Wind Instrument?

When a physicist looks at a wind instrument, he distinguishes the essential features shown in Figure 1. The production of a musical tone begins when the player provides a supply of compressed air to the instrument's reed system. The reed functions dynamically as an air flow controller, working with the air column downstream from it to set up vibrations that we hear as a musical tone. The air column, which is adjusted by the player's fingers operating on keys and tone holes, is normally terminated by some sort of bell-shaped opening.

There are two major families of wind

instruments—the woodwinds and the brasses:

1. A woodwind is recognized by the fact that its air column is adjusted by a sequence of tone holes that are opened or closed in various combinations to produce the desired notes. The oboe, clarinet, saxophone, bassoon, flute, and baroque cornetto are all recognizable as members of this family.

2. In a brass instrument the air column continues from mouthpiece to bell uninterrupted by any opening; the air column is modified only in length by the insertion or removal of segments of tubing into the bore by means of valves (as in the trumpet or horn) or by means of a sliding extension of the sort found on the trombone.

The Air Reed or Controller

The sound production in all wind instruments is a cooperative process in which the air flow controller works under the influence of a *set* of acoustical disturbances within the air column. The generic term *reed* applies to three major types of flow controllers:

1. The *cane reed* is used on the clarinet and saxophone (single reed), and the oboe and bassoon (double reed), to name only the most familiar instruments. Both the double and the single types of cane reeds share the dynamical property that the valve tends to *close* when the air pressure is increased in the player's mouth or decreased within the reed cavity or mouthpiece.

2. The *lip reed*, or vibration of the player's lips in a mouthpiece, normally used on brass instruments and on the cornetto, is the second major type of flow controller. Here the valve tends to *open* under the influence of a pressure increase in the player's mouth or a decrease in the mouthpiece.

3. Flutes, recorders, and most organ pipes are sounded by a third type of controller that may aptly be described as an *air reed*. The vibration is produced not by the action of cane reeds or lips, but by an air jet whose path is deflected rapidly in and out of an aperture at one end of the air column by the *velocity* of the air that is oscillating up and down within the length of the governing air column.

It should be emphasized that the nature of the flow controller itself (while very important) does not distinguish the instru-

mental families. Thus, the cornetto, though excited by a lip reed, uses typical woodwind tone holes, and was traditionally the property of the oboist or recorder player. Sounding a clarinet by buzzing one's lips at the upper end of the barrel joint gives rise to perfectly recognizable clarinet-like sounds (despite the absence of a cane reed).

The Air Column or Oscillator

It will help us to visualize the oscillations of the air within an air column of a wind instrument if we consider the analogous motion of water in an elongated channel. Figure 2a shows three modes of "sloshing" that are possible for the water in a uniform channel closed at both ends. The first diagram illustrates the simplest of these motions, which has a periodic alternation of water height at the two ends of the channel. The second diagram shows the next more complicated mode of motion, in which the water alternately piles itself up in the center and then at the ends of the duct. This oscillation repeats at a more rapid rate than the first, but we must not assume that it will always oscillate at precisely twice the rate of the first mode; this will only be true for a particular variation in the depth of the channel. The third diagram shows a yet more elaborate (and still higher frequency) mode of oscillatory motion. We can see from these diagrams that the water height at the ends of the channel rises and falls in synchronism with the vertical motion of the water at certain other positions along the channel.

Clearly the increase and decrease in the *water depth* at any point is correlated with an increase and decrease in the amount of water that is present at that point. In an exactly similar way we can recognize that the rise and fall of *air pressure* at some point in a musical air column is associated with the inflow and outflow of air to and from this region in relation to the neighboring parts of the air column. Like the water channel, an air column possesses a large number of *modes of oscillation* each having its own complexity of motion and its own characteristic natural frequency.

Figure 2b presents what might be called a "water trumpet": a channel of varying depth is supplied with a float that can operate a flow-control valve. Like a cane reed, this valve permits a flow of water into the

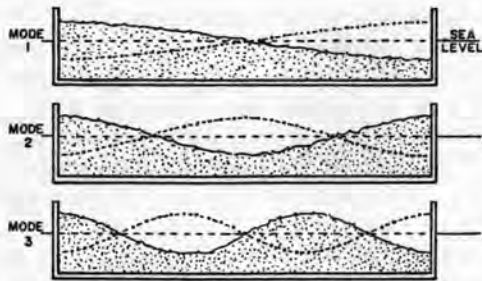


Fig. 2a. Possible modes of back-and-forth sloshing of water in a uniform channel.

channel end whenever the water level there is high and shuts it off when the level is low. Such a mechanism would be able to maintain the oscillation of *any one* of the vibratory modes of the water. There is, however, a complication, one that is crucial to real wind instruments as well as to our hypothetical water trumpet: each smooth rise and fall of the float gives rise to an abrupt *pulse* of injected flow. This impulsive excitation will start all of the oscillatory modes going in the water column at the same time. We come now to the essential feature of our dynamical system. If the various modes of the water (or air) column have *irregularly* related characteristic modal frequencies, the succeeding swings of each mode will then "request" a different pulse rate from the flow control valve, resulting in chaos! The flow controller might well say, "I can do nothing until all of you modes agree amongst yourselves about the actions you are asking me to carry out."

Suppose, on the other hand, that the water or air column shape is cleverly chosen in such a way that all of its characteristic modal frequencies are in exactly (or very nearly)

whole-number relation to each other. Suppose for example that modes two, three, and four like to oscillate at frequencies that are almost precisely double, triple, and quadruple the frequency preferred by mode one. Under these conditions the action becomes regular. Mode 1 will call for the valve to open once during the cycle of its oscillation, mode 2 will call for two such openings in the same period of time, while modes 3 and 4 will make "requests" for three and four such openings. All this will provide the valve with one strong request for a flow pulse (produced by the synchronous arrival of requests from all the modes) plus a sequence of rhythmically consistent lesser requests from the higher-numbered modes. We have now deduced the essential secret of a successful musical oscillator: the flow controller must be operated *cooperatively* by a set of synchronized characteristic air column modes.

Now the next step in understanding how wind instruments operate is to learn what happens in their air columns. Let us consider how someone in the laboratory might go about measuring the pressure response of an air column to a carefully controlled externally applied flow whose repetition frequency is varied smoothly over a suitable range. Figure 3a shows an easily visualized and perhaps familiar experiment. A loudspeaker (source) is placed somewhere in a room and is driven by a variable-frequency oscillator. This combination is simply a means for stimulating sound vibrations in the room by means of an oscillatory flow signal. At some other point in the room we place a microphone (actually a rapid-acting pressure-measuring device), which turns the

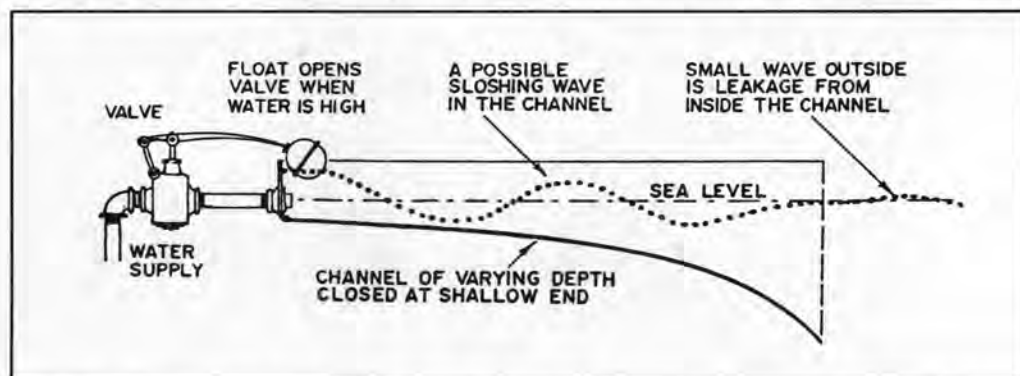


Fig. 2b. A "water trumpet" showing how the water level (or air pressure) can control a flow control valve to maintain oscillation.

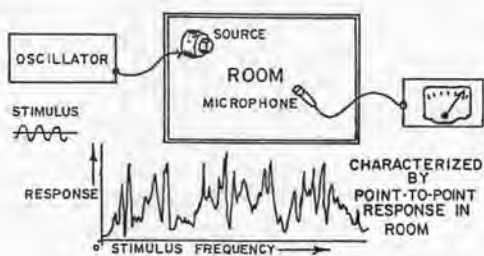


Fig. 3a. Prototype experimental set-up to illustrate the response curve in a room, as the frequency of the stimulus (source) is varied.

sound vibrations back into an electrical signal. The electrical signal from the microphone can then be recorded on a moving strip of chart paper to show the strength of the pressure disturbances at the microphone position that result from a flow stimulus applied to the room air at the position of the loudspeaker. As the frequency of the tone from the loudspeaker changes, the strength of the response in the room will change because of the room's natural frequencies, determined by the size and shape of the room.

Figure 3b illustrates an exactly similar set-up, in which the boxlike volume of a room is replaced by the elongated volume of an instrument air column. As before, we have an oscillator-driven excitatory flow source, this time located at the mouthpiece end, where the reed normally supplies the excitation. We have also a supervisory microphone, now located inside the mouthpiece, where it measures the pressure variation that in a wind instrument has the job of "instructing" the reed. The resulting response curve shows peaks located at the characteristic

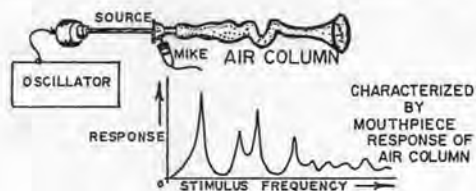


Fig. 3b. Apparatus analogous to the set-up in 3a, this time measuring the pressure response of a wind instrument driven at the "blowing end" by a stimulus with a known variable frequency. The resultant response curve tells a great deal about the playing behavior of the instrument.

("natural") frequencies of the air column modes, with the tallness of the peaks giving a quantitative measure of the responsiveness of these modes to a flow excitation applied in the mouthpiece. Response curves of this sort can readily be obtained in the laboratory for the air column used to play each of the separate notes of the instrument's scale, and these may be read like a book to learn the instrument's oscillatory virtues and faults for these notes.

Figure 4 shows schematically some of the features of all woodwind air columns and indicates some of the information we can gain from them. The diagram shows a response curve having three response peaks, which means that our system possesses three modes of oscillation whose characteristic frequencies are determined by the basic shape of the air column. (Woodwind air columns normally show four such peaks when essentially the entire length of the air column is in use (holes covered), and two of them when most of the tone holes are open.) As is normal, the first (i.e., lowest-frequency) peak is the tallest, with the other two being progressively less tall, and at high frequencies the response curve is somewhat squiggly but quite low and lacking in significant peaks. The sloping dashed line drawn across the entire diagram indicates the ability of the reed to maintain oscillation at some frequency determined by the position of an air column peak. Oscillatory energy can be generated jointly by the reed and a response peak if the tallness of this peak puts it above what is aptly called the *breakeven line*. We see that the first three air column response peaks would separately be able to keep themselves in oscillation by instructing the flow control valve (the reed), and so they can all participate in the *cooperative* production of oscillatory energy.

The next question is, how will these modes set about cooperating, and what will they settle on for the frequency of their joint operations? In such a situation, if the player blows very gently, the oscillation will take place at the frequency of the tallest response peak, which in our example is at 200 Hz (about the pitch of the G string on a violin), and the sound produced will be a very soft and breathy humming sound. If the player blows with increasing air pressure, the second peak will join the proceedings by oscil-

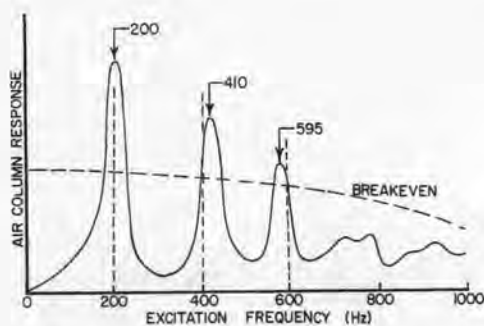


Fig. 4. Diagram of a response curve for a given air column, showing greater response (peaks) at certain frequencies than at others. Peaks taller than the breakeven line "negotiate" with the reed to determine the tone produced. If the peaks are not quite in whole-number relationship to one another (as shown), the pitch will drift as the instrument is played louder or softer. It may also start poorly, and tend to choke up, or to have wobbly pitch.

lating at double the tempo of the main vibration, and the tone will begin to "fill out" and acquire some semblance of musical character. Note that, in our example, the frequency of peak two is given as 410 Hz, slightly more than double that of the first peak. When both peaks are working together, peak 1 has a strong vote for sound production at 200 Hz, while peak 2 indicates a preference for something close to $410/2 = 205$ Hz. It turns out that the two peaks and the reed will "negotiate" under these conditions and settle for something a little above 200 Hz, but not quite 205 Hz. After all, the dominant peak pretty much tends to get its way! In other words, the softly played 200-Hz oscillation rises a little in frequency when it is played more loudly. As the player blows more strongly yet, peak 3 enters the "discussion." In our example, however, it votes for a frequency of $595/3 = 198.3$ Hz. The playing pitch will therefore fall a little, and the note will become a little unclear and a little unsteady. The reed is trying to function with some mildly inconsistent instructions.

This imagined experiment suggests physical explanations for some common observations about the behavior of woodwinds.

1. Pianissimo (very soft) playing normally gives a smooth, colorless, cooing

sound. The relative placement of the upper-response peaks has no influence.

2. The tone fills out as the player blows harder, but the playing pitch will try to drift sharper or flatter during a crescendo (increase in loudness) as the upper peaks gain influence one by one if they are not precisely aligned in whole number relationship.

3. Not only does an instrument try to drift in pitch during crescendos when its response peaks are not accurately aligned, but also it proves (through the workings of some very complicated physics) to be slow and somewhat hesitant in the way it starts notes played at a medium (mezzoforte) level.

4. When blown vigorously, an instrument constructed so that the response peaks are poorly aligned is prone to "choking-up" of the reed, coughing, or "flying off" to some new and peculiar screech.

5. A misaligned instrument also tends to be hard to blow, wobbly in maintaining a note, and unwilling to submit to any of the small adjustments needed by the player for his finer efforts.

Some Musical Implications

We now have an explanation for the tendency of low-register clarinet tones to drift sharp during a diminuendo (a pitfall noted in every orchestration book since Berlioz!), and for other pitch vagaries that may afflict the wind departments of an orchestra. We can also understand why an instrument may be a balky starter, likely to choke off during a diminuendo, unresponsive, and taxing to play, and why an instrument may be unreliable when the player tries to raise or lower the pitch by adjusting the reed, or when he tries to play louder or softer by altering the blowing pressure. In short, once the physicist (with a little help from his musician and craftsman friends) has gotten scientific hold of the vibration physics of a wind instrument—what he might call a nonlinear, self-sustained oscillator having several degrees of freedom—he is able to diagnose almost the entire litany of faults that it can have, and at the same time provide many clues for remedying them. He can also throw some light on the historical development of instruments as a possible guide for their improvement today.

Our discussion thus far has focused on the instrument itself, but of course the player

himself has a large role in the successful production of musical sounds. What has already been said about instruments can help clarify the general nature of two major resources available to the player for producing excellent sound:

1. The player is himself possessed of an air column, extending from his lungs into his mouth, whose shape is susceptible to extensive modification at its upper end via motions of the mouth, tongue, and throat muscles. The response peaks of this adjustable air column can influence ("talk to") the reed on its upstream side in exactly the ways that the column of a clarinet (etc.) may "talk to" the reed on its downstream side. We find that a skillful player can then arrange to put his own response peaks in positions that best collaborate with whatever is provided by his instrument.

2. By changing pressure and position of his lips on the reed, the player can modify not only the reed's shape and volume but he can also shift its own characteristic frequency of best response to align it usefully with some multiple of the playing frequency, so that it can participate stably in the cooperative generation of sound.

These things have long been known to the best players, but they have not been talked about much. In our culture, indescribables (especially scientific indescribables) have always been given an absurdly second-class status, despite the fact that it is from these that our geniuses have derived nearly all scientific insights.

The First Revolution: 1680-1700

Before about 1680, European woodwinds as a group were soft-spoken and fundamentally rather unstable. The flutes and recorders of the day had a charming dovelike sound, with somewhat limited resources in dynamic level, tone color, and range of playing pitch. A skillful player *could* play wonderfully well on them, but most of the variety of sound that one might wish in a musical performance was provided by employing a series of instruments built in different sizes to provide an overlapping sequence of playing ranges. Tonally, the instruments lacked what musicians call "carrying power," distinctness, or definition. That is (quite aside from questions of loudness), one could not readily follow the voices of individual instruments in

an ensemble. The instruments would blend wonderfully well, but intertwined melody lines were practical only by orchestration using some method of "each take his turn." We can now explain the weakness of these late Renaissance instruments: their air column response peaks were not very well aligned.

One of the many remarkable features of the court of Louis XIV (1643-1715) was the presence, besides composers such as Couperin, of skilled groups of performing artists who were given the time not only to practice and rehearse but also to think deeply about their instruments and even to manufacture them. Some members of the group built instruments and supplied them to their colleagues. A few instruments were also sold to musicians outside the privileged ranks of the court, who of course wanted the finest instruments they could get, and who no doubt also wanted to be able to say that they played on instruments "just like those of the royal establishment."

Among the musicians attached to the Sun King's court was a most remarkable family, the Hotteterres. It fell mainly (but not exclusively) to members of this family to discover empirically the advantages conferred on the performer when he could use instruments having well-aligned response peaks, and thence to evolve the familiar instruments of the Renaissance into the sturdy, vigorous, full-toned, and flexible instruments of the Baroque era. They also wrote books explaining how to play effectively and describing the subtleties of style and phrasing as practiced at court.

The new designs for the flute, recorder, oboe, and bassoon simply took over the European musical world. As a matter of fact the focus of improvement of the new designs moved very quickly to Germany. The Gensers of Dresden were prominent in these refinements, and the process went so far and so fast that even Jacques Hotteterre joined the rest of Europe in referring to one new instrument as the *German flute*! This was an era when major composers were first able to demand as much musically from their wind players as they were accustomed to getting from singers and the performers on string and keyboard instruments. No doubt some performers enjoyed, and some resented, the added musical responsibilities laid on them.

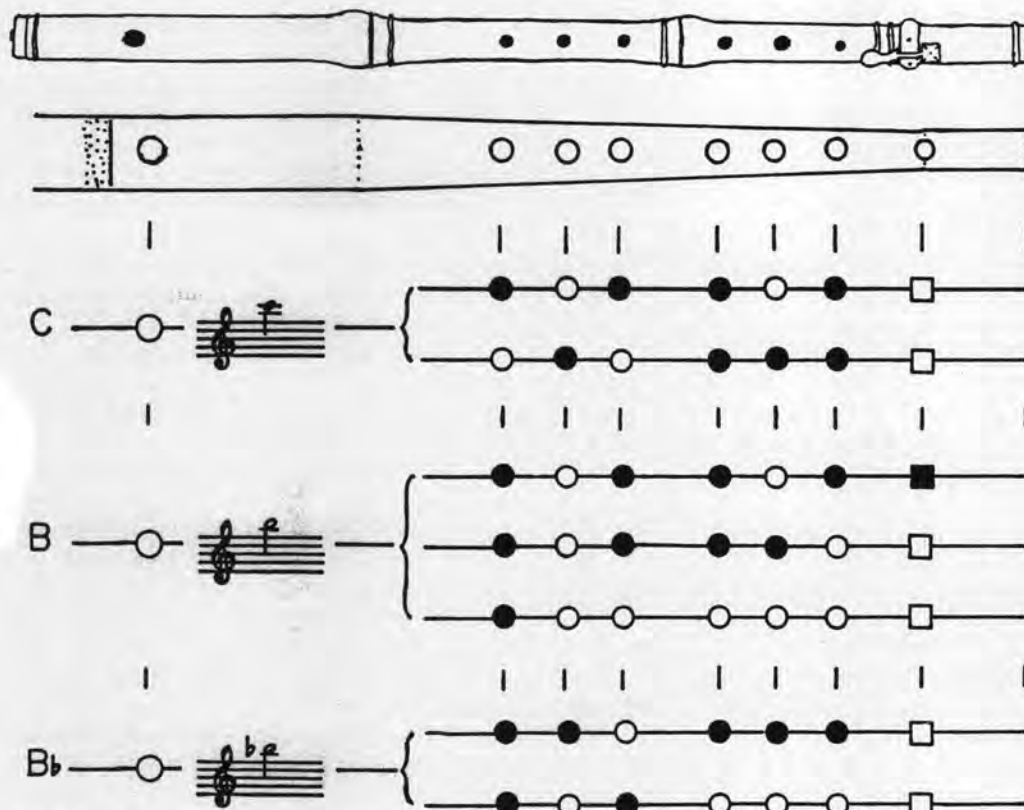


Fig. 5. Top: General appearance of the Baroque flute: instruments like this were still common at the time of Beethoven, and manufacture continued through the end of the nineteenth century. The embouchure hole is at the left, six tone-holes in the middle, and a single key at right.

Middle: Diagram to show the cylindro-conical shape of the air column of such flutes.

Bottom: Examples chosen from many possible fingerings available to the player for playing C, B and Bb in the second octave of this flute's range. Fingerings such as these remained a part of many flutists' technique through the first decade of the 20th century. The black dots indicated closed tone holes; circles are open holes.

Though the actual modifications to some instruments would be too complex to explain here, it is easy to outline the revolutionary modification made to the recorder and the flute. Up through the Renaissance, both made use of a cylindrical air column, excited at one end by a flow controller of the air-reed type. Laboratory measurement and straightforward calculation shows that when such air columns are provided with tone holes, their response peaks are misaligned with an error amounting to two or three percent relative to the whole-number relationship needed for perfect cooperation. The situation was in fact worse, because the cooperation of the response peaks deteriorates further as the vigor of blowing increases. Some shrewd and as yet untraced

experiment suggested to a genius among the Hotteterres that an air column that starts out at the blowing end as a nearly straight cylinder but then changes into a cone of progressively decreasing diameter would provide a good basis for a strong-voiced, responsive instrument. Once this insight was obtained, it was then a matter of hard, systematic work to refine the air column proportions and their relations to the tone hole positions, and to the tone holes' sizes and chimney heights (i.e., the thicknesses of the wood through which they are drilled). By 1730, patience, skill, and intelligence had carried out refinement at many places in Europe. We need here only add the names of the Stanesbys in London and the Grensers of Dresden to indicate the international nature of the work.

The top part of Figure 5 shows schematically the shape of the air column and the general positions of the seven tone holes that are found on a Baroque flute. The bottom hole is controlled by a key, operated by the right little finger. Opening the finger holes one by one gives the D-major scale. All other notes used in the familiar key-signatures of the day (i.e., mostly with three or fewer sharps, two or fewer flats, and rarely one additional sharp or flat) can be played by using various combinations of open and closed holes. On a mature Baroque flute almost all of the notes of the chromatic scale *can* be played one by one in tune with a full and steady tone, at least in music of moderate tempo. Many alternate fingerings are available, each with its own pitch of best and clearest tone, so that a skilled player governs his choices by the exigencies of true tuning within the chords of his ensemble.

The lower part of Figure 5 shows *some* of the alternative fingerings available for producing the notes B \flat , B, and C above the treble staff. Because a very large number of the fingerings belonging to this flute have their close analogues for the recorder, the oboe, and the bassoon, it is worth while to take a moment to see how the player might use these fingerings. Notice that almost all of these are what are sometimes called *long fingerings*, i.e., a lot of the air column is brought into play in order to assure a certain steadiness of purpose on the part of the air column in its negotiations with the flow-controlling reed.

Players tend to consider the relative pitches during *transitions* between notes as being nearly as important as the absolute pitches of one or the other member of the pair. For example, in some places the music might call for a wide semi-tone step between B and C, leading the player to use the third of the B choices in Figure 5 played next to the first of the C choices (he must of course ensure that both of the notes are properly tuned relative to the other performers). A narrow B-to-C transition might on the other hand be played using the first of the B's and the first of the C's. Nothing has been said here about the relative sharpness and flatness of the note pairs, but there are numerous choices beyond those indicated, so that a resourceful and self-respecting player can always find his way to perfection *provided the music does*

not go too fast! Things are not so straightforward when rapid music is to be played. However, a thorough knowledge of practical music theory (and informal psychoacoustics) can almost always lead to an acceptable result, since all that is necessary is to get the *important* notes of a passage in accurate tune with their context, and keep the remaining ones plausible. The listener will find this very acceptable, and frequently remains unaware of the artifice.

When modern instrumentalists play on Baroque instruments, many problems are likely to arise, some of which come simply from inadequate knowledge of performance practice and instrumental properties. Intensive scholarship over the past three or four decades has begun to remedy a considerable part of this lack. Another problem has been lack of appreciation of the fact that it has always taken ten to thirty years for anyone to acquire true mastery of any instrument, and it is a rare player who can find the time to attain equal skills on both an old- and a new-style instrument. The problem is aggravated by many people's tendency to think of the early instruments as being crude and imperfect, instead of realizing that they long ago proved themselves worthy of the serious attentions of some of the world's greatest composers.

Older pieces of music played on the bowed strings and the keyboard instruments have usually had at least passable performances, because their basic nature has not been violently changed. Their players had to adapt, rather than to relearn completely. It is significant that in our century the recorder was the first of the Baroque instruments to be graced with adequately prepared performers, probably because it had no distracting modern counterpart, and people had to learn it on its own terms. Today one simply expects to hear the recorder as a sturdy, active member of the musical world. The Baroque flute has been much less fortunate. For many years Leopold Stasny of the Vienna Concentus Musicus was almost alone as an expert player of this instrument; today we have Barthold Kuijken of Belgium and David Hart of the U.S. with a significant number of others soon to join them.

Listeners may recognize a good Baroque flute well played by several characteristics:

1. All of the notes (even the lowest) start very quickly and cleanly, whether tongued or slurred. This is true also for the recorder. The measured startup times tend to be about half that of the modern Boehm flute.

2. The tone of essentially all notes (except the very highest ones) is full and round, and it is well heard in the ensemble. The modern listener is struck by the fact that the lowest notes fall only a little in strength relative to the mid-range notes.

3. Tuning can be very excellent, but only if the player is skillful and if the tempo is moderate. Faster tempos and chromatic passages can be extremely hazardous, even when all artifices are employed.

4. Large and small skips in pitch are not only easy, but effective. Even the downward drop of an octave and a half to low D is safe, being found even in music for amateurs. Modern players have been known to assert ignorantly, on the basis of such skips, that a certain composer "did not understand the flute."

5. The playing range extends from the D below the treble staff up to, with good comfort, the D two octaves above. Up to G is possible, and Bach (only once!) demands a most risky high A.

The Baroque oboist found his life very much more secure than did the flutist. While the mechanical resources of the oboe were little different from those of the flute, the player was blessed by the fact that the cooperative stabilizing effects of the double cane reed are enormously strong compared with those of the flute's air reed. Also, the adjustability of the player's personal windway gives him many more chances to enjoy the virtues of his instrument and to overcome its weaknesses. His playing technique and his problems are very similar to but less difficult than those of his flute-playing colleague. Hence the predominance of the oboe over the flute in the musical literature of the era. In the Baroque oboe,

1. the tone is smooth and full, with flexible dynamics for all notes from the bottom B below the staff up to at least the D above the staff.

2. articulated and slurred notes are quick and clean, as is true of the modern oboe as well. The Baroque oboe has the advantage, however, at lower dynamic levels

for the low notes.

3. enormous skips of pitch both up and down are as easy and safe on the oboe as on the flute.

The Baroque bassoon has similar qualities, for obvious reasons.

Today we are blessed with a number of superb performers on the old oboe and bassoon. Earliest among the oboists in time and first in musical polish is Jürg Schaefflein and the colleagues he has trained in the Vienna Concentus (there is good reason for Vienna to have bred the first of the fine Baroque oboists, as we shall see very shortly). Closely following these artists is the Swiss musician Michel Piguet, whose tone differs far more from the Viennese on records than it does in live performance. We must turn again to the Vienna Concentus to hear Milan Turkevitch's elegant, precise and fluent performance on the Baroque bassoon.

Evolution Into the Classical Period (Mozart-Beethoven)

During the latter half of the eighteenth century, the woodwinds not only matured in the perfection of their acoustical balance and the sophistication of their players, but each also added a number of mechanical keys as an adjunct to the finger holes. The player did not give up the best of the older long fingerings as the keys were added, but relied on keys mainly as emergency devices for quick music.

Although flutes with four to six keys were common by the end of the eighteenth century, essentially all of Mozart's writing for the flute could be (and frequently was) played on a one-keyed instrument, whose tone holes had shrunk a trifle from Baroque days as part of an acoustical re-proportioning that greatly improved the ease of playing high notes while not harming the low notes.

Mozart's oboe writing, on the other hand, depended on an instrument that was obviously fluent and dependable. Though it might seem little different from the Baroque one, this early classical oboe had different proportions for the bore and tone holes, and one or two additional keys—all of which enhanced the virtues of the earlier version and took care of its weaknesses.

Mozart's (justifiable) trust in the abilities of the classical bassoon is well demonstrated by the tumbling rush of notes in the

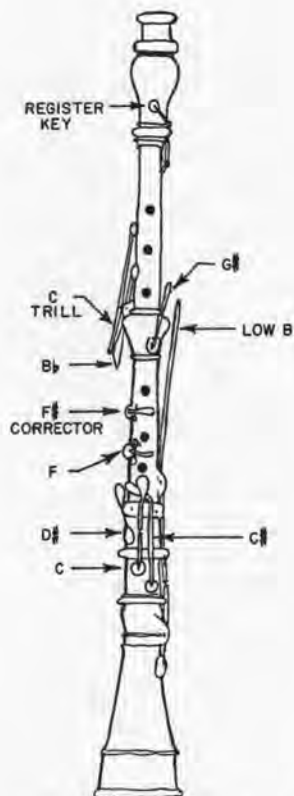


Fig. 6. Diagram of the fully-developed classical oboe. The Baroque oboe had only the D# and C keys at the lower end, and many oboists of Beethoven's era were able to play without the G# and C trill keys. Keys keep tone holes closed until pressed. Keyless holes, of course, are closed by the fingers themselves.

opening of his overture to *The Marriage of Figaro*. I had the never-to-be-forgotten experience of hearing William Waterhouse, one of Britain's leading bassoonists (who is also the world's leading scholar of the instrument), casually dash off this passage, unrehearsed, on an old instrument in my own living room, and then he cheerfully illustrated by a few stumbles on his beautiful modern Heckel instrument why today's player does not perform this in public without careful preparation. Unlike a modern player, Mozart's bassoonist could consider the composer's writing of this bit as a friendly act!

Whereas Mozart was conservative in his use of the flute, Haydn called for resources beyond the reach of a flutist who did not have an instrument with at least four keys. For Haydn, the flute had reached a state of "no holds barred" which has per-

sisted essentially to this day—although he and his contemporaries could count on a measure of low-register steadiness that has been somewhat reduced in the later evolution of the instrument, so that a passage like the lovely one from the second of Haydn's Six Duos for Flute, Opus 101 nowadays could be ineffective and perhaps risky for the second player. Haydn treated the oboe and bassoon with a confidence in their abilities equal to that of Mozart.

Because the double reeds of the oboe and the bassoon were susceptible to the skillful management of expert players, there was no driving force to modify this pair of well-proven instruments, as there was for the flute, which afforded less opportunity for control. So the mechanical ingenuity of the makers focused primarily on the flute. Moreover, this instrument had always been more popular with amateurs than the oboe or bassoon because of its more limited demands on a casual player's abilities. As the music changed, however, the home musician found it ever more difficult to play acceptably on the one-keyed flute.

In any event, mechanical developments did take place in all the instruments, but slowly, for they brought along problems of rebalancing the acoustical proportions of the air columns. Professional performers, notoriously conservative about changing to instruments of newer design, were understandably wary of risking a public disaster because of "improvements" that were not quite perfected or that required new techniques. Beethoven wrote for a flute having from four to six keys, while his double-reed writing tended to be suited to instruments little different from those used by Mozart. Not until well after Beethoven's death did the oboe and bassoon reach a mechanical elaboration comparable to the flute, with the addition of seven to ten mechanical keys.

The Clarinet

Because we have been following the evolution of the Baroque instruments into the early Classical era, there has been no mention so far of one of the major instruments of the woodwind family—the clarinet. At the time when Mozart first became seriously interested in the clarinet it was coming into wide use in bands, where it served (as it does today) as the analogue of the orchestral

violin section. There were some fine players, including some successful virtuosos, but there was very little in the way of serious music for a slightly primitive instrument. By the time the young Mozart heard it in about 1763, the Mannheim orchestra had several clarinetists and a few composers who understood the instrument. The clarinet was at a stage much like that of the flute around 1730: good and also showy music *could* be properly played on it; but, unlike the flute earlier, it had not yet found truly great composers to exploit it and to challenge its makers and players.

Mozart made himself the first among the clarinetist's patron saints, considerably encouraged by the presence in Vienna of his friend the player Anton Stadler (1753-1812). Mozart at one stroke sized up the exquisite flexibility of the five-keyed instrument and learned how to write music of all moods and degrees of solemnity, without betraying its very significant limitations. His compositions were vastly superior to the beautiful but musically limited works of Stamitz or Danzi, or of Franz Tausch in Mannheim.

An inherent complication in the structure of the clarinet relative to the other woodwinds is that the low-register scale covers a range of about an octave and a half before the second register comes into use through the agency of a "register" key plus a shift in the configuration of the player's vocal tract, in an approximate repetition of the low-register fingering. (In the parallel situation, the flute, oboe, and bassoon fingerings need cover only a one-octave range.) This fifty percent increase in the number of notes in the basic scale requires that many more holes be controlled by the same number of fingers that proved barely able to cope with the notes of the other woodwinds! To play even one gap-free diatonic scale requires eleven holes rather than six, and for real music one must have a minimum of five keys rather than one.

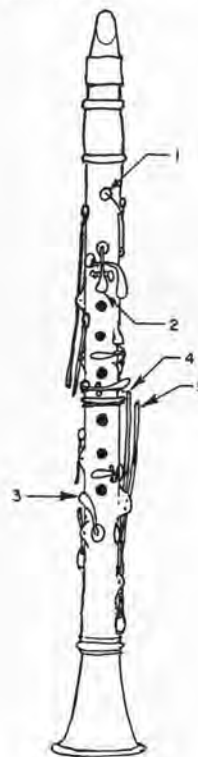
A resourceful clarinetist *could* play every chromatic note. Almost all of these were possible with an exceedingly clear and steady sound and with a wide choice of workable fingerings, especially in the second register. But there were a number of notes in the low register that were distinctly more troublesome than any to be found on the earlier flute and oboe. As everywhere else in music, a certain ingenuity and thoughtful-

ness on the part of a composer could allow the player to offer a polished rendering of an adagio or andante passage; but—to an extent much greater than in the Baroque instruments—certain combinations of notes requiring complicated fingerings were simply out of the question in quicker tempos.

In the hands of someone who troubles to learn how to do it, articulation of notes on the Mozart-era clarinet is extremely quick and clean; large skips of pitch both up and down are trustworthy and musically effective to a degree matched only by the bassoon; and a wide range of dynamics is available—wider than on any other instrument of the wind family.

Curiously enough, Haydn, who had been a leader in exploiting the rapidly evolving flute and who was a superb composer for the oboe and bassoon, made only a very limited use of the clarinet in his writings. Apparently no adequate player was available to

Fig. 7. The Mueller clarinet design, which liberated this instrument in the years following 1810. The numbered keys are those which were carried over from the earlier version. The keywork on this instrument was functional, whereas that on the oboe in Fig. 6 was merely useful.



him among the Esterhazy court musicians with whom he worked, and perhaps he was not fully convinced that the instrument was destined for a lasting position in the orchestra. Beethoven used the clarinet with a skill equal to that of Mozart and contributed with equal significance to its choice but limited chamber music repertory. Beginning around 1800 he consulted closely with Joseph Friedlowsky on the finer details of clarinet tone and technique. The enormous popular success of Beethoven's *Septet* (Opus 20, written in 1800), among other works, was a strong stimulus to his contemporaries Reicha and Hummel, to say nothing of Franz Schubert. All of these composers wrote almost exclusively for the five-keyed instrument that was like Mozart's and only a little improved in its acoustical alignments.

The clarinet was served by a particularly large number of well-intentioned experimenters, but it fell to the Russian-born virtuoso Iwan Mueller (1786-1854) to find a solution whose success still determines the structure of a large number of the clarinets made and used today. By 1810, Mueller's design was stabilized enough that many makers were following it, and the superb musician Heinrich Baerman (1784-1847), using such instruments, attracted the attention and the admiring friendship of Carl Maria von Weber in 1811. The direct result was the production of a group of superb new compositions that form, along with those of Mozart and Beethoven, the third leg of the classical tripod that has supported the clarinetist to this day, and that set a new standard for composer and listener alike. Equally inspired by the Mueller clarinet was Ludwig Spohr, who wrote four musically effective and rather spectacular concertos and a nonet plus three pieces for clarinet, piano, and voice that have considerable musical value. Composers like Rossini, Mendelssohn, and a host of lesser figures quickly followed with music that made good use of the instrument, and the clarinet was truly launched as an indispensable part of the orchestra.

Mueller's new clarinet was a great advance on its predecessor. The poor notes were essentially eliminated, new fingerings became available and troublesome old ones disappeared, and all of this was accomplished without loss of the best features of tone and response possessed by its predecessor!

As sometimes happens, this truly successful innovation displayed a breathtaking economy of means: all these wonders were accomplished with an instrument needing only ten to thirteen keys, preserving the original and well-proven five in their accustomed places. This meant, among other things, that a player could transfer his allegiance to the new instrument quite safely, with only a short time required to become fluent with the new resources and with essentially no loss of his hard-won original expertise. This design has always been underestimated, because its innovations in retrospect seem so obvious.

The Mueller design (Fig. 7) shares many features with the classical oboe (Fig. 6). The five keys of the earlier clarinet are indicated on this diagram by arrows. But unlike the oboe, the clarinet now used the old long fingerings in the second register only occasionally. It was probably the success of the new clarinet, in fact, that encouraged oboe and bassoon makers to introduce the belated mechanical elaborations mentioned above. In any event, by 1830 the oboe had become stable as a thirteen- or fourteen-keyed instrument, as did the bassoon. Meanwhile, the six-keyed flute was in equally excellent condition, but was about to roar off in an entirely new direction.

The Mid-Century Revolution, Part I

Theobald Boehm (1794-1881) grew up in Munich, where he served his apprenticeship as jewelry maker in his father's business. At a rather young age he also became enamored of the flute, and soon began to make his own (quite respectable) instruments. He played incessantly, gaining mixed reviews from the neighbors in the large building where family and business were located. One of the neighbors was Johann Nepomuk Kapeller, a fine professional flutist. Kapeller, no doubt in self-defense, offered to teach the boy, whose musical talents were publicly displayed within two years with such success that at age eighteen (in 1812) he was made principal flutist at the newly opened Isartor Theater.

In this romantic fashion begins the story of a man who led the world of woodwind making into new territories. Very quickly Boehm became one of the crowd of virtuoso wind-players who traveled the length and breadth of Europe, and he also

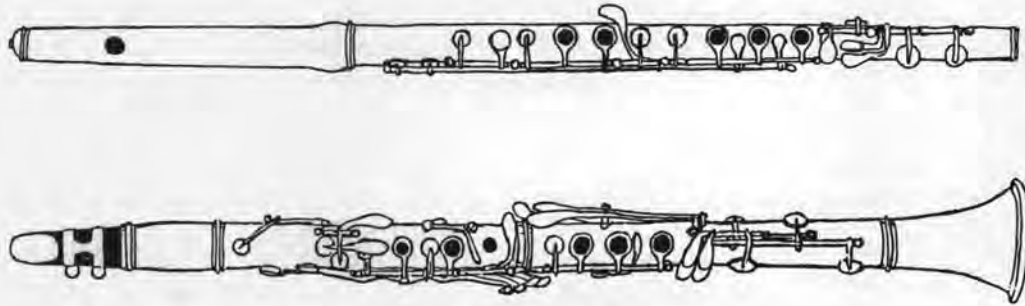


Fig. 8. Top: the 1832 model cylindro-conical flute of Theobald Boehm, in the form it took shortly after it was introduced. The five "ring keys" extend the control of the player's fingers to more holes than they could cover. Boehm's new system of fingering has never been surpassed.

Below: the Buffet-Klose (so-called Boehm) clarinet. This design is based on an adaptation of Boehm's 1832 flute fingering layout to the very different acoustical requirements of the clarinet. This design is now dominant in the world, because of its greater simplicity, and produces instruments equal to any others for tone and response.

became a recognized maker of flutes. His beautiful, often florid early compositions were written for a player confident of his powers, who was able to make himself heard effectively even in the setting of heavy orchestral or piano arrangements: his music proves that he did not consider the six-key flute of the day to be the feeble creature that some of his latter-day admirers imagine.

Though the flutes made by Boehm at this time were gems of elegant workmanship and precise tuning, they were somewhat unresponsive and small-voiced compared with instruments by the best makers of the time, who were more expert at the subtle task of what we can today call the proper alignment of the air column's natural frequencies.

In 1831 during a concert tour to London, Boehm went to hear the reigning British flutist Charles Nicholson (1795-1837) and came away astounded and impressed. Nicholson played a specially-made flute, an ugly instrument with a slightly modified embouchure hole and, more particularly, a set of irregular tone holes, larger than those on the normal flutes of the day. Further, the corners or edges of the tone holes were extensively rounded off (contributing to their messy appearance). Boehm recognized at once that this instrument was one that only a very skillful and assertive player could subjugate for musical service. But it stimulated Boehm to undertake a radical rethinking of the current accepted design of the flute. During the next few months, Boehm quite deliberately

set himself three tasks, and he succeeded in all of them:

1. To find the best re-proportioning of the familiar cylindro-conical bore to suit a revised set of tone holes laid out in a uniform sequence.

2. To calculate (in an orderly way) the positions of his postulated set of tone holes. The design was to require full-venting, that is, fingering in which no closed holes are below an open one, for any note in the lower two octaves of the playing range.

3. To devise mechanisms for conveniently controlling a set of at least thirteen holes with only nine available fingers (an immobile right thumb being required to assure firm support for the instrument).

Boehm's decision in favor of all this orderliness had two curiously different roots. One of these was his Victorian faith in science, a faith that led him to brand as irrational the traditional air column provided with open- and closed-standing keys scattered about among a set of six bare finger holes. The other root was his empirical awareness as a player and instrument maker that the traditional long-fingered notes on conventional flutes (especially his own) were unsatisfactory, tending to be a little weak, unclear, and unsteady. When we recall that this sort of weakness would have been fatal to the usefulness of the original Baroque and classical-era woodwinds, we are made aware that *something* untoward was going on in the workshops of the 1820s.

Because Boehm had been thinking very hard and effectively before he met the stimulus of the Nicholson flute, it required him only one year to work out his new design and perfect it. Successful public concerts upon it were given, beginning in 1832! The upper part of Figure 8 shows the neat and elegant nature of the new flute, in the form upon which it settled almost immediately. This instrument is commonly designated Boehm's 1832 model, or the conical Boehm. That Boehm was able to accomplish his revolutionary task at all, and in fact do it extremely quickly, is evidence of his genius.

Karl von Schafhaeutl, professor of physics at the University of Munich and lifelong friend of Boehm, was of significant help to him in devising his tone-hole design procedure. They worked out a geometrical construction based by analogy on certain properties of vibrating strings that have been the basis of procedures used by guitar makers in setting out frets since the time of Vincenzo Galilei. Boehm's rationalization of this layout procedure was decorated with Schafhaeutl's acoustical "theory" but it was in fact a compact expression of his magnificently carried out empirical observations. It is another sign of Boehm's high intelligence that he did not allow his romantically rational side to betray him into useless numerology, or into blind dependence on von Schafhaeutl, whose ideas were disfigured by errors which would have embarrassed him.

It turned out that Boehm needed to compromise his desire for full venting only to the extent of one closed-standing key. Many of the new holes were controlled by open rings placed around the holes that were closed by the player's fingers. It was quickly apparent that the new system of keywork not only does its acoustical job very well but is also an arrangement whereby the neurophysiological resources of the player's fingers are harnessed to the service of music in a spectacularly successful and regularly progressing way. The fingering convenience of Boehm's new flute was recognized almost immediately, and the possibilities it opened up play a large role in instrument design from that time on. Boehm's recognition and successful handling of the subtle problem of muscular control had historical consequences that make it Boehm's greatest con-

tribution to the evolution of the woodwinds.

This epoch-making new flute was superbly well-tuned, with a built-in flexibility that permitted subtle modifications of the pitch by the player's embouchure control. Every note was played by the simplest sort of fingering, and the orderly musical pattern of successive chromatic notes was mirrored by an almost equally regular pattern of finger motions. Traps and finger-twisting combinations of notes were no longer required. Tonally, every note was as good as its neighbor, and all of these notes were as good as the best of the notes of the best of the conventional instruments of its day. The dynamics of Boehm's 1832 flute were easily controlled, the pitch was stable, and the speed and clarity of articulation were equal to the best of the older instruments. All in all, we may say that Boehm's 1832-model flute was magnificent. It did everything as well or better than its predecessors, yet simplified the player's task by relieving him of the need to learn dozens of ways to deal with the numerous subtleties of note-by-note musicianship. The 1832 model of Boehm represents the highest evolution of the cylindro-conical flute whose basic structure was settled upon at the court of Louis XIV.

Boehm almost at once formed an admiring friendship with the distinguished Parisian instrument makers Louis-August Buffet and Claire Godfroy the elder, both of whom contributed mechanical refinements to the new flute and made beautiful examples of it for general sale. A parallel symbiotic relationship was formed between Boehm and the London partnership of George Rudell, John Rose, and Richard Carte. After a mixed reception and some questionable maneuvering, the Paris Conservatory settled on the new flute as its official instrument, thus assuming its adoption in France. It was immediately welcomed by many players in Britain, Scandinavia, and the German-speaking world. Some who *could* play everything on the old instrument stayed with their trusted friend, while a few marginal instrumentalists salvaged their careers by making a (somewhat scary) switch to the easier one. On the Continent outside of France, even more than in Britain, the older six-keyed flute persisted (and even continued to evolve), being extensively used until the 1930s.

The Mid-Nineteenth Century Revolution, Part II

The ring keys settled upon by Boehm were quickly seized upon by makers of the clarinet, oboe, and bassoon as a means for solving many little problems faced by the players of these instruments. The Mueller-descended clarinet was the first to benefit, beginning with Adolphe Sax's successful application of rings to control the "F-sharp corrector key" on the clarinet and its later, rather unsatisfactory adaptation to the oboe.

In France Hyacinthe Eleanore Klose, a distinguished musician, collaborated with August Buffet in applying Boehm's principles to the clarinet. During 1839 and 1840 they developed an instrument that plays extremely well. This instrument, which successfully joins fairly traditional tone hole proportions with the elegances of Boehm's fingering system, has ironically come to be called the Boehm system clarinet.

It was immediately adopted by the Paris Conservatory and therefore moved into dominance throughout France. It was received with serious interest in Britain, but did not predominate there for many years. It had less success in Germany, partly because its tone was different from that of its traditional competitor, and partly because German makers had successfully adapted some of Boehm's mechanical improvements to the old design, and felt little need for more extensive changes.

The Mueller type of clarinet, with an ever more skillful use of ring keys, was the dominant instrument at least until 1900, and was routinely available from manufacturers in Britain and the U.S. into the 1930s. As we shall see, this primacy has been retained to this day in German-speaking countries.

The only woodwind that seems to have been invented and perfected by a single individual—the saxophone of the Belgian instrument maker and clarinet virtuoso Adolphe Sax—shows the clear influence of Boehm's 1832 flute. Sax had already contributed to the development of the Mueller type of clarinet, especially by devising the first really satisfactory bass member of that family. He was also hard at work creating a profitable line of newly developed brass instruments. It was this diversity of skill and knowledge that Sax brought to his attempt to create a conical woodwind that used a single instead of a

double reed. This was a challenging undertaking, because he planned to relinquish the double reed's great flexibility, which had kept the other conical woodwinds at the forefront of music making since the earliest days.

By 1846 Sax had his new instrument in fit condition to bring before the public. The influence of Boehm is apparent in the almost complete achievement of full venting and in some details of the pattern of fingering. The side keys and little-finger keys of the Mueller clarinet were taken over unchanged, in part to make it easier for his prospective customers to adapt to the new instrument. Because of the relatively wide bore of the saxophone, the holes look very large to anyone accustomed to the other instruments of the day. Acoustically, however, they are sized relative to the bore almost exactly as on the clarinet, oboe, or the bassoon. The reason is very simple; to get an acceptable tone and proper cooperation between the reed and a tube having a set of woodwind tone holes, there is very little choice in the proportioning. That Sax was a master of his profession is shown by the perfection of the cooperations that he was able to achieve for all the notes of the playing range. Only a few details of the keywork have been modified in the century since this invention first appeared, while the well-intentioned meddlings of later makers have almost destroyed the prompt, clean articulation and stable intonation that characterized the instrument up through the 1920s. The early swashbuckling pieces composed to show off the saxophone, considered terribly difficult today, were originally written for players having little experience with the instrument to present before audiences accustomed to hearing florid music performed cleanly.

Meanwhile, the double-reeds moved steadily along their essentially non-Boehm evolutionary routes during the mid-nineteenth century. The German oboe makers were willing as usual to pick up ring keys and other small benefits of the new design, but they left it to the French to choose new directions. Frederic Triebert (1813-1878) worked to "regularize" the bore, to make the fingering more uniform, and to solve a number of the chief problems of the classical oboe. Triebert devised a whole series of oboe "systems" which progressively eased the player's fingerings and embouchure tasks by means of a

fairly successful set of mechanical linkages. Flexibility was, however, sacrificed for fingering simplicity to an extent that sometimes creates difficulties for today's players when they perform the music of Schumann, for example. The Triebert "System VI" was adopted by the Paris Conservatory in 1882, and thence by most French players. Later models moved fairly rapidly into Britain and most of the German influenced lands except Vienna, where in 1890 the player Baumgarth brought in a superbly perfected version of the classical German oboe designed by Carl Golde of Dresden (1840-73). This instrument (which is the only existing version to provide a proper solution to the oboe's "F-sharp corrector key" problem) has persisted against all attempts to dislodge it. The reasons are clear: it is a perfect fit for the entire classical literature, being able to perform it with fluency and comfort, with an aptitude for large skips and flexible dynamics. Viennese oboists such as Jürg Schaefflein do much less complaining than their conservatory oboe playing colleagues about the technical problems they face in their everyday work. It seems that they can cope comfortably with everything the modern composer can come up with.

Two fine bassoons also emerged in the mid-nineteenth century: that of Carl Almenraeder (1786-1843), as taken up, further developed, and manufactured by Johan Adam Heckel (1812-1877) and his family, and

now called the Heckel, or German, bassoon; and the characteristically French instrument developed by Eugene Jancourt (1815-1900), professor of bassoon at the Paris Conservatory. The speed of execution, dynamic range, flexibility, articulation, and precision of pitch of the Jancourt bassoon are breathtaking, and the living, breathing sound it produces in the hands of musicians like Maurice Allard and Paul Hongne can exceed the abilities even of virtuosos on the less-demanding Heckel.

Boehm's Flute of 1847

The reader may be wondering whether the long-lived and energetic Theodore Boehm himself took any further part in the development of instruments in the years following 1832; the answer is yes. In 1844 he and August Buffet designed and sold a type of oboe with large, regularly laid-out holes and a flutelike and elegant fingering system using ring keys. Triebert (who knew and admired Boehm) also made instruments of this design. All these oboes are elegant in appearance, beautifully tuned, and fit the hand well. The tone, however, is coarse, the dynamic range varies from loud to louder, and the notes can only be started as an abrupt blast of sound. There were a few players who could tame this beast, but even they gave it up, defeated by the problems of producing refined music on it. The acoustical reason is to be found in Boehm's conviction that big



Above: Jancourt (French) system bassoon. Below: Heckel (German) system bassoon, the type that predominates throughout the world today outside of France. Collection of the author.

tone holes are good tone holes. Boehm had set aside the fact that his own invention of 1832 had ended up with holes significantly smaller than those he had originally projected. Boehm and Triebert also collaborated on a bassoon. This had a hideously complex system of keywork and a vast number of tone holes. It, too, suffered oblivion because it was expensive, tonally unacceptable, and difficult to control.

But the restless mind of Boehm did not surrender to these setbacks. His dream of a flute with truly large tone holes was always with him. He was also having a mounting doubt about the special peculiarity of the flutes we have discussed so far: of all the wind instruments, only the flute has an air column that tapers to a smaller diameter at its lower end than it has at the top. To Boehm's metaphysical side this seemed backward, despite the fact that he knew very well the troubles caused by too much or too little taper.

To deal with the practicalities of large holes, Boehm gave up his placement of ring keys around the finger holes in favor of pads to cover all the holes, whether or not they had fingers directly over them. He already knew that his well-proved fingerings would work even better on a flute built this way than on his earlier model. What remained to be done was to devise a proper shape for the air column and to choose the proper placements for the holes. This task he assumed would be relatively easy, since he believed that the use of large holes would remove some of the puzzling behavior that he had met and overcome during his earlier experiments.

To seek the proper proportions for a flute based on a cylinder rather than on a cone might seem quixotic to us when we recall that this was exactly the place from which the Hotteterres had departed a century and a half earlier. Nevertheless, Boehm succeeded. He found that satisfactory tone and response could be achieved by contracting the head-joint bore toward the embouchure hole on a cylindrical flute, whereas the earlier flutes could best be described as having a fundamentally conical shape, the upper part of which was contracted to be cylindrical. To get a suitable curving taper in the head joint proved a much more difficult task than that of getting a correct variation of size along the main length of the earlier type of flute:

the whole taper-adjustment job for all the notes of the new instrument had somehow to be accomplished in about one-quarter of its length instead of three-quarters. Nevertheless, Boehm found proportions that worked well with tone holes that were nearly as big as the tube into which they were drilled.

Boehm announced what he called the *cylindrical flute* in 1847—generating universal interest and mixed reviews. The main judgments stand today:

1. The use of plates to cover all the holes greatly increased the player's fluency because he no longer needed to seal the holes precisely with his fingers.

2. The tuning of all the notes of the scale was extremely good, and their stability was excellent. Better yet, it was easy for a player to "bend" the pitches to suit his musical needs without significant loss of tone. These virtues were preserved from Boehm's 1832 design.

3. The high notes were very easy to blow, and the tuning of the highest ones was considerably improved.

4. For all the notes above the bottom three or four, the tone was at least as strong and clear as on the 1832 version, and the bottom notes were perfectly acceptable in the hands of a practiced player.

5. The tone color was full and interesting, but it was also distinctly different from that of all the earlier flutes, and its blend with other instruments in the orchestra was significantly different as well.

6. The onset of notes, whether tongued or started by slurring from other notes, was significantly slower and less crisp than listeners were accustomed to hearing from any woodwinds to this date. Today's measurements indicate that the startup times for the low notes are as much as twice as long for the 1847 flute as for the six-key or the 1832 Boehm.

The qualities noted in 1 through 4 were much admired by everyone and made many converts to the Boehm instrument as well as to the essential soundness of Boehm's design philosophy. It goes without saying that the Boehm fans at the Paris Conservatory were enthusiastic in their adoption of the new instrument. The Germans were equally predictable: some players switched from the 1832- to the 1847-model flute, but some of the



Left to right: one-keyed Baroque flute; five-keyed classical flute; thirteen-keyed late nineteenth-century flute; German "Reform flute"; Boehm's "1832 Model"; Boehm's 1847 Model; and Carte's "1867 Patent" system. Collection of the author.

others were unwilling to grant that it was even a musical instrument. Conductors in many cities refused to allow the new instrument into their orchestras, but an occasional bold soloist would make his tours with it with good success. Today the 1847 flute has taken complete control in the Germanic lands. The British were interested in the new development, in part because they had many fine players who were adaptable, in part because they liked the sound, and mostly because the distinguished firm of Rudall Carte stood ready to supply magnificent examples of the new design.

During the initial flurry of worldwide enthusiasm, it was said that here at last was an acoustically perfect instrument. And some players thought, with a flute such as this, they no longer needed to take responsibility for more than supplying compressed air and working their fingers. But the inherently slow startup of notes on the 1847 flute has always drawn the criticism of other wind players: "Why are flute players so mushy in their attacks?" is a question I have often been

asked. The answer is that *players* need not be mushy, but their *instruments* are, as an inherent part of the acoustics of the contracted head joint. The disease is fundamentally incurable without departing from this design. The tendency toward weakness in the lower notes stems in large measure from the same structural feature.

We have here before us the reason why much of the earlier literature for the flute lies neglected: it simply does not "come off" well enough today to warrant the time spent in preparing it. Other music is played, but only in forms that are (unconsciously) distorted by the necessity of phrasing the notes in a way that makes the slow startup and somewhat weak low notes into an integral part of the musical line. Few professional players are aware of these problems, because most of them have neither heard a properly played cylindro-conical flute nor had a chance to try one with the aid of a knowledgeable coach to persuade them of the possibilities it offers. It has always been much easier for a player to "move forward" from

the earlier design that it has been for him to go in the opposite direction.

The Position Today, and A Retrospect

The classical music world of today is drawing ever closer together, not only in general communication but also in the nature of the instruments it employs. This is unfortunate for several reasons: it reduces the variety of musical approaches one might hear, and it reduces the chance of hearing a piece played in the spirit and with the sound intended by its composer. And, perhaps most serious for those of us who wish to understand and maybe to improve the instruments, it reduces our opportunities to gather diverse data and narrows the outlook of the performers with whom we deal.

An encouraging development, which at least to some extent offsets the difficulties enumerated above, is the growing interest in the correct playing of music from earlier times and the broadening of this interest from the Renaissance and Baroque eras forward to our times through the Classical and Romantic periods. The growth in sophistication of this interest has paralleled the growing knowledge of earlier instruments that has come from the joint efforts of scholars, performers, and occasional scientists. Today we are therefore entering a happy period when all these disciplines can usefully converge, to help us with the actual understanding of the music of earlier times. Less and less often does one hear a fatuous remark like "Wouldn't Beethoven be glad to hear his — played properly, on good instruments?" Sometimes he would indeed be happy, but I am sure that there would frequently be times when he would cringe at the stiff and halting way that some of his music has to be performed on today's instruments.

Since there are many instruments of all kinds available to us dating from the Baroque to the present, we can learn a great deal about the music of the past if we go about it intelligently. It is helpful, for example, to remember that the humble status of the performer and the composer forced them both to be extremely practical in their labors. They knew what their instruments could do. We can also be helped by remembering that music for the amateur player of any period can give us a clear picture of what was considered relatively easy to play.

In the Baroque era the flute and recorder were considered equally suited for the amateur and the serious musician. Composers having all degrees of talent wrote a vast literature for these instruments, a literature that involved running and leaping passages as well as beautiful slow movements. We should note that the flute in particular was expected to cope with the accompanying harpsichord, violin, or cello in worthwhile balance right down to the lowest notes. Pergolesi and many others thought nothing of writing a flute concerto in which the soloist pitted his notes below G against an orchestral tutti! The oboes and the bassoon were treated with equal respect, but generally at a higher overall level of sophistication, because these instruments were normally played only by professionals. Today we have many fine recorder players who "feed their instruments properly" and play with conviction, with just the right amount of assertiveness. The same is beginning to be true of the Baroque flute and oboe, despite their having suffered from players who reveled in quaint inadequacies instead of remembering that every early player not only had to pay his rent and feed his children but also had to do it sitting next to a vigorous violinist and under the ears of some arrogant monarch. The reputation of the early bassoon has not been so often endangered.

The instruments of the classical period were similarly well adapted to their tasks, and their tasks adapted to their abilities. Once again we find a large and instructive literature for the amateur flutist and now for the amateur clarinetist as well. By the time of Beethoven this latter instrument was everywhere, in the bands, in the bars, at dance halls, in the orchestra. Thousands of five-key clarinets were made that show up today in antique stores and at barn sales. Most of these clarinets show signs of hard usage and often traces of very humble employment. It is never safe to try dating one of these instruments, unless the maker's name and datable address are on them. They were manufactured well past 1850, when the Mueller-descended clarinet displaced them everywhere.

Except for the fact that relatively fewer were made, the foregoing remarks apply to the simpler forms of oboe. I know of oboes imported for serious use into the U.S. from

Germany after 1900 that are almost identical with the symphonic instrument of 1830.

All through the period of rapid nineteenth-century change in woodwinds, there were of course many musicians, both amateur and professional, who continued to use the older instruments. Some may simply have been stubborn or poor. Or some tried the new version and found it difficult to adapt to, yet saw enough promise that they insisted that their students learn it. This last did happen frequently, to the great credit of the older musicians.

We may say that the fundamental evolutionary development of the woodwinds was essentially complete by 1850. The flutes of Boehm were solidly launched, the two major types of clarinet were stabilized, and the saxophone had come into existence in a form that has changed only a little in the years since. By 1905 the conservatory oboe had taken over the world's orchestras (except in Vienna and, for very different reasons, in Russia), and the two types of bassoons were in their present forms. At first glance, then, it looks as though everything has been stagnant for a century, and this in a culture that is said to make a fetish of change!

One instrument does show recent progress: the Mueller-descended clarinet has continued to improve in small but significant ways as the proportions of tone holes and bores have been gradually improved.

Even more significant is the clarinet now widely used in Germany, developed by Oskar Oehler (1858-1936), a leading performer and co-founder of the Berlin Philharmonic. The Oehler system clarinet that evolved through the 1920s is a superb instrument that can be taken up readily by any German-oriented player who can afford one. Curiously enough, this clarinet shows the most complete and the only *practical* approximation of Boehm's ideal of full-venting to appear on any reed woodwind. Its many keys simplify the player's tasks only in constructive ways and do not foreclose any options. One finds that most of the students in German and Austrian conservatories follow in the footsteps of their established seniors by using the Oehler clarinet. It is also found very frequently in Scandinavia and the Netherlands, and to a certain extent in Belgium. To my knowledge there is only one symphonic player using these instruments in the

U.S., although a number of serious musicians employ them for special purposes.

The Prospect Before Us

As acousticians like myself have learned more and more about the physics of the woodwinds from both a theoretical and a practical standpoint—so that some of us can actually design and make instruments—we get a continually clearer understanding of the actions of the musicians and craftsmen of the past. We can look both to the past and to the future in an attempt to divine what directions are possible for the continued evolution of woodwinds.

To begin with, let me recall my claim early in this essay that the long-fingered notes of the Baroque instruments are among their best when they are properly played, and contrast it with my later remarks to the effect that in Boehm's day such fingerings were beginning to cause trouble. How could an actual virtue begin to turn into a problem, especially since continual progress supposedly was being made in other respects? The answer turns out to be readily suspected, though not too easily proved. The much improved cutters and drills of the 1820s left the corners of tone holes and joints much sharper than they had been in earlier days. Craftsmen took increasing pride in the burr-free sharpness of their corners as a mark of care and skill, an attitude that has strengthened with the years. This *mechanical* refinement had a most unfortunate *acoustical* consequence. We find that the oscillatory flow of air past these corners eats up energy in a manner that chokes up a note if you try to blow it strongly (the difference in sharpness between serious trouble and marginal acceptability turns out to be very small). We have also come to realize that the patterns of open and closed tone holes that give rise to the most aggravated corner flow problems are those that go with the long and fork fingerings. In other words, the impetus in design acting toward what was called full venting was caused by the very act of refining the construction technique. So, one of the changes suggested (and subsequently verified by cooperation between science and craftsmanship) for woodwinds is to make sure the tone holes have rounded corners. Not only does this make them more smoothly responsive, but it also automati-



Left to right: Classical five-keyed clarinet, for which Mozart, Beethoven, and Schubert composed; Mueller design thirteen-key clarinet; late nineteenth-century clarinet; "Oehler system" clarinet; and "Boehm" (Klose-Bohmet) system. Collection of the author.

cally brings back the possibility of many long-lost auxiliary fingerings (some of which were discarded only in the past thirty years!). WARNING! Only an idiot will tinker by rounding the corners of a present-day woodwind. He can ruin many other of its virtues by a single well-intentioned scrape of the knife! The responsible craftsman, however, can accurately predict the consequences of any action he is willing to take on a customer's instrument.

A fairly recently uncovered aspect of the acoustic flow around tone holes and other discontinuities is the recognition that *any* sort of complexity in the flow can cause dissipation of oscillatory energy. We also find that neighboring complexities can mutually aggravate one another's effects. The historian's mind leaps at once to the long (and allegedly irrational) tone holes on the upper joint of a bassoon. The flow complexity at one end of each hole has a chance to smooth itself out before the complexity begins at the other end.

Theory and experiment agree that it is possible to design re-proportioned holes having all acoustical features matched to the traditional one except for its length-to-diameter

ratio. If the chimney height is not sufficiently long in comparison to the diameter, the instrument becomes hopelessly "stuffy" (hard to blow, dead sounding) and leads one to look at all woodwind holes with sharper vision. We come to recognize that the shorter tone holes of a woodwind tend to be the troublemakers because of the complexity problem, and are forced to search for the special set of circumstances that permits Boehm's 1847 flute and the saxophone to work *at all!* So we might well look toward a systematic lengthening of the chimneys of the holes, as we understand one more reason why Boehm's acoustical theories could not be followed in the past.

The next step in this line of enquiry uncovers the fact that holes spaced too close together can trouble each other because of flow complexity. Full venting at the upper end of a woodwind, where the holes are close together, can therefore become nearly fatal. Once again, the educated eye finds evidence that some of the innovators of the past have realized this in some subconscious way, and have evaded the worst problems. We are often led further to understand the reasons for some of the habitually quirky behavior of cer-

tain combinations of notes on modern instruments. Also, the historian is fascinated to discover one more reason why the long fingerings and the closed standing tone holes of early instruments worked so well: any holes that were open were so far apart that their flows could not possibly quarrel.

Perhaps the most crucial question the acoustical physicist can ask is what direction should be taken for the true improvement of our instruments. I have pointed out how the player can manipulate his reed by lip pressure, thereby assisting in the alignments of his instrument's air column, and I have also noted the recently elucidated but musically familiar ability of the player to harness the response peaks of his own windway into cooperative service with the reed and instrument air column. Through the entire history of woodwinds these physiological resources of the player himself have made possible the fine levels of playing that have always been achieved by the best players. But in the past forty years there has been a deliberate trend on the part of makers and players (who after all talk a great deal with one another) to exploit the measurement facilities of electronic instrumentation in a manner that is ultimately destructive. With the best intentions in the world, instruments have increasingly been built in such a manner that the control of the player over the sound production process has been reduced. This procedure (which one of my craftsman friends sarcastically describes as "tuned at the factory," muttering about the need for frets to "stabilize" the notes of a violin) is supposed to reduce the demands on the player, leaving him free to devote his attention to the music. Designs of this sort not only deprive the player of the ability to use his lips and vocal tract to adjust his tuning to the chord he participates in, but he also loses his ability to control any imperfection of the reed, or to modify his tone color independently of the pitch and loudness. Furthermore, it also puts a literally impossible burden on the designer of the instrument. He simply does not have enough variables at his disposal to take care of the wide variety of adjustments and corrections that go into the successful alignment of a woodwind.

In former days the player was an active part of the enterprise and took responsibility for the leftover corrections. The muscular de-

mands on a woodwind player's embouchure have never been excessive—they are little different from those required of a twelve-year-old cornetist if he is to play at all! Today, when an oboist asks why a clarinet cannot be built in tune, or why its tone is often dull, he is reflecting the defensive remarks of his colleague who never was taught methods for coping.

Fortunately, there are always thoughtful and skillful players around, but life today is often difficult for them, because they must fight with instruments that cannot properly respond to their efforts. So far, the bassoon has been most free of this foolish kind of "improvement," while the oboe is only partially affected. The flute today has very few capable makers, so that most players have never learned what spectacular demands can be made on the Boehm design, or are overimpressed by what would have been considered routine fifty years ago. They are sometimes also seduced by the silly talk about this instrument being the most perfect woodwind. It may make them take too much for granted.

If the makers will focus their efforts more constructively, even the traditional methods of development can lead to good progress. The fact that Oskar Oehler is the only one of a small but significant number of recent serious experimenters to have attained major success reflects well the musical sophistication of German clarinetists, who have never given up their responsibilities. Meanwhile, the fashionable arrival of multiphonics (e.g., simultaneous production of vocal and instrumental sounds) and other strange noises as a part of the wind player's repertory has begun to refocus interest on the ability of the human body to modify the operations of a reed and air column. It has also begun to make people aware that today's highly mechanized instruments interlock so many of the keys that there is only limited opportunity to create new sounds with new sets of fingerings. One can readily use a classical flute, oboe, or clarinet to produce enough well-controlled "funny noises" to turn the conventional player green with envy and at the same time illustrate to him the ways in which players used to operate while coaxing more conventional sounds from these wonderful instruments.

FOR FURTHER READING

Anthony Baines. *Woodwind Instruments and Their History* (rev. ed.). New York: Norton, 1963. This book provides a comprehensive and dependable account of all the woodwinds. More detail is to be found in the books listed below.

Philip Bate. *The Oboe: An Outline of its History, Development and Construction*. 3rd ed. London: Benn, 1975.
_____. *The Flute: An Outline of its History, Development and Construction*. 2nd ed. New York: Norton, 1979.

Arthur Benade. *Fundamentals of Musical Acoustics*. New York: Oxford University Press, 1976. This presents in close-knit, but essentially non-mathematical form the basic nature of musical sounds, and their perception. Chapter 20 introduces (via the brasses) the cooperative ways in which wind instruments generate their tones, while chapters 21 and 22 deal with the woodwinds.

Oskar Kroll. *The Clarinet*, rev. Diethard Riehm, trans. Hilda Morris, ed. Anthony Baines. New York: Taplinger, 1968. Kroll discusses the clarinet as it is seen by a member of the musical community that adheres to the non-Boehm instrument of today.

Geoffrey Randall. *The Clarinet: Some Notes upon Its History and Construction*. 3rd ed., rev. Philip Bate. New York: Norton, 1971. This book emphasizes the Boehm instrument that is dominant in the world today.



The author with flutes of his own design and construction, designed to combine the tone color and response of the Baroque flute with the fingering convenience of Boehm's 1832 design. The lighter-colored instrument is the prototype; the darker is the formal version.

Dennis Dooley

Time's Shadow: *The Thin Man* and Dashiell Hammett

Nothing changes more constantly than the past; for the past that influences our lives does not consist of what actually happened, but of what [we] believe happened.

—Gerald White Johnson

The preeminence of Dashiell Hammett in the world of twentieth-century detective fiction and his influence on the genre are propositions that have attained the status more or less of received truths. But when one considers the incredibly brief span of Hammett's career as a productive author, his stature as a writer becomes astonishing. The five novels on which his reputation is based—*Red Harvest*, *The Dain Curse*, *The Maltese Falcon*, *The Glass Key*, and *The Thin Man*—were all published during a five-year period (1929-1934).

The fact that Hammett published virtually nothing of any significance in the remaining two-and-a-half decades of his life has only deepened the fascination of latter-day Americans with this enigmatic figure.

More than fifty years after they first appeared in print, Hammett's novels and stories (later collected into book form) still captivate readers with the authority of their craft, the credible characters and wonderfully

drawn action scenes, the canny air of authenticity with which they capture the mood and texture of the twenties underworld and the work of real detectives, and Hammett's own special blend of a sometimes chilling cynicism and a deeply rooted sense of honor.

Though he was a profligate spender and drinker, Hammett was also an enormously generous and thoughtful man. Everyone who knew him was struck by his fierce sense of personal integrity and the lengths to which he would go to be true to his beliefs. When Hammett, at fifty-seven, spent five months in a federal prison for refusing to cooperate with a McCarthy era investigation of the Civil Rights bail bond fund, uncomplainingly carrying out such distasteful tasks as scrubbing the men's urinals, even the guards recognized that there was someone special in their midst.

A self-declared Communist who was highly critical of the Communist party, a patriot who went to jail rather than betray his country's ideals in a period when its own elected representatives had misled them, Hammett had reenlisted in the army during World War Two, accepting the tedious assignment of editing a small army newspaper in the remote Aleutians, despite protest over his age (forty-eight) and the scars on his

Dennis Dooley was asked to write a book on Dashiell Hammett before he had read a line by or about him by a friend who was editing a series on the detective novel. He began reading Hammett's novels, however, became fascinated by the man, and ended up writing the book to be published this spring by Frederick Ungar. Entitled Dashiell Hammett, it is, he says, "not a biography, but a fresh look at Hammett's work—in the light of the times in which he wrote and what we know now about Hammett himself, his politics and his life." The present article is a selected adaptation from the book.

He was born in Oak Park, Illinois—birthplace of Hemingway, hence perhaps fated to be a writer—and attended Loyola University but received his bachelor's and master's degrees from Indiana University. He trained as a college teacher of English, has been the editor of Northern Ohio Live, a drama critic, and is now Community Relations Officer and Director of Publications for the Cleveland Foundation (a charitable trust).

Although most of his working life has been spent directing the writing of others, he gives his profession as Writer, perhaps to remind himself that this is what he prefers to do.



lungs that were the result of pulmonary problems developed as a young ambulance driver in World War One.

Born in St. Mary's County, Maryland, in 1894, into a southern Catholic family of French and Scottish ancestry, Hammett had been still only feeling his way toward what he might want to do with his life when a lung condition, which soon turned into tuberculosis, threatened to cut it short. Indeed it was the growing conviction that he did not have long to live which in 1922 led the ailing Hammett to sequester himself in a cheap hotel room in downtown San Francisco and write. The stories that flowed from his typewriter over the decade that followed were to change detective fiction forever.

But to understand Hammett's impact, one must begin by recalling that the literary detectives who dominated the horizon during Hammett's early years as a writer were an egocentric little Belgian named Hercule Poirot (who had debuted in Agatha Christie's *The Mysterious Affair at Styles* in 1920); a dashing gentleman scholar with what critic Edmund Wilson once called the "embarrassing" name of Lord Peter Wimsey (introduced in Dorothy Sayers' *Whose Body?* in 1923); and their American cousin, Philo Vance, the creation of the immensely popular author S. S. Van Dine (pseudonym of Willard Huntington Wright). Bored, supercilious, condescending, a cynic given to sleeping late and smoking perfumed, rose-petal-tipped cigarettes called Regies, the unpredictable Vance might one moment astonish his house guests with "an impromptu *causerie* . . . on Tanagra figurines, which, had it been transcribed, would have made a most delightful and instructive monograph," and in the next dazzle his readers with virtuoso displays of deductive reasoning, while the police plumbed ever profounder depths of ineptitude.

Such was the popular image of the arch detective even as several carloads of slain Chicago mobster Dion O'Bannion's men sprayed hundreds of bullets into the storefront of rival Al Capone's headquarters in broad daylight. Against these bookish (if not altogether uncharming) fantasies, the twenty-eight-year old Dashiell Hammett now set a new character of stunning realism: the Continental Op. An improbable hero at first glance, the stocky, nameless, middle-

aged operative of San Francisco's mythical Continental Detective Agency was to be the forerunner of Sam Spade and every other tough-talking, no-nonsense detective from Philip Marlowe to Baretta.

Hammett's Op, who dispensed with the usual admiring narrator to tell his own "hard-boiled" stories, quickly became an underground sensation in the popular pulp magazines of the day, particularly one with the rather *fin de siècle* title of *The Black Mask*. The cases he investigated were realistic, his methods those of real nine-to-five detectives—drawn from Hammett's several years of experience as a young operative with the Pinkerton Detective Agency. And the villains he pursued were the anxious junkies and petty criminals, the brutal gangsters and corrupt politicians who populated the "mean streets" of real American cities. "Shivering and shaking in my wet clothes, keeping my mouth clamped tight so that my teeth wouldn't sound like a dice game, I climbed into a taxi," mutters Hammett's detective narrator in a 1924 story, in the course of a typical monologue that would have sent Philo Vance scurrying for his smelling salts.

Hammett, in short, invented the modern urban detective story: its poses, its dialogue, its *rhythms*, its ethos, its heroes and villains. There was nothing like them before Hammett, and much of what has come after has been mere variation—however talented, however clever—on the forms he created.

It was in the work of Dashiell Hammett that the fictional detective reached self-consciousness. Before Hammett, the emphasis—for all the eccentricities of character indulged in for the amusement of the reader—was on the solving of the crime. With Hammett, the detective himself—his aches and pains, his motives, values, feelings and needs, his fears of growing old—has become the real subject. The people with whom he deals fascinate him as much as the evil deed he is investigating. As does his own behavior.

Hammett invested his fictions not only with memorable writing but also with an extraordinary feel for the human condition and a series of questions that lie at the heart of the twentieth-century experience: Is it still possible to be a good person in what is manifestly an evil world? Wherein, given the collapse of the traditional shared value system, does that goodness consist? (In other words, how

can we continue to tell the difference between the good folks and the bad folks?) How do we know what we know? And is it possible to live a life without trusting in something or someone?

In their characteristic blend of cynicism and idealism Hammett's fictional heroes mirror what seems to have been their creator's lifelong struggle with his own contradictory behavior. The perennial themes of guilt and punishment found in all detective stories are complicated, in Hammett's, by all the ambiguities and maddening uncertainties that haunt the real world. What makes Hammett's heroes interesting is not, finally, their endearing tough talk or the steel nerves with which they face their nemeses, nor even their touching moments of odd vulnerability (a lifelong theme of Hammett's), but the fact that they experience doubt, guilt, the judgment of time, a yearning to believe in someone or something, revulsion toward their own actions, the need for forgiveness and—especially in the case of Sam Spade and the Continental Op—a real agony over what is happening to their humanity.

It was perhaps inevitable that Hammett's wildly popular books, and he along with them, would sooner or later be sucked into that mad vortex of myth and money, spiritual emptiness and celebrity that was the Hollywood of the Roaring Twenties and early thirties. He was to spend more than a dozen years there, polishing other people's screenplays and grinding out original screen stories and loose adaptations from his own fictions, though his name, perhaps because he seems not to have taken this work very seriously, rarely appeared in the credits.

His own novels were often filmed—and refilmed—without him, as the public appetite for gangster movies grew. *The Glass Key* was made twice, *The Maltese Falcon* three times (1931, 1936, 1941). But Hollywood's greatest love affair, where Hammett was concerned, was to be with his fifth and final novel, an autumnal but thoroughly beguiling whodunit known as *The Thin Man*.

Long before *The Godfather* Parts I and II and the much-ballyhooed sequels to *Rocky*, *Superman*, and *Star Wars*, there was *The Thin Man*. Dashiell Hammett's highly successful 1934 detective novel (the only one of his books not to have originated in *Black Mask*) inspired a run of no fewer than six movies:

The Thin Man (released the same year the novel appeared in its hardcover edition), *After the Thin Man* (1936), *Another Thin Man* (1939), *The Shadow of the Thin Man* (1941), *The Thin Man Goes Home* (1945), and *Song of the Thin Man* (1947)—to say nothing of a radio series and a still later TV series centering on the further adventures of mysterydom's original husband-and-wife team, Nick and Nora Charles.

As sleuths they were a refreshing change of pace from the hard-boiled private eye Hammett himself had introduced a decade before. Their breezy banter and light-hearted way with crime and criminals endeared them to an America caught in the throes of the Depression. Just as John Huston's 1941 remake of *The Maltese Falcon* would create an all but insatiable demand for more movies featuring the team of Sydney Greenstreet and Peter Lorre—who became, in the words of one writer, a sort of Laurel and Hardy of villainy—*The Thin Man* spawned a veritable traffic jam of screen vehicles for the duo of William Powell and Myrna Loy, who became the hottest Hollywood "couple" since Fairbanks and Pickford.

Hammett, who had nothing to do with any of the screenplays, was content to accept a paycheck from Metro-Goldwyn-Mayer for thinking up the story lines for the second and third films. And in early 1937 he sold MGM all rights to the *Thin Man* title and characters, with whom he had become "bored," for \$40,000. Other men had no doubt written better books than he, Hammett conceded in a letter to his close friend and sometime paramour Lillian Hellman, but nobody had "ever invented a more insufferably smug pair of characters. They can't take that away from me," quipped Hammett, "even for \$40,000."

All this becomes the more interesting in light of the fact that Nick and Nora Charles did not even exist in the first version of the novel. The 18,000-word manuscript, which seems to have been begun sometime in the winter of 1930-31 and abandoned the following May, was a straightforward detective story set in San Francisco and, like *The Glass Key* and *The Maltese Falcon*, told in the third person. Its hero is a private detective named John Guild who sets out to find an elusive inventor who has mysteriously vanished and

now stands accused of his secretary's murder. Guild has only his gut feeling that the man is innocent.

Guild is still there in the second version of the book, written two years later, as is the basic premise of the plot. But what a sea change has come over Hammett's story. Guild has been stripped of all his moody mystery and "demoted" to the distinctly secondary role of an earnest, but rather pedestrian police detective assigned to the case. The story has been moved to New York, and someone distinctly different from Sam Spade, Ned Beaumont or the Op is telling it.

I was leaning against the bar in a speakeasy on Fifty-second Street, waiting for Nora to finish her Christmas shopping, when a girl got up from the table where she had been sitting with three other people and came over to me. She was small and blonde, and whether you looked at her face or her body in powder-blue sports clothes, the result was satisfactory. "Aren't you Nick Charles?" she asked.

I said: "Yes."

Can one imagine any of Hammett's earlier protagonists in such a domestic scenario—sitting, *waiting* for a woman, let alone a *wife*, to finish her shopping? Yet this is the first thing Hammett wants to tell us about his new hero. Nick Charles, the reader very quickly learns, is a retired private detective who spends more time worrying about his wife's investments and whether there is ice for his scotch than about the cruel vagaries of the underworld. Nick and Nora go to parties (usually with their broker) and the theater (sometimes walking out in boredom after the first act), lie around drinking (a lot) and exchanging witty quips, and sending out for food to all-night delis. Instead of poker, they play backgammon. Nora puts Bach on the record player or reads aloud to Nick from the newly published memoirs of the great Russian operatic basso Fyodor Chaliapin. They even have a dog named Asta, who makes her first appearance, in that irritable way of canines, by pouncing with her paws on Nick's belly unannounced. Asta is in effect the surrogate child of this childless couple—impulsively intruding herself between her "father" and the attractive young woman she finds him dallying with. Nora is glimpsed "at the other end of the leash"—subtly suggesting, with Hammett's typical and masterful indirection, the domestic web in which

Nick seems to be rather contentedly entangled.

The charming couple obviously owed its inspiration to the relationship of Hammett and Hellman, whom he had met in the winter of 1930-31 shortly after moving to Hollywood. Hellman was delighted, she tells us in her own memoirs, when Hammett told her she was Nora Charles, less certain how she felt when he added that she "was also the silly girl in the book and the villainess." The novel's new ambiance reflected the lifestyle that Hammett, now a successful novelist and well-paid movie scenarist, had found in Hollywood and New York, where the ex-Pinkerton operative now frittered away most of his waking life in partying with a circle of new friends that included S. J. Perelman, William Faulkner, Dorothy Parker and the brilliant pianist/raconteur Oscar Levant (who credits Hammett with introducing him to the works of the sardonic nineteenth-century American writer Ambrose Bierce).

When Hammett, in a ferocious burst of self-discipline, finally holed up in a New York hotel on East Fifty-sixth Street run by Nathanael West (*Miss Lonelyhearts*, *The Day of the Locust*) in September 1932 to pound out the second, completed version of *The Thin Man*, it was understandable that his characters and dialogue should reflect the decadent, devil-may-care world he had joined. There is even a piano player impishly named "Levi Oscant" at one of the parties the Charleses attend.

The Charleses, to be fair, are on a holiday in New York. In fact *The Thin Man* is the only one of Hammett's novels to be set conspicuously in historical time—the plot unfolds between Thursday, December 22, three days before Christmas, and Saturday, December 31, 1932. But one has the distinct impression their normal life back in San Francisco is not all that different. Nick, we are told, has not worked at his former profession for six years, having retired a year after his marriage when Nora's father died, leaving her "a lumber mill and a narrow gauge railroad and some other things." He repeatedly refuses the exhortations of an old friend, Mimi Wynant Jorgensen, his wife Nora, and others to investigate the murder of a young woman named Julia Wolf, secretary to Mimi's ex-husband Clyde Wynant. Wynant, an eccentric, possibly mad inventor who

holds many valuable patents and had gone into hiding allegedly because of the sensitive nature of a new invention he is working on, also importunes Charles to take the case in a series of letters mailed to his attorney, Herbert Macaulay, which also contain authorizations for large sums of money to be withdrawn from his bank account.

But none of this pleading has any effect on Nick, who enjoys his carefree new life (he is the embodiment of Hammett's tart reference to himself in a 1934 newspaper interview as a "two-fisted loafer"), sleeping late and limiting his exertion to opening a fresh bottle of scotch. Nick is typically lying in bed when he has his first encounter with the ex-convict, Shep Morelli, who is the number one suspect in the murder. Having tried unsuccessfully to convince the thug he is not working on the case, Nick is finally forced to act by the sudden arrival of the police, who were tipped to Morelli's visit. But where Sam Spade or the Op might have hurtled themselves into a monumental tussle with the gunman, Nick Charles tosses a pillow at him. In fact about the most violent thing Nick does in the course of the story is wrestle Mimi Jorgensen to the couch when she goes berserk one afternoon.

It is only after he himself has been shot at and wounded that Nick reluctantly agrees to investigate the murder—which he does with a mixture of patrician languor and tough-guy cockiness—not as anyone's hired man but to protect himself from whoever is trying to involve him in this case. And then, he does almost no real detective work, leaving all of the legwork and most of the actual investigating to Guild and the rest of the police, with whom he cooperates most amicably. Indeed Nick eventually solves the crime and unravels the whole strange business, almost Philo-Vance-like, without ever once visiting the scene of the crime or inspecting the corpse for himself.

Hammett's genius is that he keeps all of this from turning into a mere S. S. Van Dine novel by continually giving us haunting glimpses of another, far more serious dimension—the world of Chandler's "mean streets" where murder is "an act of infinite cruelty." A gun is not just a literary prop, it is a killing machine as real as the daily paper, a grim reminder of a world Nick Charles—and Dashiell Hammett—have left, quite grate-

fully, behind them. When Mimi Jorgensen's daughter Dorothy innocently pulls a battered automatic from her coat pocket to show it to Nick, Hammett creates an unforgettable little tableau. Asta the pup, "wagging her tail, jumped happily at it," Nick tells us. "The back of my neck was cold." And a few pages later, when Shep Morelli points another gun "very accurately" at Nick, lying there in his pajamas, Nick tells the reader he "could hear the blood in my ears, and my lips felt swollen."

The scene that immediately follows is classic Hammett—a slow-motion sequence that recalls the gun fired at the Whosis Kid (in the early Hammett story by that name) from a car going by in the rain. "Open up, Police," comes a voice from the other side of the door.

"You son of a bitch," [Morelli] said slowly, almost as if he were sorry for me. He moved his feet the least bit, flattening them against the floor.

A key touched the outer lock. I hit Nora with my left hand, knocking her down across the room. The pillow I chucked with my right hand at Morelli's gun seemed to have no weight; it drifted slow as a piece of tissue paper. No noise in the world, before or after, was ever as loud as Morelli's gun going off. Something pushed at my left side as I sprawled across the floor.

But this scene, which occurs on page twenty-six, is the only real violence—or action, for that matter—Nick will engage in for the rest of the book. Just as Hammett, after the shocking bloodbaths of his Op novels (*Red Harvest*, *The Dain Curse*), wrote a book (*The Maltese Falcon*) in which not a single killing—and very little actual violence—occurs "onstage," now in *The Thin Man* he withholds action itself. Hammett's fondness for understatement, evident in his earliest work, has finally won the day. The final word of the book, "unsatisfactory," curiously echoes Nick's use of the word "satisfactory" on the book's first page—almost as though the two words were meant to frame Nick's laidback narrative. Nick speaks the one, Nora the other; between them hangs their life together—more of which below.

Others have seen Hammett's final detective novel as merely a "lazy" book. "Unlike Hammett's previous novels in which the detective went hunting evidence, in *The Thin Man* the evidence comes to Nick Charles," writes Richard Layman in his recent biogra-

phy of Hammett, *Shadow Man*, charging that "Hammett plotted his novel like a short story then padded it into a novel." To be sure, *The Thin Man* lacks the tense feeling of organization that makes *The Maltese Falcon* such a nail-biter. There is even the odd insertion of a two-thousand-word excerpt from another book—the rather bizarre account of one "Alfred G. Packer, the 'maneater,' who murdered his five companions in the mountains of Colorado, ate their bodies and stole their money" back in the winter of 1874. Even Lillian Hellman told friends she believed the fragment, which has no ostensible connection with the rest of the novel, was simply thrown in to fill pages by a pressured Hammett trying to fulfill an overdue obligation to his publisher. The passage is taken from Maurice Duke's *Celebrated Criminal Cases of America*, which Nick pulls from his bookshelf to amuse Dorothy's inquisitive kid brother Gilbert, a brainy pest who is drawn to morbid subjects like cannibalism. Curiously, this same book was also evidently Sam Spade's favorite bedtime reading: it is the book on which Spade's alarm clock rests at the beginning of Chapter 2 of *The Maltese Falcon*. But whether or not this is some sort of hard-boiled inside joke of Hammett's, most of his critics have found it difficult to look upon the five-page digression as anything more than an irrelevant piece of self-indulgence in an interesting but flawed book.

Elsewhere in the pages of *The Thin Man*, by curious contrast, Hammett is almost painfully scrupulous in his realism. The reader never hears what is being said on the other end of a phone conversation, for instance, unless it is Nick who is holding the receiver—a subtle touch which makes a great deal of sense. And such glimpses as we are given of the underworld are marked by a crisp and highly satisfying authenticity.

The loveliest touch of all however is the central conceit of the novel itself—a metaphor as fine as any invention of Hammett's mind: the "Thin Man" of the book's title, which refers not to Hammett's dapper hero but to the elusive suspect, the mad inventor Wynant, who reminds one of the police officers of the joke about "the guy who was so thin that he had to stand in the same place twice to cast a shadow." The beauty of the metaphor is of course that Wynant, the reader learns at the end of the book, does not

even exist—has not existed, in fact, since the very first page of the story, except as a figment of everybody else's imagination—thanks to the clever machinations of the lawyer Herbert Macaulay, who has been composing all of the scientist's supposed correspondence authorizing him to raid his former client's bank account and extensive stock portfolio. Hammett clearly enjoys his conceit enormously. "What's he like?" Nora asks Nick on page nine. "Tall—," says Nick, "over six feet—and one of the thinnest men I've ever seen." One of the thinnest men, indeed. The object of all their obsessions—the figure who sends them all scurrying madly about, racking their brains and adjusting their own perceptions of reality, will turn out to be nothing but a shadow.

Ironically, the "Thin Man" of the title became almost immediately identified with Nick Charles, whose continuing adventures on the silver screen were given titles, in the all-leveling imperative of sequel tradition, such as *The Song of the Thin Man*, *The Thin Man Goes Home*, etc. A similar expediency on the part of Hollywood led to a permanent identification in the mind of the public of the name Frankenstein with the famous monster and not, as Mary Shelley had in mind, with the scientist who created him. But it was actually Alfred Knopf, Hammett's publisher, who seems to have started all the confusion by running a photograph of "Hammett as the Thin Man"—obviously meant to be Nick Charles—on the dust jacket of the first edition.

Nevertheless, it is an inescapable fact that this, the most successful of all Hammett's books, is also probably the most seriously flawed, or at least the most disappointingly from a purely literary point of view. Though the undeniably likable Charleses may well be, as Lillian Hellman has said elsewhere, "one of the few marriages in modern literature where the man and woman actually like each other and have a fine time together," their relationship is never tested. Unlike every one of Hammett's earlier heroes, Nick is never pushed to any kind of moral crisis. There is no moment of truth in *The Thin Man*.

Set beside Nick, the Op, Ned Beaumont (the gambler hero of Hammett's fourth novel, *The Glass Key*), even the "satanic" Sam Spade—maybe especially Spade—are

seen as passionate men. Nick is *too* cool, *too* detached, too well insulated from the world of feelings around him. Or maybe it is only that Hammett, for the first time, lacks the stomach (or real interest?) to test Nick's humanity in any serious way. Nick's befriending of poor battered Dorothy over her mother's shrill objections pales in comparison with the Op's devotion to Gabrielle Leggett in *The Dain Curse* or Ned Beaumont's fierce loyalty to Paul Madvig. He has even made his detective a Greek—a decision that may take on some significance in the light of a remark Hammett makes about Greeks in one of his earliest published writings, the 1923 magazine piece "From the Memoirs of a Private Detective":

Of all nationalities haled into the criminal courts, the Greek is the most difficult to convict. He simply denies everything, no matter how conclusive the proof may be; and nothing so impresses a jury as a bare statement of fact, regardless of the fact's inherent probability or obvious absurdity in the face of overwhelming contrary evidence.

In *The Thin Man* Hammett seems to be having a perverse kind of fun with this idea. "She's got so much confidence in you, Nicky," Nora says feelingly, referring to Mimi Jorgensen. "Everybody trusts Greeks," quips Nick. And a handful of pages later, an exasperated Mimi herself is telling Nick, "You're the damndest evasive man." This only a few lines before the most explicit and extended discussion yet of Nick's Greek parentage.

"You like Nick a lot, don't you, Nora?" Dorothy asked.

"He's an old Greek fool, but I'm used to him."

"Charles isn't a Greek name."

"It's Charalambides," I explained. "When the old man came over, the mugg that put him through Ellis Island said Charalambides was too long—too much trouble to write—and whittled it down to Charles. It was all right with the old man; they could have called him X so they let him in."

Dorothy stared at me. "I never know when you're lying."

But while Nick's "evasiveness" is one of the most disarming things about him, it is also finally one of the most disturbing. He moves through his current world of endless parties and almost automatic banter without ever really engaging anyone on any mean-

ingful level. (None of this admittedly would be much cause for rumination in a detective novel except in the light of Hammett's earlier fiction—in which these are issues that matter very much and are always, at some point, confronted.) He seems to hold even Nora at arm's length, occasionally interacting with her with the same fatherly (read: distancing) affection he shows to the twenty-year-old Dorothy. "Tell me the truth, Nick: have I been too silly?" Nora asks him. He shakes his head. "Just silly enough." Nick, we are told, is forty; Nora is twenty-six. (Hammett was thirty-eight, Hellman twenty-seven when he sat down to write *The Thin Man*.)

But Nick's inability to sustain a serious conversation may go deeper than that. Others have commented on the emptiness of the lives of Hammett's characters in this book, including Nick and Nora. The story unfolds over what is for most Americans the most joyful and sentimental of holidays, yet Nick and Nora's exchanging of Christmas presents is almost perfunctory. The reader has the distinct impression that not even New Year's Eve or the coming of the New Year will evoke any quickening of the spirit in the strangely deadened lives of this superficially charming couple, that it will prove no occasion at all except for another bout of silly partying and still more drinking. Indeed, there are so many references to his drinking and hangovers in the first pages of the book that by the beginning of Chapter 4 drinking has become almost a subtheme.

That afternoon I took Asta for a walk, explained to two people that she was a Schnauzer and not a cross between a Scottie and an Irish terrier, stopped at Jim's for a couple of drinks.

* * *

She scowled at me. "And stop talking to me as if I was twelve." "It's not that," I explained. "I'm getting tight."

* * *

In the next room "Rise and Shine" was coming through the radio. My glass was empty.

* * *

I said: "Let's all have a drink."

Offered a drink by Mimi Jorgensen when he drops by her apartment briefly one night, he accepts, adding, "But you'd better

make it a short one; Nora's waiting downstairs in the cab." The very first time we ever see Nick, he is sitting alone—drinking.

I was leaning against the bar in a speakeasy on Fifty-second Street, waiting for Nora

—a detail that might have been unimportant, except for the thematic importance Hammett often attached to his opening sentences—and the fact that the next morning Nick doesn't want to go out to meet his old army buddy Herbert Macaulay for lunch because he is hung over, and that he obviously drinks, by his own admission, to get drunk. "How do you feel?" Nora asks him the morning after his encounter with Morelli. "Terrible," Nick replies. "I must have gone to bed sober." "For God's sake," he says to her on another occasion, "let's have a drink." Indeed on the very last page of the novel we find Nick cracking that "This excitement has put us behind in our drinking."

Of course everybody in this book drinks—even the police—and seems to pay an inordinate amount of attention to the whole ritual (these were after all the last days of Prohibition, which was repealed a few months after the novel's publication in book form). But Nick's preoccupation with alcohol and with getting drunk is so pronounced that it almost asks for comment. One continually expects Hammett to confront the issue in some way, but he never does. Nick's drinking never leads, as it did with the Op in *Red Harvest*, to an episode of true horror and a powerful crisis of conscience. Only to a kind of comfortable numbness—which cannot help but remind one that Hammett himself, who had a lifelong problem with alcoholism, was already drinking heavily at this time. On "the night we had first met," wrote Hellman years later, "he was getting over a five-day drunk and he was to drink very heavily for the next eighteen years"—until, warned by a doctor that he would kill himself if he didn't stop, Hammett quit cold.

The author gives the distinct impression that Nick Charles is running away from something. And the only thing that seems clear is that it has to do with his past—his other life as a detective. Is it his inability to deal with his current inactivity—the loafer's life he has always thought he wanted—in contrast with the life-or-death excitement, or

even just the honest work, of his past? Is the reader seeing Hammett's celebrated proletarian hero, who has been described as the quintessential "job-holder," cut off from the life-giving force of honest labor? Maybe, though Hammett stops just short of bringing the issue into the open.

But the very point at which this novel becomes the most frustrating is also the point at which it becomes the most fascinating. For Hammett has left what seems to be an ingenious trail of clues so structural in nature as to be nearly subliminal—and from the very first pages of the book. Nick Charles is a man not only cut off from, but *pursued* by his past. Hammett's decision to begin his story at the moment he does is highly significant in this regard. It is the moment in which a person from Nick's past—more specifically, from his *old* life—suddenly enters his new life, bringing with her a whole network of old entanglements: an old affair with her mother, Mimi Wynant Jorgensen, an old case of Nick's which was never solved, and the whole cast of characters connected with it: the past, in short, as unfinished business. In deed Mimi's new husband—who seems for so long to be the one new character in the drama—turns out to be Clyde Wynant's old nemesis. "A fellow who'd worked for him accused him of stealing some kind of invention from him," Nick explains to Nora. "Rosewater was his name. He tried to shake Wynant down by threatening to shoot him, bomb his house, kidnap his children, cut his wife's throat—I don't know what all—if he didn't come across. We never caught him." But the real villain here will turn out to be yet another figure from Nick's past, his old army buddy Macaulay.

The fact that Hammett makes so much of Nick's resisting a return to his past life as a detective—even as he is sucked into a sinister new plot involving a cast of characters from the life Nick has thought he left behind—suggests we may be on the right track here. Nick has come back "home" to New York on a visit, and his past literally catches up with him. The lesson, if there is a lesson here, seems to be that one must face one's past or be destroyed by it. And on one level, Nick does face it.

But there is another theme interwoven with the first. And it has to do with who Nick really is. "Aren't you Nick Charles?"

Dorothy asks him on the first page of the novel, coming up to him at the bar. "Yes," Nick unthinkingly answers. But she soon presses her point, one that unsettles him; for she means Nick Charles *the detective*—an identity Nick has forsaken and keeps insisting is not his anymore. The later reference to his father's original name, Charalambides, is very much to the point: Nick's father had shed an older identity and become someone else. And Nora later calls Nick by that name in an intimate moment, suggesting that he too is someone other than who he pretends to be. Indeed, Nick's reasons for turning his back on his former identity as a detective are not so dissimilar from his father's in sacrificing his old name willingly for the opportunity of gaining admittance to America with all its plenty and its promise of the good life.

The shadow that has fallen over Nick's life is that of time itself: the inescapable past with its uncomfortable echoes of old aspirations and uneasy compromises, its unfinished business and its unanswered questions. One of those questions, says Malcolm Cowley, is frequently, as one grows older, who *was* I and why did I do what I did and not do certain other things? The difficult part about trying to answer such questions is that one's sense of what actually happened changes. It is in this regard that people out of one's past can be fascinating, in a morbid sort of way, like time travellers bringing news of a forgotten or as yet unknown era.

Dorothy had been "a kid of eleven or twelve" when she had known the old Nick. "I was fascinated by him," she tells Nora, "a real life detective, and used to follow him around making him tell me about his experiences. He told me awful lies, but I believed every word." Her fascination with what she believes was the romantic nature of that life is paralleled, interestingly, by Nora's. Just as Dorothy, now twenty, tries to recapture a connection with that past, Nora yearns to see her husband in action as the mythic detective he used to be: "You didn't have to knock me cold," she complains to Nick after the struggle in the bedroom with the armed gangster Shep Morelli. "I knew you'd take him, but I wanted to see it." ("I know bullets bounce off you," she says later in a more tranquil moment, realizing that he has been wounded, "you don't have to prove it to me.")

Aglow with excitement after Nick takes her to a speakeasy run by one Studsy Burke, a mobster he once sent to jail, where she witnesses a scuffle at close range, Nora blurts out impetuously: "I don't understand a thing that was said or a thing that was done. They're marvelous." And a moment later, she playfully confesses: "I love you, Nicky, because you smell nice and know such fascinating people."

Nora even plays at being a detective.

And it is great fun. In the last chapter, as Nick finally does his thing, unraveling the whole case with the insight and second-nature methods of a professional, she listens in amazement—and exasperation. "Then you don't know positively that he was robbing Wynant?" she interrupts at one point. "Sure we know," says Nick. "It doesn't click any other way." "Then you're not sure he—" she blurts out at another point. "Stop saying that. Of course we're sure. That's the only way it clicks," says Nick. "But this is just a theory, isn't it?" she interjects a moment later. "Call it any name you like. It's good enough for me," says Nick.

"But I thought everybody was supposed to be considered innocent until they were proven guilty and if there was any reasonable doubt, they—" objects Nora. "That's for juries, not detectives," Nick tells her, followed by a thumbnail dissertation on the way real detectives work:

You find the guy you think did the murder and you slam him in the can and let everybody you know think he's guilty and put his picture all over the newspapers, and the District Attorney builds up the best theory he can on what information you've got and meanwhile you pick up additional details here and there, and people who recognize his picture in the paper—as well as people who'd think he was innocent if you hadn't arrested him—come in and tell you things about him and presently you've got him sitting on the electric chair.

It comes down to a question, says Nick, of what you choose to believe—because the facts don't "make any sense otherwise." The problem of *belief* runs throughout *The Thin Man*. In fact the word itself crops up constantly.

"He told me awful lies, but I believed every word."

I believed in her bewilderment, though both it and my belief in it surprised me.

* * *

"I don't believe it," she said. "You made it up. There aren't any people like that."

* * *

"... as long as she can get anybody to believe in it. And you, of all people, to be fooled, you who are afraid to believe that—well—that I, for instance, am ever telling the truth."

* * *

"This doesn't have to've happened," I reminded him. "It's what Gil says happened."

In fact it is Nick's inability to *believe* in the motives implied in Wynant's "letters"—a kind of "tenth clue"—that drives him to suspect there is something fishy in the whole setup.

This thematic concern may even explain Hammett's inclusion of the strange "Alfred G. Packer" digression. Young Gilbert, like us, is "disappointed in the story I had given him." "It's very interesting, but, if you know what I mean, it's not a pathological case," says Gilbert, who has evidently decided to dismiss Packer's own later admission that he had, subsequent to murdering the first of his snowbound companions, grown "fond" of human flesh. "It was more a matter of that or starving," reasons Gilbert, rejecting the episode as a case of true cannibalism. "Not unless you want to *believe* him," says Nick simply (*italics mine*).

Hammett has moved, in the course of his five novels, from the Op's compulsive litanies rehearsing all the possible *scenarios* of what really happened . . . to juxtaposing various characters' *versions* of what happened. In *The Thin Man*, we have Macaulay's version, what is thought to be Wynant's, then Mimi's, then Jorgensen-Rosewater's, and finally Nick's. Nick might have seen through the tissue of lies sooner, he apologizes, "only I was a bit too willing to believe she"—meaning Mimi—had planted a certain piece of evidence at the scene of Wynant's secretary's murder.

Young Gilbert is constantly asking Nick, in effect: Is all of this *true*? Do such things really go on in the world? Do people really eat other people? What does it *really* feel like to be stabbed? shot? ("You only feel the blow—and with a small-calibre steel-jack-

eted bullet not much of that—at first," Nick tells him. "The rest comes when the air gets to it"). "Listen: remember those stories you told me? Were they all true?" Dorothy asks Nick at the beginning of the book; but when Nora finally learns at the end of the novel how real detectives work, she finds it "all pretty unsatisfactory."

The American public, on the other hand, found it all quite satisfactory indeed—to Hammett's great profit (he is estimated to have earned nearly one million dollars from the book and its spin-offs) and to his demise as a serious artist. For though Hammett would live for another twenty-seven years, *The Thin Man*, published when he was only thirty-nine, was to be his last novel. Hammett would help develop a highly successful—and seemingly endless—series of films, radio and TV series based on his characters, even collaborate briefly on a comic strip called *Secret Agent X-9* with artist Alex Raymond, the creator of Flash Gordon, but the highly influential series of detective novels begun in 1929 was at an end.

Even as Hellman was finishing her first play, *The Children's Hour*, Hammett was grinding out the story line for the first Thin Man movie sequel, beginning a long and frequently wistful second career of cannibalizing his own work for money. Why he stopped writing books has been the subject of intense speculation for decades. His alcoholism? Perhaps. But that is less an answer than another question. The ease with which he now found himself able to make money—a commodity he reputedly went through like water—without having to work as hard as in the past seems to have been another factor. Some would say he had passed into his "mentor" phase and was now pouring his creative energies into teaching Lillian Hellman how to write and molding her (through the most rigorous coaching) into an important playwright. Others, that he was simply tired of fame, of success American-style, and all the hypocrisy and easy superficiality that went with it—which took away his heart for serious work. But *The Thin Man* itself may offer other important clues, for it stands squarely in the midst of the often exasperating tangle of paradoxes that was Dashiell Hammett.

There is a sense in which Hammett's last novel, whatever else it may have been,

was also his own literary obituary for himself. For if *The Thin Man* is on some level the story of a man who is trying to leave his past behind but still finds himself haunted by it, Hammett found himself in the early thirties in a very similar situation.

Lillian Hellman believed Hammett had been made to feel ashamed of his books—mere detective stories—by the literary crowd they now moved in, especially once her plays began to create interest in New York. Ironically, the fact that he *wrote* detective stories was no doubt one of the very things about Hammett these people found so charming. But he came, Hellman felt, to look down on his own work as somehow less worthwhile than theirs, something unworthy of a writer of his obvious gifts. And yet he found himself unable to make the transition from that material he had once felt so comfortable with to the stuff of regular “literature”—though his life was rich enough with such material.

“I’ve been in a couple of wars—or at least in the Army while they were going on—and in federal prisons and I had t.b. for seven years and have been married as often as I chose and have had children and grandchildren,” Hammett would write in a “serious” novel entitled *Tulip* which he began shortly after he was released from prison and which he abandoned in 1953, “and except for one fairly nice but pointless brief story about a lunger going to Tijuana for an afternoon and evening holiday from his hospital near San Diego I’ve never written a word about any of these things. Why? All I can say is they’re not for me. Maybe not yet, maybe not ever. I used to try now and then,” says Hammett’s narrator, a fifty-seven-year-old blocked writer like himself, out duck hunting with an old army buddy from the Aleutians, who is trying to start a new book, “—and I suppose I tried very hard, the way I tried a lot of things—but they never came out meaning very much to me.”

This final, maddening mystery eluded the man who had made a career—in fact two careers—out of solving mysteries. Is it possible that, just as the Op is made to confront in *Red Harvest* the question of what is happening to his humanity, *The Thin Man* was an attempt, perhaps not even fully conscious, on Hammett’s part to deal with what had been

happening to him? Nick, the reader is told, has quit the detective business to look after his wife’s financial interests; by the time he appears, he has become quite thoroughly distracted by the family investments, which need constant care and watching over, though they demand a minimum of exertion on his part. Hammett himself had, in a sense, “retired” from the business of serious writing, devoting the better part of his energies now to cultivating Hellman’s promise and to looking after his own literary properties. Only reluctantly was he, like Nick, coaxed out of retirement to gratify his fans with one more dazzling performance.

And just as Hellman, the woman in Hammett’s life, inspired not only Nora but “also the silly girl in the book [Dorothy] and the villainess [Mimi Jorgensen],” it may be that Hammett lurks behind not only Nick but also the vanished inventor Clyde Wynant, the “Thin Man” of the title. For there was also a sense in which a part of Hammett—someone he had been once, an inventor of ingenious things no one had hitherto imagined—had slipped away while everyone was looking and become little more than an illusion, a ghostly presence barely capable of casting so much as a shadow. For years the radio shows and movies kept up the illusion of his presence; the fact is that by the day in 1951 when *The Adventures of Sam Spade* finally went off the air he had been gone for years.

His publishers may not after all have been so far off the mark: the Thin Man would become a fitting image, more fitting than they could have known, for the aging Hammett—gaunt, mysterious, a stoic, almost ascetic figure who increasingly indulged himself in “rich refusals” until he was little more than skin and bone. By then prison had broken his health and he knew he no longer had the energy to write a real book again—his kind of book—a book like the ones that had captured the imagination and respect of literary figures on both sides of the Atlantic, and had changed forever the landscape and the possibilities of the detective story. “If you are tired you ought to rest, I think,” he has the old writer tell the younger man in the *Tulip* fragment, “and not try to fool yourself and your customers with colored bubbles.” It is the last sentence in the manuscript.

Laura Martin

Gringa in the Field

An anthropological linguist struggles to record a dying Indian language

Many people think of academic research as something that happens in libraries or laboratories. But there is another kind of research that can take place in an adobe hut or a crowded market, and under unfamiliar and uncomfortable conditions. This is research "in the field"—a way of gathering knowledge that not only challenges the intellect, but also tests the researcher's physical stamina, resourcefulness, and emotional stability.

By training and experience, I am an anthropological linguist: I study languages in their cultural contexts. Often researchers in this discipline investigate languages that have had little or no previous scholarly attention. They gather their materials within the communities of speakers who use the language—communities often located in remote areas of the world. Anthropological linguists, then, are among the researchers who frequently go into the field.

My own previous field experience was mostly in the Guatemalan town of Santa Eulalia, where I worked on Kanjobal, a member of the Mayan language family. There are about thirty languages in this family, and they carry an ancient and proud cultural heritage. Earlier forms of some of these languages were spoken several thousand years ago by the Mayans, whose temples at Palenque and Tikal remind us of their civilization's great architectural and scientific achieve-

ments. Their system of written hieroglyphs, long believed to be undecipherable, is now beginning to be understood as the representation of an older form of some of the modern Mayan languages.¹

Today, millions of Guatemalan and Mexican peasants still speak languages that belong to this fascinating family. Many speak only a Mayan language, but some also speak Spanish, the national language of both Mexico and Guatemala. A number of the Mayan languages have received detailed grammatical descriptions only very recently, and some have not yet been studied. My own work on Santa Eulalia Kanjobal was the first full-scale study of that language.²

The Mayan languages have no close relation to any other language group in the world, including the other Indian languages spoken around them. Though they show many similarities with one another, just as English and German do, speakers of different Mayan languages are as unintelligible to one another as speakers of English and German. Each language is distinct and reflects its own history and genius.

Within the past twenty years a very active group of young linguists—many of them working through the Proyecto Lingüístico Francisco Marroquín, an Indian-run language school and research center in Antigua Guatemala—have done intensive analysis and description of languages in the Mayan

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family, producing a number of valuable articles, dictionaries, and grammars. Speakers of some Mayan languages such as Quiché have begun large-scale literacy projects so that they can record their own folklore and develop their own community expression. Similar work in Mexico has led to the development of active local literary traditions, as among the Tzotzil, who publish translations and original works in their own language.

While this sort of effort has received some government support in Mexico, the situation has been very different in Guatemala. Indian communities there have come under violent attack by the national army and unofficial paramilitary groups. With the acquiescence of the government, many Mayan Indians there, especially those who have received some education or have been politi-

cally active, have been the targets of violence. Many of them have "disappeared" or have fled as refugees to other countries. The social and political circumstances in Guatemala, especially the inequality between the small upper class and the large impoverished Indian population, are similar to those throughout Central America, but the Guatemalan situation has been exacerbated in recent years by the increasingly strong community activism among Indians.

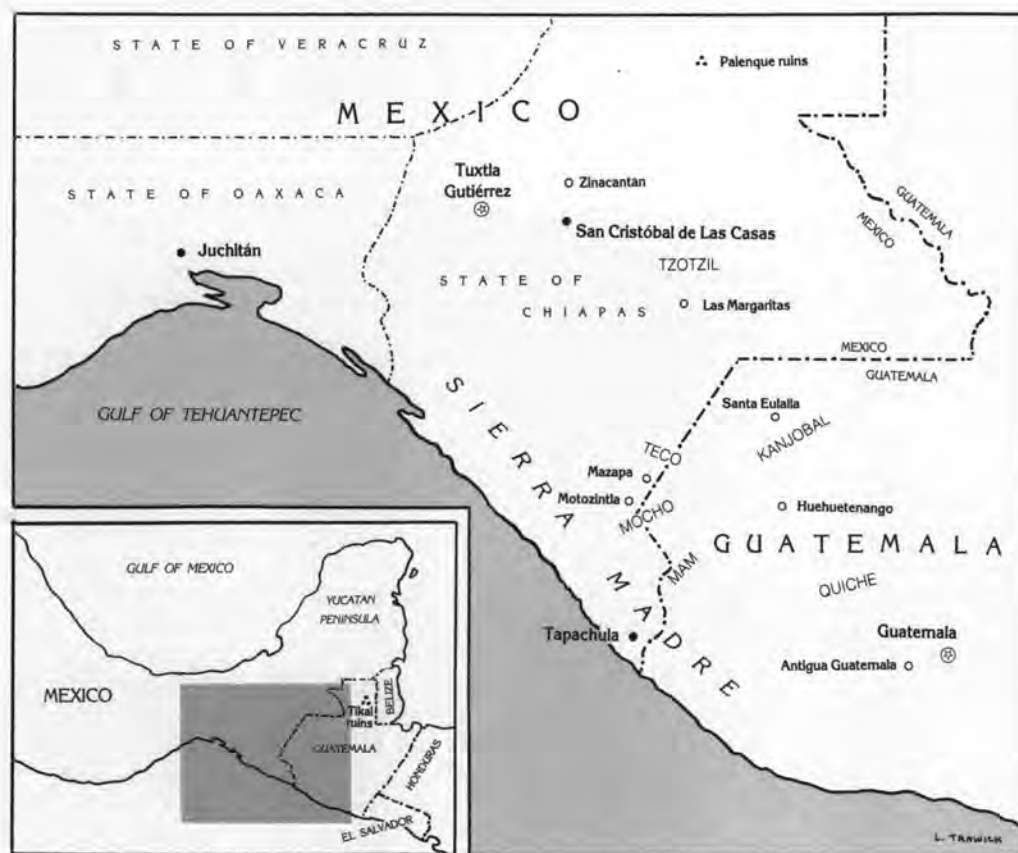
Events in neighboring Nicaragua and El Salvador have been seen as threats to the traditional power structures in Guatemala. The Guatemalan military government has undertaken systematic war against its own population in an attempt to undermine community organization and repel what it perceives as Communist-inspired political activ-

Some of the best-known Mayan languages include the following: *Quiché*, spoken by more than five hundred thousand people in central Guatemala and the language of the writers of the mythic Mayan folk history, the *Popul Vuh*³; *Maya* or *Yucateco*, spoken by several hundred thousand people in the Yucatan peninsula in Mexico; and *Tzotzil*, the language of the residents of Zinacantan, a town in the southeastern Mexican state of Chiapas and one of the best-studied indigenous communities in the western hemisphere, thanks to the Harvard Chiapas Project which began sending social scientists there in the late fifties.⁴

Among the more interesting peculiarities which Mayan languages do share is the use of a large class of words known as *positionals*, words which describe objects according to their shape, texture, or orientation in space. In Kanjobal, for example, there are several different "positionals" which can be used to refer to "round things": *sop* ("cylindrical and thick, like a swollen thigh"); *jol* ("cylindrical, but long and pliable, like a snake or a noodle"); *suy* ("circular, flat and rigid, like a wheel or a griddle"); *pit* ("a very small round thing, such as a marble, just lying someplace"); *pux* ("round, short and looks as if it is filled with air, like a ball or a clay water jar"); *tis* ("round and wide, like the feathers of an angry bird"); *biq* ("cylindrical but limp, like a sleeping person or a rope"); and *txil* ("a lot of small round objects scattered over an area, like fruit fallen from a tree"). These roots can be used (in slightly altered forms) in verbs, adjectives or nouns; English and other Western European languages have no counterpart for them.

Another feature found in some Mayan languages, including Kanjobal, is a small set of "noun classifiers," words which are like definite articles except that they classify the nouns they refer to according to sex, age, and social status when they refer to people, and according to substance of which they are composed when they refer to objects. In Kanjobal, for example, the words for "leather shoes," "cow," and "steak" would all be preceded by the classifier *no* [?] which marks animals and animal-products (the [?] is a phonetic symbol for the sound called a glottal stop).

Mayan languages place a heavy emphasis on possession—nouns belong to grammatical classes depending on whether they refer to things which must be possessed (your arm, for instance), can never be possessed (e.g., a star), are possessed by objects and not humans (e.g., tree bark), or may be possessed or not. The Mayan family pays less attention to number in nouns—their form does not show whether they are singular or plural.



Southern Mexico, showing places and Mayan languages mentioned by the author.

ism. Some Guatemalan towns with especially strong local organization or with a reputation for rebellion have been destroyed and whole groups of people have been forcibly relocated to new "model towns" under military jurisdiction. The visibility of some Guatemalan leftist guerrilla organizations, such as the Guerrilla Army of the Poor, has allowed the government to cloak much of its activity in the rhetoric of anti-Communism, but many observers trace the current brutality against the large Indian populations to social and economic factors that date back to the Spanish conquest.⁵

One of the consequences of the decade-long civil unrest has been a loss of momentum in the documentation of Indian languages which had begun so well in the late sixties. Conditions have been inhospitable for foreigners and for Indians who have contact with them. Especially discouraging is the fact that the disruption of community life which has affected so many of Guatemala's Mayan groups over the past few years means

that much of the work can now never be completed. Some of these languages will become extinct without ever having been adequately recorded.

Kanjobal, when I began working on it in the early seventies, had some forty thousand speakers, living in Santa Eulalia and three other towns in the northwestern Guatemalan department of Huehuetenango. It had never been studied by a trained linguist. I lived in Guatemala for twelve months in 1972-73 and returned for shorter stays in 1975 and 1978. Though I had been engaged in other projects since then, I still felt drawn to the area and to field work.

I knew that many Kanjobal speakers had left Guatemala and were living in southern Mexico, so I decided to go there to see whether it would be possible to continue research on the language with these immigrant speakers. My information, while incomplete, suggested that I might be able to locate groups of speakers who would be willing to serve as "informants"—the native speakers

who provide the language data and who are thus necessary collaborators in linguistic analysis.

My particular interest was the structure of narratives in Kanjobal. I hoped to record stories from a large number of speakers and examine these texts for clues about the way in which Mayans organize various types of discourse. So it was that, in mid-January, 1984, I left Cleveland for southeastern Mexico to do linguistic research in the field.⁶ With me were Nora England, an old graduate-school friend (now at the University of Iowa), also working on Mayan languages, and Kathy Fobes, a former student of mine now serving as a research assistant.

Our destination was the old colonial town of San Cristobal de las Casas, located in the Mexican state of Chiapas. I had visited here briefly in 1977, but the area and the town were not well known to me. Even though I was an experienced field worker and was confident that my control of Spanish was adequate for almost any encounter, there were still many unknowns to consider as I prepared for my six-month field stay. For example, I was unable to anticipate which "essential" objects would be available in the remote regions where I expected to travel. I decided to take my chances with the shampoo and toothpaste, but to guard against real disaster I packed a dozen notebooks and a collection of good pens. A linguist can make do with baking soda for tooth-brushing, but six months of bad paper and leaky pens would be intolerable!

Even more disquieting than the availability of Earl Grey tea, of course, were the potential difficulties involved in long-term residence and research in a foreign country. Many of the details of proper behavior which I had learned to use in Guatemala were sure to be inappropriate in Mexico, and the exact process by which I might find the refugees who were necessary to my research was still unclear. I was sensitive to the fact that most of them would have survived harrowing personal experiences at home and would be illegal residents in Mexico. I hoped that my now rusty Kanjobal along with my former contacts and experience might be enough to get me started; but if asked, I might have confessed to a great deal of fearfulness about the task I was committed to undertake, and to general uncertainty about the traveling, liv-

ing, and working conditions I would find. Every field worker knows that each field situation is unique and the research one plans to do is never what actually gets done. Field work is often a crash course in thinking on your feet.

I had determined to try to record the progress of my work and my own reactions to it by keeping a personal journal, and with my first entry, written soon after arriving in San Cristobal, real field time had begun.

Journal entry: Wednesday, January 18, 10:30 p.m. *Enormous feelings of anxiety dissipated completely on the plane. The seemingly endless block of time ahead and the abstract fears and dreads suddenly convert themselves into discrete tasks and manageable moments. At worst, one simply "gets through it"; at best, the satisfaction of surviving another small trial becomes the pleasure of success. International travel offers many opportunities for satisfaction, I guess. Of course, the "expect the worst—you can't be disappointed" system proves its worth at every turn!! Our previously reliable Mexico City hotel was unexpectedly a pit, unable to produce three cold drinks at 11:00 p.m. or breakfast at 7:30 (we're still on Cleveland time, I guess). On the other hand, the house—much anticipated but hardly imagined for fear of excess optimism—has turned out to be a *maravilla!* A lovely location with plenty of flowers and a view of the tiled roofs of San Cristobal, well-equipped and comfortable (won't have to spend as much as we had thought to make it habitable), lots of light and work space. It's hardly like being in the field at all! (I'm sure that feeling will come soon enough.)*

I had agreed to share a rented house in San Cristobal with Nora, who was hoping to begin linguistic research on Teco, a nearly extinct language related to Mam, the Guatemalan Mayan language which she had investigated for more than ten years. Nora and I had originally decided to establish ourselves in San Cristobal because of the amenities which previous field experiences in Central America had taught us to appreciate: reliable water and electricity; variety of available food and the opportunity to maintain our own kitchen; a highland climate (7000 feet); and, of special importance to me since I proposed to work with illegal immigrants, the considerable anonymity to be found in a large town. We also foresaw the advantage of

friendly support in sharing the burdens of the inevitable feeling of being "foreigners," especially single, female foreigners in a cultural climate which does not encourage much female independence. In the Indian towns of Guatemala, we had each had the experience of being the first non-native women to live in the community. We were so unlike the native women that to some extent we simply did not count as women at all. Such isolation leads to intense loneliness, but in some ways we found that preferable to living in a town where tourists were frequent enough to create expectations we did not care to fulfill. Nora and I anticipated, correctly, that both in San Cristobal and in the outlying towns where a female researcher would be the subject of greater curiosity, we would each be glad to have the companionship of another American professional woman when dealing with the frustrations of "culture shock."

My research assistant, Kathy, had come along to gain some field experience and improve her Spanish. Responsibility for her was another kind of burden, but one I gladly undertook in exchange for the useful clerical help she could provide.

Once we had all arrived, with our projects defined and our energies high, we wanted to begin work at once. In doing field work, however, other tasks come first.

Journal entry: Monday, January 23, 2:15 p.m. Household situation has occupied most of our efforts during the week. Miscellaneous shopping—clothespins, pencils, food—a little bit every day and always more time required than can be imagined or planned for. And the process of discovering where unusual items are to be found is tiring as well We've all had "final straw" moments when we wonder what we're doing here. Mine came late in the week at a dry goods store near the market: I waited for fully twenty minutes for my change (no one in Mexico ever seems to have any), after an exhausting negotiation over the price of thirty meters of clothesline—which turned out to be sold by weight! No wonder I couldn't get the details straight.

Both Nora and I had personal reasons for wanting to become informed about the refugee situation in Mexico. While living in Guatemala, we had formed many strong friendships with members of the Mayan communities where we had worked. We

were naturally concerned about the welfare and current whereabouts of people we had known well and who had been so important to our research successes. We joked about the likelihood that we might meet people we knew just by sitting in the San Cristobal central park for a few hours every day! The presence of a large number of refugees inside Mexican borders was a source of national embarrassment to Mexican officials, as we well knew, and we were circumspect about our inquiries. We first approached a private refugee aid organization, CARGUA (*Comité de Ayuda a Refugiados Guatemaltecos*) which was based in San Cristobal and whose staff had regular access to the official refugee camps established by the Mexican government close to the Guatemalan border.

Journal entry: January 23, continued. We began work in earnest a few days ago with a visit to a local private refugee aid organization. A very pleasant, busy office with very helpful staff. Depressing in the extreme though . . . walls covered with clippings reporting dreadful conditions in the refugee camps along the Mexican border and worse ones inside Guatemala . . . camp photos of the usual undernourished children, universal victims of war conditions everywhere . . . huge maps with the camps, now counting into the forties, marked by numbered pins . . . piles of donated goods—clothing, supplies—and on top of it all, two large bags of rubber balls. I know that the children need recreation as well as food, that boredom is one of the chief problems in the camps; still, it was heart-breaking to me to imagine the hundreds (estimates now exceed one hundred thousand refugees on the Mexican side) of homeless, sick and needy little kids receiving those four dozen beach balls. I wonder if I can really handle what this project means. We were there again this morning. The border situation sounds very grim and Kanjobales seem to be scarcer in this region than I had assumed. Not much so far but we have more contacts to make, more names, more places to try. Nora's project looks promising, except for the prospect of border hassles. Guatemalan army incursions are apparently commonplace in some areas. Meanwhile, we continue to enjoy the house (especially the fireplace—it gets cold here!) and wonder how it is that we feel as if we've been here a month already. We all want to get on with the work, get a schedule, get busy. My main problem now is to maintain that energy long enough to find work to do.

The news about the Kanjobal refugees was daunting. The camps, formerly open to anyone with transportation in, had recently been closed to non-Mexicans, and in any case, the conditions described to us by those who still did have access were frightening: new, unusually virulent strains of malaria, rampant tuberculosis, dysentery, and other diseases caused by close quarters, low resistance, and poor nutrition. There were even reports of terrorist activities from the Guatemalan side. And the prospects for locating non-camp refugees seemed dimmer than expected as well. Increased surveillance by Mexican authorities suggested that it would be difficult to locate them, difficult for them to travel to me and for me to spend the time with them which would be necessary for the collection of the stories I needed. After only a week in the country, I had to face the possibility that I might have come all that way with a research project that I would not be able to begin, much less complete.

I continued to make contacts around town with people likely to know about the possible location of Kanjobales and made plans to go with Nora to the Teco towns, located south of San Cristobal and very close to the Guatemalan border, but on the whole, it seemed an unlikely beginning. But I also began to think about the possibility of an alternative project, perhaps on a different language. On the positive side, we began to feel that we were getting some control over the bothersome, but essential, details of daily life in our new setting.

Journal entry: Wednesday, January 25, 9:15 a.m. Yesterday was very productive! The garbage truck finally came—we've learned to recognize the cowbell which announces its arrival, but are so far unable to discover a schedule. We also did the daily marketing—we still love the San Cristobal outdoor market and having fresh oranges every day is a real treat, but the beggars and the pig heads do take their toll! We made a courtesy call at CIES

wēt kitōk'le hūne kwēntō, wābīn hūne? tiradór || tiradór
yo contō contar un cuento mi cuento de los tiradores el tirador

'ong ti montānyā || xaha 'ōk hūne silpyēntē || 'e txāwī he,
se fue a la montaña + encontro con una serpiente en la montaña

'ayī āwēt txōma txāmaha' txik'i ti montānyā, xki
(=Sp) yo tū saber que estábamos pasando en la montaña dijo

4 silpyēntē || mōtxō; xkik'ātān kasār, || 'ik'agin (te'ēl)
la serpiente a nada yo estoy casando || ce ~~travieso~~ travieso

txibēl. te tōng, ya hodido hi'in || 'aki rrōka ti wīng,
debajo de esta piedra porque estoy jodido yo vino la piedra encima

xki silpyēntē || kwēno 'kwik'agin te'ēl xīn, pwe mu kalo'agin
dijo la serpiente Bueno el voy a hacer sacos pues pues no me daña

|| kwēno, 'k'ē te'ēl. txū we tiradór. || la 'aki tā silpyēntē he,
Bueno (fue llevado) por el tirador || uno la serpiente (sic) si ase

'tsāni niākagin te'ēl txibēl. te tōng, kon un 'oyen xi kon un
nar that. = āwik'agin sacos. debajo de esta piedra con un bien se hace y con un

ahra ya me ~~hizo~~

Leaf from a linguist's worksheet: Terrence Kaufman's transcription of Mocho speech with Laura Martin's translations into Spanish underneath.

(Centro de Investigaciones Ecológicas del Sur), one of the ubiquitous government-sponsored regional research agencies. We spoke with María Elena Fernández Galán, a CIES librarian with some background and a strong interest in linguistics. Nora and I heard about her from another Mayanist who thought that she had been doing some linguistic work on Mocho, a language I know nothing about but which is spoken near the Teco towns. Actually, it turns out that she hasn't done anything after all and is really interested in learning more about linguistics. My mind is whirling with contingency plans! The arrangements are nearly complete for tomorrow's excursion to Teco (and Mocho!) land—through the middle of refugee territory as well. The next few days may tell the tale.

The usual field technique for linguistic work involves a collaborative process between the linguist, who asks questions based on tentative analytical hypotheses about the structures she has observed in a body of language data (stories or conversations, for example), and the native informant, whose responses to the linguist's questions confirm the hypotheses or lead to their reformulation. During this process of questioning, the linguist may suggest a form or a sentence, eliciting the informant's judgments about its acceptability and confirming its meaning through translation or a description of context. At other points in the analysis, the questions may focus on some syntactic construction whose precise structure or function is not yet clear. In such a case the linguist will ask the informant to create contexts for the sentence, or to paraphrase it, or to transform it in some way—make it negative, make it passive, and the like.

While all this conversation is going on, the linguist is writing down what the informant says, including the grammatical judgments. For a language without a written tradition, the linguist may have to invent a new alphabet, but in the early stages, she transcribes the informant's words using a phonetic script in order to capture all the phonetic details which will be needed for an analysis of the sound system. Linguists sometimes record even the earliest work sessions on tape and review them later, but most linguists work directly from the informant's speech, at least at first.

Whatever the details of any specific work session, the process of informant/lin-

guist interaction is a largely mental activity which requires patience and intelligence on the part of the informant as well as the ability to react to his language as an object of study rather than as simply a behavior that he takes for granted. Strengthening that ability in an informant and adapting to the personal dynamics of the elicitation process is a major part of a linguist's initial work on a language.

The success of a field linguist's enterprise often depends, therefore, on the opportunity to select good informants. Nora was anxious to visit the Teco towns in order to meet likely people and begin her own project. Partly to provide her with company and partly because the towns were close to a major route for Guatemalan labor migration into Mexico, Kathy and I decided to accompany her. We originally planned to spend the time asking around about Kanjobales, but since we had learned that Mocho was spoken in the same area, we thought we might be able to find out something about that language as well.

The Teco towns were located very near Motozintla, a big crossroads town very near the Guatemalan border. Since Mazapa, the town Nora most wanted to visit, did not have either lodging or food service, we put up in a Motozintla hotel for three days. This circumstance was especially convenient for me since Maria had told us that the remaining few hundred Mocho speakers lived in the outskirt neighborhoods of Motozintla. While Nora spent her time in Mazapa meeting municipal officials, explaining her interest in their language and interviewing potential linguistic informants, Kathy and I walked through the Mocho *barrios*, or semi-independent neighborhoods, trying to find speakers and hoping to locate some of the refugees that everyone had assured us were hiding in the outlying areas of town.

We were happy to discover that Motozintla was a surprisingly usable town for field stays: there was an acceptable restaurant where the food not only tasted good but did not make us sick. The hotel was better than we expected—at least the rats hadn't eaten the electric wires as they had in a Guatemalan *pension* where Nora had once stayed! The road was in fairly good repair—only two serious rock-slide areas—and the trip down and back was uneventful, although we did resent the special attention

that the Mexican immigration officials seemed to give to the process of asking three *gringas* for their papers.

The most significant event for me during the first trip to Motozintla was the discovery of Guatemalan refugees there. While walking through some of the residential areas outside the main town center, I took advantage of my status as a well-observed stranger to engage some of the observers in conversation. After all the proper greetings and comments about the heat, I explained that I was interested in Mocho and was hoping to find someone who might teach me a few words. People pointed out the households of Mocho speakers and told me the names of some "good" speakers and wanted to know why I was interested. I said that I had worked on a similar language in Guatemala but was afraid to go back there now and so was trying to find out how much Mocho might resemble the language I already knew. By this method, a sort of "on the hoof" piece of ethnographic detection, I managed to talk my way into a well-hidden refugee compound several kilometers outside of town.

When I went in, I was astounded at the reception I received from the fifty or so inhabitants. Many of them turned out to be from the Mam town where Nora had worked, and some were from a town near Santa Eulalia and were speakers of a language very much like Kanjobal. Although I had not studied that language, my Kanjobal greetings were understood. The people greeted me with all the pleasure and traditional Mayan hospitality that I would have expected from them in their own towns.

But they were not in their own towns; they had come to live in that place only after long and dangerous trips on foot, abandoning their homes to escape violence and bringing with them only what they could carry. Many were young widows with small children, eloquent testimony to the success of the effort to destroy potential Indian leaders. It occurred to me to wonder why people who had found at least temporary safety after brutal treatment should be gentle with a stray *gringa* whose well-observed presence in the area could conceivably be a threat to them. The very normality of their greetings seemed naive to me at the time; in retrospect, I find reassurance in what it reveals about the resilience of the human spirit and the binding

strength of the social contract. As I looked around their little squatter settlement, I saw evidence of both essentials of Mayan life: subsistence cultivation and community organization. Some members of the group had been living there, hidden from official view, for as long as two years. And there I stood—a stranger to them—surrounded by smiling, cheerful people who looked for all the world as if they were glad to see me! I think I have never experienced such thoroughly conflicting emotions.

Excerpt from letter home: January 30. *I couldn't believe how easily I had located them. I also hadn't realized how powerfully affecting it would be to talk with people from towns I had known, even if I couldn't get specific information about individual people. Shortly after I arrived, a young man turned up that I still can't place: some kind of unofficial aid person? a more sophisticated refugee? one of the "guerrilla subversives" we've all heard so much about? This guy was not naive, or trusting! The subsequent conversation—me with the stresses of relief at finding them in such good shape, fear for their continued safety if they were so easy to find, fear for my safety if this new dude didn't like my story, an overwhelming desire to relieve their fear that I might expose them—was one of the most intense and scary experiences I've ever had.*

I did in fact manage to reassure the "new dude" that I was harmless, mostly by persuading him that I had found the group by accident rather than design, and when Nora and I met again at lunch, she was a sympathetic, and envious, audience for my tale of adventure. I'll admit that it made a more dramatic story than her account of finding two good Teco informants. She could also comprehend my small expressions of self-satisfaction with the success of my strategy for finding refugees—and the more complicated success of getting out after I had done so. After all, an essential quality in any fieldworker must be the willingness to take risks in support of one's research goals, and a central skill is the ability to win the confidence of strangers.

But I had begun to fear that the statement in my grant proposal that "the status of Kanjobal speakers now in Mexico will no doubt make the process of finding potential contributors and establishing rapport more



Street scene: Guadalupe, a *barrio* or neighborhood of Motozintla, where the author found Mocho spoken. Photo by the author.

difficult" might have been a serious understatement. Meanwhile, my forays around town had put me in touch with Mocho speakers who were willing to "teach" me the language. My interest in Mocho was already becoming engaged, even though I had only collected a few words as part of the process of interviewing potential informants. I returned to San Cristobal still committed to the Kanjobal project, but having hired two men to come to work on Mocho, just in case!

Journal entry Thursday, February 2, 6:00 p.m. *María has become very enthusiastic about joining me in a Mocho project. She has been very helpful and supportive to all of us: she has brought us books from the CIES library (a Mocho dictionary was done years ago by Terrence Kaufman which should be useful); introduced us to contacts around town; and made some suggestions about locating Kanjobales. We were at her house for dinner right after we got back from Motozintla, when one of her efforts paid off in a way I don't think even she expected. A Spanish Dominican, a friend of hers and heavily involved in the church-sponsored refugee aid program in a large camp*

near Las Margaritas, was so taken with the idea of people hunting Kanjobales for scholarly purposes that he came, during dinner, to see if we could make a deal: sanctioned entry into the camps for me, in exchange for my (full-time?) help to the religious aid people there. (I gathered it would involve some medical assistance, sanitation work and some instruction in nutrition or whatever, but the details were very unclear.) At first he was not too straightforward about the proposal and we had an altogether unnerving discussion, full of all the subtlety and indirection which is possible in Spanish, with its convoluted passives and unspecified third persons! (My Spanish is certainly getting a workout, even if my Kanjobal isn't!) While I was trying to guess what he might be up to, he evaluated me—especially, I think, my motivations—and seemed to look for ways to persuade me. My whole research project seemed to be at stake. I was anxious to hear him out, but I feel as if I'm in a perpetual state of conflict these days. It's so difficult to balance the intellectual issues (what did I come here to do? what could I really get done under such circumstances?) with the selfish ones (an adventure! an unparalleled opportunity!); the pragmatic ones (living in a refugee camp?! malaria!

hepatitis! typhoid!) with the emotional ones (I want to help, to do something, but can I stand it? could I bear it? does that matter? would failure be worse?) All of it is complicated by the excitement of the new possibilities (less strenuous possibilities at that!) offered by Mocho. I am still dithering, still hoping for Kanjobales to drop into the patio—no risks and no adventure. Maybe the priest will eventually turn over the two that Maria thinks he has right here in San Cristobal—if he likes my act . . . if he can take no for an answer . . . if I can give it. Meanwhile, Nora's informants arrive Sunday; we still must find lodging for them, but any minute now, the work (or some of it, at least) will begin. Now we are just waiting: waiting for informants, waiting for mail, waiting for it to get warmer, waiting to make up my mind.

The dilemma of what to do about the original Kanjobal project eventually resolved itself when no Kanjobales ever appeared. I decided that the camps were not a possible place for me to work after all, and the Mocho speakers arrived in San Cristobal for a few days' work. I still wonder what important linguistic data is going unrecorded in the camps where Mayans from so many different language groups are inventing makeshift new social structures and struggling for communication and a sense of community. I wonder what opportunity I might have had to document the lives and experiences of that voiceless group of victims still holding onto humanity under conditions of tremendous stress. I wonder what I might have said to the priest's offer if I had not been still recovering from the emotional drain that a short meeting with just a few, relatively prosperous refugees had been for me and if the discovery of Mocho, moribund and almost without scholarly documentation, had not provided so convenient an escape route for a linguist who found that her lust for adventure had unexpectedly finite limits.

In any case, what had begun as a sort of temporary project to occupy me while I waited for the Kanjobal project to materialize became instead the focus of my research. My first language helpers, a man in his fifties who still spoke Mocho at home with his wife, and a much younger man whose fluency was very limited but who was interested in the development of reading materials in the language, were not very successful informants. What I could pay them was not as much as

they could earn at their regular work as masons, and after several hours they found the process of data collection boring. When I had interviewed them in Motozintla, I had collected a short list of words without any difficulty, but neither man was sufficiently fluent for me to be able to get very far in the collection of dialogues or stories. I was beginning to learn about the difficulties of studying a dying language.

Mocho speakers, never very numerous, have been surrounded by Spanish speakers for centuries. They have been taught in Spanish in schools and encouraged to adopt Mexican ways rather than maintain their Mayan traditions. As a result, all remaining Mocho speakers are adults over forty and they are all bilingual in Spanish. Without children to speak to and with most of the day's transactions conducted in Spanish, many speakers confine their use of the language to just a few familiar contexts. Telling stories or inventing sentences for a linguist to write down do not count as familiar contexts, and my first informants found requests for such responses difficult to fulfill. Nevertheless, I did about three days of intense work with them.

When starting to work on a new language, most linguists begin by collecting vocabulary items, usually by using a previously drawn up list of culturally relevant words. The list I used included an entry for "corn silk," for example, but not one for "lettuce." The vocabulary words are useful during the later process of writing down longer phrases, but at first they serve primarily to help the linguist become familiar with the phonology, or system of sounds, used by speakers of the language. As might be expected from a language which is unrelated to English, Mocho's phonology includes some unusual sounds and sound contrasts different from our own. For example, Mocho distinguishes between vowels held for a relatively long and a relatively short time. A word like *saq* ('white') is recognized as different from *sa:q* ('cracked corn'), only because the vowel in the second is slightly longer than in the first (as indicated by the phonetic sign ':'). Mocho contains some of the same consonant sounds as English, but some of them, such as *t* and *k*, also occur in a glottalized form; that is, they are pronounced with a catch in the throat that produces a little "popping"

sound (symbolized phonetically by an apostrophe after the letter; glottalized *t* and *k* are transcribed as *t'* and *k'*). Words can sound just alike except for the glottalized consonants, but have completely different meanings, as in *si:k* ("cold") and *si:k'* ("tobacco leaf").

One of the most interesting discoveries I made while collecting the word list was that Mocho seemed to have some words which were only distinguished by a difference in the type of tone [e.g., rising, falling—like Chinese] used for their vowels. Some other Mayan languages have tone contrasts, but no one had ever suggested that Mocho did, so I was especially anxious to be able to work on that problem.⁷

Besides collecting individual words during my first three days of informant work on Mocho, I also began to analyze the verb system. Mocho verbs, like those in languages such as Spanish or Russian, indicate the subject of a sentence by a system of prefixes which are attached to the verb stem itself. In collecting various verb forms, I learned that Mocho requires a speaker to use different forms for the several meanings of "we": "just the two of us"; "we, but not you guys"; or "all of us, including you guys too." I also found that the Mocho verb system includes a set of words which mark the direction of verb actions. "Toward the speaker," "away from the speaker," "up," "down," and "going by" are the basic directions, but verbs can also indicate whether the action was accomplished while returning or staying in one place. All Mayan languages have special uses for verbs of this kind—linguists call them *directionals*—but in every one of the languages the system of directionals is somewhat different. I would have to collect many sentences in order to discover exactly how the Mocho system worked.

Finally, I also had my informants create some short texts; they described a photograph of a Mexican town for me and composed a dialogue which might take place between a man who offers another man a job building a house. From these small samples of connected speech, I observed that Mocho uses a great many small words, called *particles*, to convey meanings such as "maybe," "also," "not yet," and "oh, yeah!" Mocho seems to have many more such words than other Mayan languages and can combine

them to create new, unpredictable meanings. Untangling all the particles and the rules for combining them promised to be an intriguing task.

It was obvious that I had collected enough language data to be able to formulate many new questions, the first step in trying to understand the grammatical system of this new language; but I knew that I would need different native informants if I was going to make much more progress. After my first informants returned home, I began immediately to make plans for another visit to Motozintla. I hoped to locate more Mocho speakers in the hill-top *barrio* of Guadalupe, an area further outside the center of town; Guadalupe was reported to have the largest concentration of Mochos. Meanwhile, my assistant and I began the careful work of organizing the data using a filing system which would, for example, gather all transitive verbs in one place, and group together all the positional roots.

Nora and I talked about Mayan linguistics all day long; we compared the materials we had gathered; we tried out hypotheses on each other; we complained about the data that wouldn't submit to our analysis. The opportunity to do concentrated work is what every scholar longs for, but in the field, not all the effects are positive. That same lack of distractions can lead to feelings of being trapped, of losing touch with familiar people and activities. Whatever is unpleasant in the local environment may color one's feelings about the intellectual task itself. Something of this process—a kind of classic "ethnographer's culture fatigue"—began to influence me after my second trip to Motozintla, about six weeks after arriving in Mexico.

Journal entry: Wednesday, February 29, 11:00 a.m. *Unfortunately, this trip to Moto was very depressing. We're the only gringas there, of course. We got so tired of being stared at by taxi drivers, whispered at by old women, laughed at by all the kids, and followed around by groups of young guys. You start to feel totally paranoid, and, because you can't do anything about it (although we fantasize plenty of snappy retorts!), the rage gets almost incapacitating. We end up staying in the hotel to avoid the situation, feeling helplessly angry, and the result is that we continue to be strangers instead of making the contacts that could change our status as outsiders. The worst*



Juan Méndez, Laura Martin's ideal Mocho informant. Photo by the author.

part is the defensiveness which makes all transactions with strangers more unpleasant than they would be otherwise. Nora and I agree that Guatemala was lots better. Dealing with Mayan Indians who have their traditional culture still intact is certainly easier than dealing with populations just being integrated into the wider society, i.e., former "Indians" like the Mocho. My most recent frustrating experience: being followed around Guadalupe by a woman who wanted to sell me Mocho words for fifty pesos each (!), accompanied by her compadre, a man who had never bothered to learn Mocho himself but was happy to involve himself in my travel arrangements since "I was paying so much." Depressing, discouraging and degrading.

Such moments of depression are, I think, common to all field workers and are part of the psychological adjustment which such work requires. The best field researchers are people who are most interested in human behavior and so constantly monitor their own. Though such introspection can help a field worker understand her reactions intellectually, it cannot relieve the emotional involvement. Fortunately, the tendency toward exaggerated emotional swings can operate positively as well as negatively.

Journal entry continued, later the same day.

Three letters! A great lunch! Sun! Some work accomplished! Agreement with Kathy that we need to get serious about doing some exercise! On the whole, a profitable and pleasant day. Resolutions: to work more; to eat less; to be less grumpy; to be more tolerant, balanced and controlled. (Probable outcome: more of the same — feeling guilty — getting pissed off — deciding to blow it all off — new resolutions! Sigh!)

The new field time in Motozintla led me to another informant, a subsistence farmer in his fifties with a genuine aptitude for linguistic work. Every linguistic field worker hopes for such a person: one who does not accept wrong pronunciation or grammar from the linguist, one who is patient even during the repetitive questioning which is often necessary in order to clarify some structure, and one who can think about his language forms relatively objectively, answering questions such as "Can you think of another word that sounds like this one?" or "Do these two words mean the same thing?" It's also useful if the informant is adept at thinking of synonyms, can tell a good story, and has had a lot of different experiences which help expand the vocabulary.

Juan Méndez, my new informant, was just such a person, eager to do the kind of work that many would consider useless or boring. A major problem for any field worker is simply to make people understand what you're up to. For the typical peasant in a subsistence society, the idea that work might consist of sitting around talking, or writing down what someone else says, sounds extremely peculiar. At first the notion that someone would pay you for just sitting around seems like a real deal. But for people not used to extended periods with little movement and mostly mental activity, linguistic consulting turns out to be intolerably confining and demanding. I felt myself fortunate indeed to have found Juan Méndez. It was especially helpful that he had previously worked with Terrence S. Kaufman, a leading Mayan linguist now at the University of Pittsburgh, compiler of the Mocho dictionary María had brought me from CIES. Kaufman had employed him as a transcriber and narrator of stories; so he was familiar with the idea of sounds as separate from the words they were in. I worked briefly with Mr. Méndez in Motozintla and arranged for him to

come to San Cristobal several days later—a *fiesta* in the town delayed his trip for a week.

Just when everything seems to be going according to plan, the central fact about doing linguistic anthropology reasserts itself: namely, that field workers are dependent on *people*. On the day appointed for work to begin, I waited in vain all day in the San Cristobal park where I had arranged to meet Juan and his wife Victoria. They did not arrive. Perhaps there was some problem with the bus schedule or they misunderstood the day, I thought, and so I waited another day—without results. Since meeting one's agreed-upon obligations is a very strongly felt responsibility among people of Juan's age and social group, and since life is often precarious in places with only limited medical care and generally unregulated conditions of public safety, I began to be very worried.

The difficulty in communication between Motozintla and San Cristobal meant that I could not simply send or receive a message. First of all, there are no phones in Guadalupe. There is a national telegraph system, but someone would be required to walk up the hill to deliver a message, and I had learned from conversations with townspeople that most of them felt the Guadalupe neighborhood was "a long way away." Besides, perhaps Juan's family would not find it easy to send a return message: getting the money might be a problem and many family members might not know how or be afraid to do such a thing. In the end, I had no choice but to take the six-hour bus trip to Motozintla and see what had happened.

As it turned out, a few days before they were to leave for San Cristobal, Juan had come down with an undiagnosed ailment involving enormous swelling of the lower legs and extreme pain accompanied by vomiting and fever. He was totally immobile. In Motozintla no doctor whom Juan's family would trust (or who would walk up to their house) was available and so he had taken to his bed and was having unidentified injections at irregular intervals. I suspected the injections might be vitamins and that they were probably having no effect, but my own lack of medical knowledge kept me from feeling confident about the advice Juan's wife begged me to give them. By the time I arrived, he had gotten a little better and so we

depended on the "rest cure." Juan (partly out of boredom and partly, I am sure, out of remorse at having "let me down") offered to work for short periods. We did what we could and waited for him to get well enough to travel, hoping that in San Cristobal we might be able to find medical treatment for him. Meanwhile, my collection of data grew, and I experienced more of the normal conditions of field work in Central America.

Journal entry: Friday, 16 March, 1:00 p.m.

Just reread the journal and realized how long has passed since my last entry. Am also struck by how much the Kanjobal project has receded. Not that it wasn't a great idea—the making of my scholarly rep! And Mocho is not as interesting as Kanjobal yet, though its little oddities are growing on me. It's still too soon (and I have too little data) to be able to really feel that it's my language! The reason for the too little data is, of course, the terrible state of health of my new (wonderful!) informant. When he didn't show up as we had arranged, I had to actually go to Motozintla again to work—and I have the flea bites, the chicken noise tapes and the aching ear drums to prove it! (This time the bus driver's radio was not an animal cracker box with painted dials!) Conditions in the field are, as we've learned before, pretty rustic. Bad beds and all food out (usually to loud accompaniment—why is it that one of the nicest things about being home is the quiet?); a long, hot, dusty (and I'm not looking forward to it in the rainy season either!) walk up the Guadalupe hill to Juan's house; interviewing an informant who is bed ridden while sitting on a child-sized chair which appears to be on its last legs; writing on notebooks on my lap in dim light and fighting off chickens, children and fleas; only able to work an hour or so because Juan gets too tired, feeling guilty about not setting up more work time with some other informant but too exhausted from it all to be able to do anything but lie in bed and pray for quiet (and hot water for the next morning!). But . . . what a priceless informant! Even better than I had hoped. Have collected some really good data. Just hope he holds out (or that I can afford to get him cured).

One of the "little oddities" that had begun to grow on me concerned the verb system in Mocho. Like other Mayan languages, Mocho uses what is called an "ergative" system, in which the form of the verb depends not only on the subject of the sentence, but also on the direct object. But this system has

eroded in Mocho, which has innovated new verb structures in all but third person. An understanding of the way in which Mocho has compensated for the loss of the ergative verb can be helpful in explaining not only verb processes in the other Mayan languages (including proto-Mayan, the hypothetical language spoken 4000 years ago which is the ancestor of modern Mayan) but also the universal processes of change in all languages. Since Mocho is so close to extinction, the peculiarities which distinguish it from other Mayan languages are in danger of being lost and with them the opportunity to illuminate our understanding of variety in language.

My investigation of Mocho verb forms could only take place, however, if I could have better access to my informants. I began to worry about the passing of time—here I was almost half way through my intended stay and I had managed only a few hours of actual informant time.

Just then, I had a great stroke of good luck. I had to come back to Cleveland on business for several days in late March, and during that time I talked with Terrence Kaufman, the linguist in Pittsburgh who had collected data on Mocho back in 1967. He had about three hundred pages of text materials—mostly personal histories and anecdotes, legends and fairy tales—which he had recorded on tape and transcribed. He had used them as the basis for his dictionary and as a source for phonological data relevant to his interest in reconstructing earlier versions of Mayan languages and establishing their interrelationships. He had never completely translated the stories nor had he analyzed them for their syntactic or discourse structure. Nevertheless, he remained interested in seeing further work done on the language and generously offered to send me copies of his texts if I would translate them with an informant.

Of course, I leaped at the chance! Not only would I save the time of collecting a similar set of texts myself (and the painstaking work of transcribing them from tape), but I would also have access to the language of Mocho speakers who were probably no longer alive. By mid-April, I was back in San Cristobal, having hand-carried on the plane my precious copies of Kaufman's texts. I finally felt that I could begin work in earnest.

Journal entry: Monday, April 16, 5:00 p.m.

Another hopeless day sitting in the park, waiting for informants. I guess this means that Juan is still sick—maybe dead, by this time. (Everyone is guessing kidney disease now, but what do we know?) I feel so sorry for him and keep trying to repress my own frustration. I don't want to have to go to Motozintla to work—it's uncomfortable and expensive. And I mind all that even more because I can't get very much done there. Only a few hours (if that!) of informant time a day, under ridiculous conditions, and, even in my room, inadequate light, space, materials and electricity. Damn!

Eventually, Juan did manage to travel to San Cristobal where we had him examined by a doctor. Diagnosis: severe arthritis, controllable with aspirin. That sounds simple. But, believe it or not, aspirin is virtually unobtainable in Mexico. Because of its straitened economic conditions, Mexico has cut off almost all imports. And since Mexico happens not to manufacture aspirin tablets, Mexicans must do without. Being experienced field workers, Nora and I had brought about five hundred tablets with us, and we donated them all to Juan's joints. I quickly put in requests for more to all the relatives and friends who were expecting to visit us in May and June and, at last, I had an able informant who did not wince in pain at every move (only at my rendition of Mocho pronunciation!)

Now my work sessions were organized around the translation of Kaufman's texts. I would read to Juan from the transcriptions, he would translate into Spanish, and I would ask my questions based on the structures or vocabulary of the story. We often worked by rephrasing sentences. Sometimes I would change around the order of the particles, trying to understand how the various combinations altered the meaning of the sentence. Sometimes I would add different directionals to see what changes they would require in the verb phrase. I was especially interested in getting a feel for the ergative system in Mocho. The stories I was working on included many interesting constructions, virtually untranslatable in a non-ergative language, so I was able to collect a lot of information on how speakers use them to change the focus of a listener's attention.



The author working with Mr. Mendez to record the Mocho language. Photo by W. Paul Meyer.

Besides being such a rich source of grammatical information, the texts that Kaufman had given me turned out to be extremely valuable for my interest in the organization and structure of narrative. I found, for example, that Kaufman had collected the same story from Juan in Mocho which I had happened to record in Spanish when I first interviewed him. The two versions have some interesting differences in narrative structure. Some of the differences—greater length in the Spanish version, for example, seem to have to do with audience reactions to the story. Such data offers an unusual opportunity to explore some questions about style in the narratives of bilingual speakers. Along the same line of research, I would be able to make use of the multiple versions of the same story which Kaufman and I had collected from different speakers.

Most of Kaufman's texts had been collected from men, so we wanted to get language samples from some female speakers as well. Kathy began working with Juan's wife, Victoria, on a small project concerning food verbs. Mocho, like all Mayan languages, has several different words which mean "to eat," each one used with only a certain type of food. One verb means "to eat corn or corn products," the staple food of all Mesoamerican people. Other verbs refer to eating vegetables or fruits, eating crunchy things such as toasted squash seeds, and eating sweets. Nora had once written an article about the eating verbs in Mam⁶, and we were interested in finding out how the Mocho system might differ.

Kathy collected an enormous amount of linguistic material related to the uses of these verbs along with a substantial amount of ethnographic data on eating patterns. Most of this work was done with Victoria and her female relatives and friends. Again we found that Mocho seemed to be innovating a restructuring of a traditional Mayan scheme, in this case by expanding the domain of the "fruit" verb to include most other types of food: in other words, creating a "generic" verb, much as we have in English with the ordinary verb "to eat," which can apply to any kind of food. We were especially intrigued by the possibility that the Mocho changes may have resulted from language contact, since Spanish has a similar generic verb, *comer*.

Our work sessions usually lasted from 9:00 a.m. until the normal San Cristobal lunch time of 2:00 p.m. The rainy season had begun and the afternoons were chilly and grey. Juan and Victoria usually spent the remainder of the day resting and went to bed at dark, but Kathy and I used it to organize and analyze the data we had gathered during the morning and get ready for the next session. After a few days, I was able to translate large sections of the stories myself, looking for constructions or words I did not yet understand and planning my questions for the next day.

In spite of all the work, the sessions were opportunities for fun and friendly joking, too. Sometimes, I would try to tell a story of my own in Mocho, usually a hilarious effort from Juan's point of view. One day, Juan and I composed a poem in Mocho. It was a new experience for Juan, but he enjoyed the process of making rhymes and puns. The days were long, but satisfying. Now our work was progressing as we had hoped it would from the beginning—and it was not a moment too soon, since we expected a number of visitors during the last part of our stay. It was already May.

Journal entry: Wednesday, May 16, 8:45 a.m.
They're gone! Juan and Victoria left on the 6:00 a.m. bus. Ten days of work, which, on top of five straight days in Motozintla, was a mixed blessing. Work . . . tiring, sometimes boring (especially for Juan), guilt producing (why wasn't I working non-stop twelve hours a day to catch up?), frustrating (what is Mocho doing with an intransitive "plant" verb? how do the directionals work? are all those interminable particle combinations ever going to be analyzable—or is this another one of Juan's little jokes?? and when will I ever catch up on the filing???) On the other hand, the text collection seems richer every day and I now have more than ten promising projects of different lengths and orientations on various aspects of the materials—enough, I've decided, for a book! I think I'm essentially going to be able to do about the same project I originally planned for Kanjobal—a book on narrative by way of being a text collection with annotations—but in some ways it will be even better since there is all the Spanish influence stuff to contend with. I bet Terry has saved me at least a year of field work. So, except for the feeling of never getting enough done, I'm feeling pretty good about the work. Mocho is get-

ting really interesting, I couldn't have a better informant, and I have way more material than I could have collected myself in this length of time—not to mention the dirty stories that Terry got that I couldn't have gotten in any length of time!

The excitement of really getting into Mocho had not completely erased the refugees from my mind. We had run into someone in the park after all, a Mam speaker that Nora had known in Guatemala. He and his wife, his mother, and two small children were living near San Cristobal, and through him we became acquainted with a small group of Mayans who were creating new lives in Mexico. Our conversations with them were often heartbreaking. We heard women tell us how they had sold their hand-woven traditional clothing for six dollars in tourist shops, because they needed the money and could not afford to wear such distinctive clothing anyway, and later saw it sold for thirty dollars to foreigners who thought they were getting a great deal. We tried to give even-handed advice to parents who were trying to decide whether to teach their children Mam in case they might be able, someday, to go back home, or whether it was better to raise them as "*mexicanos*." We lent money for bribes to landlords who threatened to report their illegal tenants—after collecting the month's rent.

And we had long conversations about politics, with intelligent, thoughtful young people who were trying to understand why a government would treat its own people with such brutality and why other governments seemed to help them do it. One of my strongest memories is the dialogue which began when a refugee asked Nora and me "What do you think—could socialism or communism really be the answer for Guatemala? I don't know any communists. I don't really know very much about communism at all. We keep hearing that the United States is helping the Guatemalan government oppose leftists. Is that true, do you think? It was the government that killed my brother and burnt down my wife's village. The government hates us. What do you think, are the socialists really on our side?"

We also marveled at the resilience of Mayan cultural patterns. A group of several families, scattered around the San Cristobal area, had organized a cooperative for the

purpose of improving their economic lot. They had elected leaders and had a network for self-help. They were in the early stages of setting up a small business raising pigs. They had completed lengthy and careful negotiations for a plot of land. They agreed to pool part of the earnings of each family to buy stock. They were providing aid to the constant stream of new arrivals, and were incorporating the most trustworthy of these into the group. The organizing committee had appointed one man to attend an agricultural extension course on pig farming and share that knowledge with the group. Meanwhile, the women were making a contribution to the project by learning to sew on machines, making small bags from hand-woven cloth for sale to tourists. All the while, the organizing committee kept careful records about their agreements and their money and met regularly to plan and to resolve disputes. This pattern of self-help and internal organization was based on ancient Mayan cultural traditions, and, to us, it was powerful evidence that the culture which had achieved such great architectural, linguistic, and scientific splendor in an earlier time was no less creative today as its inheritors adapt to the demands of their less benign environment. Knowing how little we could do to help them was painful for us, but I would not have wanted to miss the chance to know them and be inspired by their strength.⁹

Throughout June, my Mocho work continued. I had managed to translate all but about thirty pages of Kaufman's texts and to record, transcribe and translate several narratives of my own. Using the texts as a basis, I had filled ten notebooks with vocabulary, verb conjugations, complex sentences, paraphrases, and many pages of notes about grammatical judgments and the contexts for constructions. I had recorded more than fifteen hours of material in Mocho (including word lists from eleven different speakers) as well as in "Indian Spanish." Taken together, it is a diverse and interesting corpus of linguistic material, an immense amount of data, much of it still in need of organization and detailed analysis and full of unsuspected puzzles and challenges.

My last trip to Motozintla took place just a few days before I left the country. Now the path up the hill to Guadalupe was a familiar one and friendly greetings replaced in-

quisitive stares as I made my way to Juan's house. His entire family gathered around as we spoke of my trip home, everyone marveling at the distances and the excitement of an airplane. Juan and I reminisced about how much work we had accomplished and how much we had enjoyed the stories. He invited me to come back to Guadalupe again whenever I wanted to learn more Mocho and I happily agreed, feeling very fond of this frail little man who had been a stranger only a few months before and who now hugged me warmly as we exchanged the traditional Mocho leavetaking: *ka:wi:la a:ba:h/* "Look after yourself." As I walked back to town, I balanced the rewards of field work and counted my relationship with Juan as my great success.

In June our various visitors came and went, about equally impressed by our view of the town on clear days and our clever invention of systems for drying clothes on the rainy ones: we hung our clothesline in the living room and built a roaring fire until the clothes dried. We even had a "modern electric version": we draped our underwear over all the lamp shades in the house and turned on all the lights! Slow, but effective.

Seeing San Cristobal afresh through the eyes of guests who had never been to Mexico made us realize how much we had come to take for granted this now-familiar place, and we found it curious to see how readily we defended the sensibleness of customs that had seemed absurd when we first arrived. We were experiencing a preview of the "reverse culture shock" that all three of us would feel as we readjusted to life back home. For several weeks after I came home, it felt odd to wash vegetables under the faucet (we boiled all our water in San Cristobal). The casual waste of food, paper, and clothing

which I see every day in the United States seems positively immoral.

Most difficult of all was coming to realize that the issues which had most constantly occupied our thoughts and conversations while in Mexico must now be relegated to the part of our American lives into which they could fit. Friends who ask "how was it?" want a few funny anecdotes, not an essay on Central American politics or an ethnography of a neighborhood in San Cristobal. And colleagues who ask "what's Mocho like?" want a scholarly paper, not an account of the effects of disease on the collection of linguistic data.

Why would anyone voluntarily engage in the kind of research I have been describing, which requires so thorough an investment of self, especially when there are plenty of research problems around that can be attacked without the dubious thrills of going into the field? One answer, of course, is that linguistic research depends on accurate data that can be collected only in this way. In other words, it's a dirty job but somebody has to do it.

But why me? There is a simple reason, centered on that merger of intellect and emotion which is at once the bane and the balm of field work. At no other time in my professional life do I feel the intensity of mental effort that I experience while doing field work, nor do I ever feel as keenly the exhilarating pleasure of a problem successfully solved. No other way of working so completely integrates and challenges both my moral and my intellectual assumptions, and I value the effects that meeting those challenges has on my professional and personal life. Field work is a kind of addiction: one does it because one cannot help it.

NOTES

¹A good account of recent accomplishments in the analysis of Mayan hieroglyphics can be found in *Mayan Glyphs: The Verbs* (Austin: Univ. of Texas Press, 1982).

²For further information about Kanjobal, see Laura Martin, *Positional Roots in Kanjobal (Mayan)* (Unpublished Ph.D. dissertation, University of Florida, 1977); "Kanjobal Texts" in *Mayan Texts III*, ed. Louanna Furbee, IJALNATS monograph no. 5 (Chicago: Univ. of Chicago Press and University Microfilms International, 1980), pp. 80-88; and "Direction/Location and the Semantics of Kanjobal Positional Roots" in *Papers in Mayan Linguistics*, ed. Laura Martin (Columbia, Missouri: Lucas Brothers, 1979), pp. 165-84.

³Several English versions of the Popul Vuh have been published. One of the most recent is by Munro Edmonson, *The Book of Counsel: The Popul Vuh of the Quiché Maya of Guatemala*, Middle American Research Institute, publication 35 (New Orleans: Tulane Univ. Press, 1971).

⁴Among the sources containing ethnographic and linguistic descriptions of Zinacantan are the following readily available works: Victoria Bricker, *Ritual Humor in Highland Chiapas* (Austin: Univ. of Texas Press, 1973); Frank Cancian, *Economics and Prestige in a Mayan Community* (Stanford: Stanford Univ. Press, 1965); Jane Collier, *Law and Social Change in Zinacantan* (Stanford: Stanford Univ. Press, 1973); Robert Laughlin, *The Great Tzotzil Dictionary of San Lorenzo Zinacantan*, Smithsonian Contributions to Anthropology, no. 19 (Washington, D.C.: Smithsonian Institution, 1975); Evon Vogt, *Zinacantan: a Maya Community in the Highlands of Chiapas* (Cambridge: Harvard University Press, 1969). A more complete bibliography of the projects which resulted from the Harvard Chiapas Project is included in *Tortillas for the Gods: A Symbolic Analysis of Zinacantan Rituals* (Cambridge: Harvard Univ. Press, 1976).

⁵There is an extensive bibliography of materials related to the history and social structure of Guatemala and to the origins of the current conflicts there. Anyone interested in further reading would do well to begin with such works as Richard Adams, *Crucifixion by Power* (Austin: Univ. of Texas Press, 1970); Phillip Berryman, *The Religious Roots of Rebellion: Christians in Central American Revolutions* (Maryknoll, N.Y.: Orbis, 1984); Richard R. Fagen and Olga Pellicer, *The Future of Central America: Policy Choices for the U. S. and Mexico* (Stanford: Stanford Univ. Press, 1983); Richard E. Feinberg, ed. *Central America: International Dimensions of the Crisis* (New York: Holmes and Meier, 1982); Stephen Kinzer and Stephen Schlesinger, *Bitter Fruit: The Untold Story of the American Coup in Guatemala* (New York: Doubleday, 1982); Kay B. Warren, *The Symbolism of Subordination: Indian Identity in a Guatemalan Town* (Austin: Univ. of Texas Press, 1978). For information on the level of political violence, see publications by the Americas Watch Committee.

⁶The opportunity to conduct field research in Mexico was made possible by the Cleveland State University Faculty Professional Leave Program which granted me leave with partial salary during 1983-84, and by the University's Research and Creative Activities Committee which awarded me a grant to defray some of my research expenses. I am especially grateful to the staff members in the Office of Research Services and in the Graduate College whose assistance in acquiring and administering the grant was invaluable, and to my faculty colleagues for their support during my absence.

⁷Laura Martin, "The Emergence of Phonemic Tone in Mocho (Mayan)," paper presented to the American Anthropological Association, Denver, November, 1984. (To appear in *Journal of Mayan Linguistics*).

⁸Nora C. England, "Eating in Mam, a Mayan Language," *Proceedings of the Midwestern Linguistic Society*, 1977, pp. 415-22.

⁹Recent information on the status of Guatemalan refugees in Mexico is found in a special section in a recent issue of *Cultural Survival Quarterly*, including "'Unofficial' Refugees in Chiapas," by Nora C. England and Laura Martin, *Cultural Survival Quarterly* 8:3.57-58.

Glending Olson

What's So "Fine" About the Arts?

In earlier times, the fine arts were so much a part of daily life that nobody noticed they were there

The fine arts are the perennial poor relations of American education. When secondary schools run into financial trouble, such classes as music and art and activities like drama are among the first to feel the pinch. Few colleges require work in the arts for admission or more than token acquaintance for graduation. The recent concern over the quality of education in America, epitomized by the Bell commission's report, *A Nation at Risk*, addresses itself principally to skills in writing, mathematics, and science. This somewhat "expendable" status accorded to the fine arts is typical of their ambivalent standing throughout America today and has led me to reflect on how differently those arts were categorized back in my other favorite century, the fourteenth. For the concept of "fine arts" is relatively new, as ideas go, and, however self-evident it may now seem, it is not without its limitations.

If we take the fine arts—a.k.a. the "visual/performing" arts, sometimes the "creative" arts—to include music, dance, the visual and plastic arts, such as painting and sculpture, and theater ("creative writing" probably belongs here too, but literature has long been institutionalized within the study of language and composition, as the name "English department" reveals), we can see a general tendency in high school to regard these disciplines as "frills." Some of the rea-

sons for that are doubtless economic, but there are academic motives as well.

Members of the Admissions and Standards Committee of my university recently argued that training in the arts is simply less important than the stricter intellectual discipline to be found in "basics" like English and mathematics. They did not dispute the existence of an aesthetic dimension in human life that fine arts courses lead one to appreciate more fully: they simply seemed to believe that this appreciation is not very relevant to the essential skills people need to succeed in higher education. The University lumps the arts with the humanities and demands only a minimum of two courses from that much broader grouping. One can only assume that Ohio's Task Force on Education takes the same view, for its report did not include a recommendation on behalf of the fine arts.

I'm not looking for villains. The situation at Cleveland State University is typical and reflective of larger cultural attitudes. The status of the fine arts in our society is an ambivalent one; we celebrate the arts, or think we should, yet we do little to encourage them. Local newscasters are fond of presenting feature stories that compare Cleveland to other large cities in the region, such as Pittsburgh and Cincinnati. As they check off the advantages and disadvantages of each, one

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criterion that almost always arises is that of cultural and artistic opportunities. Cleveland does well here—we have two stars of the first magnitude (the Museum of Art and the Orchestra) and a host of lesser twinklers (professional and community theater, opera, ballet, modern dance, arts and poetry groups). We point with pride to this range of artistic activity, we use it to attract new businesses, while at the same time the city and county offer negligible support for the arts and the schools do little to help our citizens appreciate what they have around them. The same could probably be said for any American city. It's hard to achieve respect and neglect at the same time, but somehow the fine arts have managed to do it.

Part of the problem may be the very idea of the fine arts. The categorization itself certainly plays some role in the status of the disciplines it incorporates. What are the relevant meanings of "fine"? Excellent, high in quality—a fine job. Sensitive, refined—a fine touch. Delicately or beautifully made—fine linen. The adjective was in use long before it came to designate a body of artistic or creative enterprise. The term "fine arts" entered the language as a translation of the French "*beaux arts*"; the first recorded use is not until 1767. It is, in fact, only since the latter part of the eighteenth century that Western culture has thought of painting, music, and other arts as an allied group of disciplines characterized by their interest in the creation of works appealing to the senses and judged according to the criteria of beauty (Kristeller 1965). In the second half of that century, principally under the influence of German thinkers, the concept of the aesthetic as a valid and separate domain of understanding emerged ("aesthetic" is first recorded in English in 1798). We have been living with the fine arts ever since, and with their connotations of polish and refinement.

In the Middle Ages there was no category of fine arts. There was music, of course, and painting, poetry, dance, and some kinds of theatre. But these activities were never grouped under any single rubric, except at times a very broad one, the mechanical arts. Many of the disciplines that today we think of as leading people away from the mechanical, the physical, into realms of the intellectual and spiritual, appeared to the Middle Ages to do almost the opposite. Indeed, as

late as the eighteenth century the arts were conceived of merely as skills, crafts, that served bodily needs.

One of the most influential medieval formulations of the idea of the mechanical arts was Hugh of St. Victor's. In the 1220s this great theologian wrote a treatise, the *Didascalicon*, which among other things attempted to categorize all human knowledge. Hugh divided rational knowledge into four major branches:

1) theoretical or speculative. This branch is concerned with truth; it includes theology, mathematics, and physics.

2) practical or moral. Concerned with right action; includes ethics, economics, and politics—the sciences, respectively, of how to regulate the self, the family, and the state.

3) mechanical. Concerned with the works produced by human industry.

4) logical or linguistic. Concerned with the ability to speak and reason; includes grammar, logic, and rhetoric.

Of the traditional seven liberal arts, the trivium (grammar, logic, and rhetoric) appears as a set of subdivisions of logic; the quadrivium (geometry, astronomy, arithmetic, and music) as subdivisions of mathematics. Hugh's seven mechanical arts include "fabric making, armament, commerce, agriculture, hunting, medicine, and theatrics" (1961, p. 74). If we recognize that these terms are metonymies, Hugh's list is quite comprehensive: fabric making includes all trades relevant to clothing; agriculture and hunting, all activities directed to the production of food; armament, all crafts based on foundry and construction skills.

Where, in this survey of knowledge, do we find the fine arts? Music, as part of the quadrivium, is a branch of mathematics in Hugh's scheme. Like arithmetic, geometry, and astronomy, it is essentially concerned with "abstract quantity" (p. 67), and Hugh's discussion of music treats such things as the harmony of the universe and the relation of soul and body. Instrumental music, the only aspect of the subject that we would consider music today, is mentioned just briefly. After all, earthly harmonies merely imitate the more important harmonies of God's creation.

We come closer to the arts when we turn to theatrics, the last of Hugh's seven mechanical arts and his most original contri-

bution to their schematization. He defines theatrics as "the science of entertainment" and within this discipline lists various activities that provided entertainment in classical times, everything from sports to religious celebrations. He includes a variety of performing arts: singing and instrumental music at banquets, dancing, recitation or dramatization of stories. The visual arts are not mentioned, but otherwise Hugh's category of *theatrica* is the closest he comes to thinking about the fine arts, and he does it only within the much broader framework of play and entertainment.

Since Hugh conceives of theatrics as a mechanical art, we need to understand what that means to him. After the fall of Adam and Eve, humankind has been imperfect. The pursuit of knowledge is the pursuit of remedies for our imperfection. The speculative disciplines increase our understanding; the practical increase our moral integrity. Together they "restore in us the likeness of the divine image." The mechanical disciplines remedy our physical incapacities: they "minister to the necessity of this life" (pp. 54-55). Subsequently Hugh sharpens these distinctions: the theoretical arts remedy ignorance by leading to wisdom; the practical remedy vice by leading to virtue; the mechanical remedy "life's weakness" by meeting bodily needs (p. 152). Hugh's idea was often repeated, sometimes elaborated, over the next several generations, and in almost all cases the mechanical arts were discussed as meeting the demands that result from human infirmity or need (de Rijk 1967).

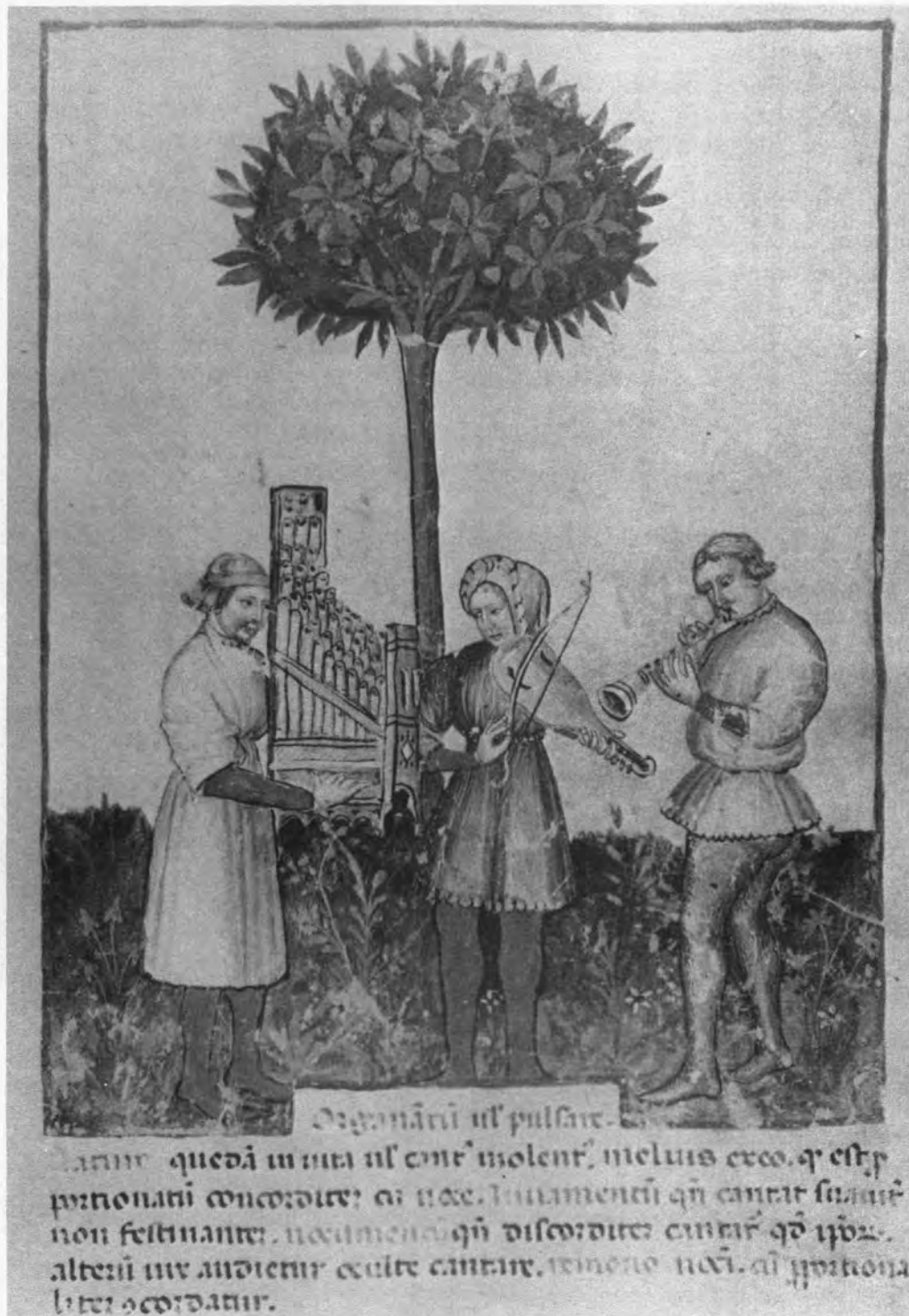
It follows that the arts, conceived of as a part of theatrics, provide physical rather than spiritual benefits. Hugh says that the ancients considered entertainment legitimate "because by temperate motion natural heat is stimulated in the body and by enjoyment the mind is refreshed" (p. 79). He is thinking about the function of entertainment within a medical and psychological perspective based on medieval scientific views of how the body works and how both mental and physical activity can alter it (Olson 1982, pp. 64-75). The pleasures of music, dance, and drama are defined not in aesthetic but in scientific terms, and their broadest justification is not what they do for the intellect but what they do for the body. The visual arts must have been thought of in somewhat the

same way, for one twelfth-century list of the mechanical arts substitutes *pictura* for *theatrica* (Alessio 1965, pp. 123-24).

Hugh's assertion that forms of play refresh the mind seems to entail some intellectual, possibly aesthetic, dimension. But if it does, he and the writers who knew of his categories fail to develop the point any further. Some are even less charitable than Hugh toward the mechanical arts, pointing out that whereas the liberal arts all lead the body to serve the soul, only the mechanical disciplines lead the soul to serve the body. No medieval cleric could find that latter tendency particularly admirable, and the mechanical arts—including whatever music and performance theatrics embraces—inevitably rank lowest on subsequent inventories of human knowledge, if they are mentioned at all.

Hugh's conception of the mechanical arts was by no means the only one in the Middle Ages, and by the fourteenth century it was not dominant. His particular seven, though often repeated, ceded prominence to a more general understanding of the mechanical arts as crafts, the various products and services provided by the artisan class. Insofar as today's "fine arts" were categorized at all, they often appeared in association with other crafts and trades. The philosopher John of Jandun, writing a celebration of the city of Paris in 1323, devotes a chapter to craftsmen. He lists painters, sculptors, and illuminators along with armorers, clothiers, metalworkers, and bread makers (Le Roux de Lincy and Tisserand 1867, pp. 52-55; partial English trans. in Martindale 1972, pp. 9-10). It is significant too that this chapter appears in the second section of his treatise on Paris, devoted to further advantages of the city, such as its buildings, its food, its climate. The first part—as one might expect from a man who taught there—gives pride of place to the University of Paris and its various faculties.

Also from early in the fourteenth century is an inventory of mechanical arts in the *Liber de exemplis et similitudinibus rerum* by a Dominican friar, John of San Gimignano. This work is virtually unknown today, but it survives in a number of manuscripts and Renaissance editions, suggesting substantial popularity in its own time. This "Book of Examples and Comparisons" is one of many



This illustration from a late fourteenth-century medical manuscript shows musicians playing a portative organ, a medieval ancestor of the violin, and a shawm. Here music is viewed as a regimen of health rather than as a "fine art." Bibliothèque nationale, Paris.

massive late-medieval compilations intended to give preachers material for sermons. It is divided into ten books. In each, various topics—usually aspects of moral or religious doctrine—are listed alphabetically, and the author then develops each topic with some example or analogy drawn from a particular segment of the created world. Book II, for example, uses metals and stones for all its comparisons; Book V uses animals. The ninth book uses things created by human industry, that is, the mechanical arts; it likens Hell to Daedalus's labyrinth, Holy Scripture to a mirror, pride to the Tower of Babel.

In the preface to Book IX, John discusses the variety of trades and services that minister to human needs in this life. He relies on Hugh of St. Victor's classification of the mechanical arts, but his list of crafts is much more extensive than Hugh's, and he includes a category of trades that promote learning, mentioning cartographers and illuminators. (John of Jandun also thinks of the illuminator not in the context of "artists" but in the context of manuscript production, along with scribes, parchment-makers, and bookbinders.) When John comes to Hugh's category of theatrics, he quotes most of the discussion in the *Didascalicon* that lists ancient forms of entertainment and then brings it up to date: "But today the art that aims at giving solace to people is almost entirely histrionic or musical; it operates through gesture, song, or the sound of instruments." He goes on to divide the instruments into various types and gives some examples of each. He is describing the principal forms of entertainment he knows—acting or mime, singing, and instrumental music. These endeavors produce solace (psychological comfort, relief from distress), whereas the other crafts, he says, aim either at meeting some basic human need (e.g., eating) or securing some kind of practical advantage (e.g., peace through military arts, learning through scribal skills).

To some extent John's discrimination of functions indicates a separate arena for the purely pleasurable; we can perhaps think of his classification as an early step toward the idea of aesthetic experience as a distinct area of human response. But all three functions are for him, as for Hugh two centuries earlier, conceptualized within the basically corporeal aims of the mechanical or servile arts. Those

artificers who work for human solace "lighten the tediousness of this mortal life, reinvigorate the mind, delight the senses, strengthen the weak, console the sad, and confer many other benefits in life" (1497, ff. 341-343v). The dominant line of thought is psychological, even medical. The arts (though John never uses this word in the modern sense) serve people by refreshing them, cheering them up, making life's daily grind easier to bear. Their status is not high up in some hierarchy of needs: attaining solace is apparently considered essential in the same way that clothing yourself is.

The kind of pleasure that John attributes to music and performance sounds something like what we attribute today to the popular arts, especially television and movies—a sort of escapist distraction from the workaday. (A Funky Winkerbean comic strip perceptively dubbed MTV "the teenager's martini.") Perhaps John's understanding of theatrics entails simply the medieval equivalent of the modern distinction between popular and high (or elite) art, between mere entertainment and challenging aesthetic stimulation. It is easy enough to think of music as a fine art when its source is the Cleveland Orchestra playing in Severance Hall; it is a lot harder to think of it as a fine art when its source is that rock band rehearsing in your neighbor's basement. Perhaps John is thinking only of the "lesser" satisfactions of mass entertainment.

To some extent this distinction between fine and popular art (which I have never been completely happy with) can be applied to the Middle Ages, but it is not adequate to the arts under discussion. It seems most plausible in the case of music, which on the one hand is a liberal art when taught in the university curriculum and on the other a mechanical art when used to entertain at a royal banquet or a peasant wedding. But in the fourteenth century there are no corresponding academic slots for painting, dance, or theatre, and little sense that these disciplines have distinctively "elite" and "popular" forms, though people were well aware of differences in taste and quality. And even in the case of music, as we saw in Hugh of St. Victor's discussion, the fundamental distinction is not between types of instrumental music but between music as an abstract principle and music as audible sound. John of

Jandun and John of San Gimignano, in the works I've just been discussing, are not deliberately excluding a realm of elite compositions and artists; they are simply reporting how they perceived the status and function of painters, actors, and musicians. If we follow their lead we arrive not at a modern conception of the fine arts or the popular arts but at a medieval conception of a set of solace-providing crafts within the broad framework of the mechanical arts.

The idea was commonplace even a century later. A confessional manual written by one of the leading churchmen of fifteenth-century Italy includes a section on the kinds of sins likely to be found in various social classes and professions. The chapter on artisans and laborers specifies such "mechanical" types as butchers, tailors, smiths, servants, actors, and musicians (Antoninus 1473, ff. 69v-70v).

Professionals in the performing arts today would probably not appreciate being thought of in the same category as humble tradesmen. And they would almost certainly think that any explanation of the value of their skills that talked only in terms of corporeal, at best psychological, benefits was reductive and inadequate. But the medieval view of the arts as crafts did not keep their practitioners from respect and recognition. At one point in the *Divine Comedy* Dante has an illuminator of manuscripts ruminant on the vagaries of earthly fame: "Once Cimabue thought to hold the field / In painting; Giotto's all the rage to-day" (*Purgatorio* 11, lines 94-95; trans. Sayers). And Giotto's fame continued. In the middle of the fourteenth century Boccaccio told a story about him in the *Decameron* (sixth day, fifth tale), praising his powers of realistic representation and claiming that he had restored to painting a quality that had been lost for centuries. (This passage, by the way, is one of the earliest examples of the Renaissance inventing itself and thereby inventing the Middle Ages as well.) A few decades later Filippo Villani, compiling brief biographies of Florence's most distinguished citizens, mentioned Giotto in similar terms (1847, p. 35). But as Andrew Martindale shows, Giotto's fame was a case of individual celebrity, not an aggrandizement of the art of painting per se (1972, pp. 22-23, 37-41, 99-100), although painting and architecture did eventually come to claim sta-



Reliefs formerly on the Florence Campanile, c. 1334-37. Top: the art of painting (attributed to Giotto); bottom: theatrics, here represented by a chariot racer (attributed to Andrea Pisano). Museo dell' Opera del Duomo, Florence.

tus as liberal arts, especially in the Renaissance, by way of their connections with mathematics (painting works with perspective, architecture with practical geometry).

Villani's celebration of Florence and its citizens shows an early humanist appreciation for the arts even though no category for them existed. His list of important Florentines includes poets (writers valued as much for their learning and authority as for their creation of powerful fiction—Boccaccio



Painting walls and statues: "The Building of Solomon's House," miniature from an early-fifteenth-century French *Bible historiale*. Pierpont Morgan Library, New York.

makes the list because of his Latin scholarship, not his vernacular tale telling), musicians, Giotto and other painters, along with theologians, lawyers, and physicians. He even manages to acknowledge some capable *histriones*, actor/entertainers, though with typical humanist snobbery adds that he doesn't want to spend too much time on them.

The arts that we now call fine did not depend solely on their most eminent representatives for recognition. Chaucer's young Squire in the General Prologue to the *Canterbury Tales* possesses a variety of skills that must have been part of the training of many members of the court culture of the late fourteenth century: in addition to singing and fluting, "He koude songes make and wel endite, / Juste and eek daunce, and weel purtreye and write." Here we have abilities in music, creative writing, dancing, and drawing, but the reference to jousting in the midst of them reminds us that Chaucer is depicting the Squire's courtly, gentlemanly accomplishments, not his sensitive artistic temperament. The Squire is on his way, historically, to becoming the Renaissance courtier prized as much for his urbanity as for his swordplay. The arts emerge as part of the leisured, cultivated life of the nobility.

Kings and princes kept and patronized (probably in both senses of the word) musicians, painters, and poets. Artists functioning in this court context, often by commission, would have thought of their creations much as other craftsmen did, as products designed for their patrons' gratification (Green 1980). If we are inclined to think of such situations as creatively stultifying, we might recall the achievements of one such court craftsman, a vintner's son who spent much of his life as a squire in the household of Richard II, Geoffrey Chaucer, or, for that matter, a servant of Prince Esterhazy named Joseph Haydn.

Medieval and modern views of the arts, then, are not as wholly incompatible as their basic categorizations may imply. We construct categories because we can't deal with every particular the world presents us. We need the intellectual shorthand but know that labels falsify because they abstract from reality. Even in a period that thought of painting chiefly as a mechanical craft, Giotto could be as celebrated for his talents as any modern artist is. Even without a familiar category of the aesthetic, John of San Gimignano could acknowledge the distinctive pleasures of music and theater. And in our own century, in spite of the governing

idea of "fine art," many of our most distinguished creative talents have found it suitable to think of themselves as craftsmen, artificers of products that give pleasure: George Balanchine, for example, thought in this way about his work; he choreographed Broadway musicals as well as ballets.

So the difference between one era's thinking of certain arts as "mechanical" and another's thinking of them as "fine" does not necessarily lead to mutually exclusive attitudes—we are considering tendencies, not incommensurabilities. Nor do I focus on the difference in order to promote an alternative to our present system. Each is tied fundamentally to the period it comes from. The pre-industrial culture of the Middle Ages and Renaissance possessed a vision of the universe as hierarchical and harmonious. That vision has been well described in such books as C. S. Lewis's *The Discarded Image* and E. M. W. Tillyard's *The Elizabethan World Picture*. If all creation reflects God's order, if you can find not only moral and spiritual lessons but subtle patterns of number and proportion wherever you turn, then there is much less need for a separate arena devoted to the aesthetic. As one scholar puts it, to the medieval mind "the real world must already be so poetic in itself that there can be no need for poetry as a special case" (Allen 1982, p. 249). We can extend his comment to the other arts. In an age in which music and pictures and dances were all thought to reflect higher kinds of spiritual harmony, not solely the creativity of the artist, the idea of the arts as crafts, as imitative products, is natural and appropriate. And there would be little perceived difference between the process of creating such an imitation and creating, say, some article of clothing, for in each case the artisan was working on a specific product that would serve a particular recipient.

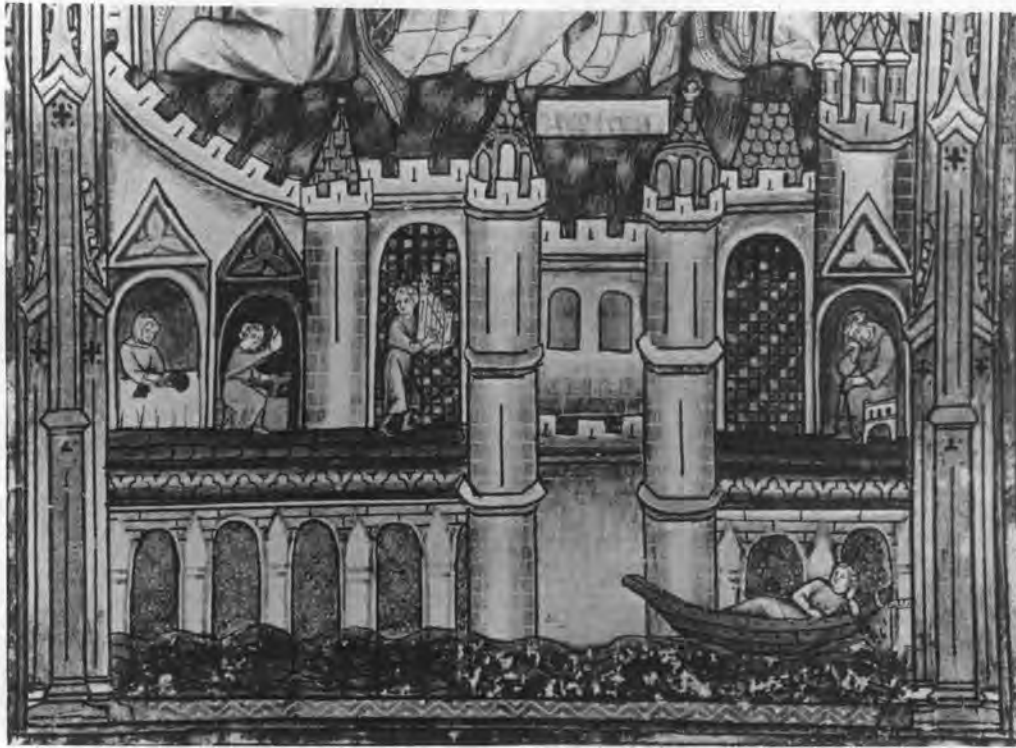
It is no accident that the rise of the idea of "fine arts" in the course of the eighteenth century correlates with the beginnings of the industrial revolution. In a mechanized society, with the loss of that sense of individual craftsmanship that automobile companies keep trying to assure us they have managed to resurrect, and in a century whose major intellectual and social developments have been in the direction of uncertainty and disharmony, the presence of a set of "fine arts" that represent the power of individual ex-

pression and creative ordering meets deep-seated human needs that were filled in earlier centuries through a combination of now-lost religious, philosophical, and scientific attitudes. The idea of the visual and performing arts as "mechanical" is a product of that previous cultural complex and is probably no more suitable to us today than such medieval crafts as armor-making.

Still, I find the old idea attractive in many ways. The notion of the arts as mechanical is humbler, but it is also more immediate, less rarefied. The fine arts often find themselves nowadays on the educational sidelines, as I suggested earlier. How much does this situation arise from the very idea we have of the arts? We isolate an area and call it "aesthetic" and in the process implicitly remove it from other presumably more practical, instrumental skills and benefits. On the contrary, to include our "fine arts" among the mechanical arts, with their acknowledged contribution to meeting the necessities of life, might miss some of the spiritual dimensions of art, but it would acknowledge the roots of art in our lives in a very direct way.

That way, it seems to me, would emphasize some important truths about the arts. They do involve craftsmanship, technical skills. They do exercise us in one way or another. They do bring solace, psychological relief, and satisfaction. I would even argue that they contribute to our health, though usually in a more subtle way than Marx Brothers' movies contributed to Norman Cousins's, who cured himself of a severe degenerative disease through a regimen that included laughter (Cousins 1981, pp. 39-40).

Creators and teachers of the arts know all this, of course; not many of them over-aestheticize their disciplines. But our category of the fine arts tends to keep the bodily and technical dimensions of these activities at a very low level of consciousness. We think about music therapy as something separate from our experience of music as art, even though our hearts respond to rhythms in the same way whether we are in a hospital room or a concert hall. It takes something like a joint appearance by Twyla Tharp and Lynn Swann on a television special (or the Cleveland Browns' hiring of a ballet instructor) to remind us of the artistic dimensions of athletics and as well the athletic dimensions of



On the *Grand Pont* across the Seine in Paris, a street musician plays a portative organ as he strolls past a money changer's shop and a goldsmith at work. From an illuminated manuscript, *The Life of St. Denis*, completed in 1317. Bibliothèque nationale, Paris.

dance. To minimize or ignore these sorts of "peripheral" aspects of the arts is perhaps to sever, however unintentionally, some of their most tangible connections to that life which they presumably serve to enhance.

Thinking of the fine arts as mechanical also has the advantage of leading us to reflect more dispassionately on the idea of creativity. Almost anyone who puts her pen to paper or his brush to canvas lays claim to some kind of creative endeavor. The romantic interest in artistic creativity, in art as the expression of the individual imagination, lives on today in the minds of many who equate creativity with the pouring forth of feeling. Our culture may not pay artists very well, but it allows them—and would-be artists—a certain pride and smugness about the quality of their mental processes as they pursue their work. But creativity is to be found in all disciplines, not just in the "creative arts." And routine hackwork can be as much a part of music, painting, and poetry as of any other enterprise. The best "thinking" in all fields

seems to involve the same kind of intuitive leap coupled with the ability to test or to work out its consequences. Robert Root-Bernstein has recently proposed that creative people tend to be creative in all activities—that the famous split between C. P. Snow's two cultures exists only at the level of the products, not of the mental processes. He goes on to suggest that we will see this unity more clearly if we recognize a subjective element in science. Perhaps we also need to attend more closely to what is objective in the arts, to the making, not just the expressing. At any rate, our habitual two-culture thinking will soon need to confront a new combination of the creative and the mechanical, one cleverly epitomized in the title of a recent exhibition at the Toronto Science Center, "Portrait of the Artist as a Young Computer."

As I write this, my university, like many others in the last four years, is rethinking what its general education requirements should be. Doubtless the fine arts will appear

somewhere in whatever proposals are made, as indeed they should, for there are such things as aesthetic pleasure and aesthetic appreciation, and most of us know that our lives would be far less satisfying without them. We also know that achievements and styles in the arts have helped characterize and even shape the culture in which we live, have helped make us what we are.

But I would also like to see required (and this will not be proposed because it doesn't exist) a course that explores just where we got that idea of the fine arts, and

where we got our other curricular categories, and how we evolve new ones, and what the virtues and limitations of such academic divisions are. I see it as some combination of history of education, sociology of knowledge, and futurism. In helping us to see how it has been in the past, the course might help us to see how it could be otherwise. In reminding us of the categories of the fourteenth or the sixteenth centuries it might help us to do some radical thinking about what our categories should be as we prepare for the twenty-first.

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Bernard Comrie

The Soviet Union's 130 Languages

Official policy lets Tadjik and Chuvash co-exist with Russian

Very often, when Soviet affairs are reported in the West, the country is referred to as *Russia*, and its inhabitants as *Russians*, as if these terms were synonymous with *USSR* (or *Soviet Union*) and *Soviet citizen*.¹ In fact, however, the USSR is a multiethnic and multilingual country, in which ethnic Russians are only one among some 130 different ethnic groups, and Russian is only one of some 130 different languages. Russians make up indeed the largest single ethnic group in the USSR, forming an absolute majority, although this is only a slight majority and has been decreasing as a percentage of the total Soviet population in recent years: in 1979, ethnic Russians comprised 52.4% of the total population of 262.1 million. Russian is also the majority language of the USSR, and the percentage of the population speaking Russian as a first language is increasing: in 1979 it was 58.6%. The reason for the falling percentage of ethnic Russians is the low birth rate in European parts of the USSR in comparison with the high rate in Central Asia, in particular among the native populations of these areas (e.g. Uzbeks, Kazakhs, Tadjiks, Turkmenians, Kirghiz). The increase in the percentage of native speakers of Russian represents the adoption of Russian as a native language by members of other ethnic groups. In any event, it is clear from these

statistics that any identification of *Soviet* with *Russian* represents a gross oversimplification of the complex reality of the USSR, and omits from consideration over two-fifths of that country's population.

The language policy of the USSR necessarily addresses this complex linguistic and ethnic composition. One can describe the situation pragmatically this way: the USSR is a country faced with certain concrete problems stemming from its multilingual nature, such as how to retain the loyalty or acquiescence of minority populations, and how to achieve the level of intercommunication needed in a modern society where there is no single language understood by all members of that community. (In 1979, some 15.6% of the population still claimed not to have a fluent command of Russian.) It is interesting to examine the solutions that the Soviet authorities have adopted in dealing with these problems and to compare these solutions with those adopted by other countries facing similar situations. Of course, as with most political decision taking, this pragmatic aspect is only one facet of the difficulty, since major social and moral problems inevitably arise from any attempt to resolve it, such as the right of a minority to preserve its own culture or language, the duty of a minority to acquire the dominant language in order to

Bernard Comrie became interested in languages while still a boy and began the study of Russian at age 14. Since then—"my appetite for languages is insatiable"—he has pored over a variety of languages in Malta, Africa, Mexico, and Spain, as well as the Soviet Union.

Born in the northern English city of Sunderland, county Durham, near Hadrian's Wall, he received a B.A. (1968) and a Ph.D. (1972) from Cambridge University. During an exchange scholarship at Moscow State University (1969-70), he became aware of the immense linguistic diversity of the Soviet Union and subsequently devoted some time to other of its languages. In 1976 he was a visiting scholar at the Institute of Linguistics of the Academy of Sciences of the USSR, where he concerned himself with the languages of the northern USSR, particularly Chukchi. He is now Professor of Linguistics at the University of Southern California (Los Angeles), where he has worked with native speakers of eastern Armenian. For his sabbatical year in 1985-86, he plans to do field work in Wiyaw, "a hitherto virtually undescribed language spoken in the highlands of Papua New Guinea." Good luck, Professor Comrie!



make its contribution to the life of the country as a whole, etc. This is particularly noticeable in a country like the USSR which is heavily committed to a given ideology (Marxism-Leninism) and where decisions will normally be justified in part, at least superficially, in terms of their conformity to the tenets of this ideology.

Linguistic composition of the USSR

As noted above, the USSR comprises some 130 different ethnic groups, speaking some 130 different languages. These languages represent a wide range in terms of number of speakers. In 1970, the largest language was of course Russian. The smallest language was the Uralic language Kamas (for classification of languages of the USSR, see below), with precisely one native speaker. Table 1 (see box) shows the 20 languages of the USSR with the largest number of native speakers, the number of speakers taken from the 1970 census. An additional 27 languages have over 100,000 speakers, followed by about 25 languages with between 10,000 and 100,000 speakers, the remainder all having under 10,000 speakers—this last group contains many languages spoken in the least accessible parts of the USSR, such as the Caucasus mountains, the Pamir mountain range, and eastern Siberia, where poor communications have fostered the development of small speech communities.

Table 1
LANGUAGE STATISTICS

Russian	141,830,564
Ukrainian	35,400,944
Uzbek	9,154,704
Belorussian	7,630,007
Tatar	5,289,435
Kazakh	5,213,694
Azerbaijani	4,347,089
Georgian	3,310,917
Armenian	3,261,053
Lithuanian	2,625,608
Moldavian	2,607,367
Tadzhik	2,202,671
Turkmenian	1,514,980
Chuvash	1,472,156
Kirghiz	1,445,213
Latvian	1,390,162
German	1,233,317
Mordvin	982,963
Estonian	974,649
Bashkir	820,390

It is essential to note that these 130 languages are often very different from one another. In a few cases, an argument could be advanced that one or other of them should be considered a dialect of some other language: for instance, outside the USSR, Moldavian is usually considered a dialect of Rumanian. But in general, what are considered distinct languages officially in the USSR are indeed mutually incomprehensible speech forms, often as different from one another as Russian and English, even more often as different from one another as English and Japanese. A number of different language families are represented within the USSR, and it will be useful to summarize the range of diversity.

Many languages of the USSR belong to the **Indo-European** family, which covers most of Europe and stretches through to northern India, and includes both Russian and English. The Indo-European family falls into a number of branches (for instance, Russian belongs to the Slavic branch, while English belongs to the Germanic branch). Over three-quarters of the population of the USSR has as its native language one of the Slavic languages, the major representatives being the closely related languages Russian, Ukrainian, and Belorussian. Other branches of Indo-European represented in the USSR by significant numbers of speakers are Baltic (Lithuanian, Latvian), Germanic (German), Italic or Romance (Moldavian), Armenian (a branch containing just the one language Armenian), and Iranian (whose most widely-spoken representative in the USSR is Tadzhik, often considered a dialect of Persian elsewhere).

Another substantial proportion of the languages of the USSR are **Turkic**, related to Turkish. These include a number of widely spoken languages: Uzbek, Tatar, Kazakh, Azerbaijani, Turkmenian, Chuvash, Kirghiz, Bashkir (all in the top twenty). It is possible that the Turkic languages are related, as part of a larger Altaic language family, to the Mongolian languages, represented in the USSR by Buryat and Kalmyk, and to the Tungusic languages, spoken in the far east of the USSR (the largest Tungusic language in the USSR, Evenki, had 12,899 speakers in 1970).

Still another major linguistic component of the USSR is its **Uralic** languages. The

two major Uralic languages of the world, Hungarian and Finnish, are not languages of the USSR, although there are some Hungarian and Finnish speakers in the USSR. Most Uralic languages of the USSR are spoken by small populations interspersed with Russian speakers, the main exception being Estonian.

In the Caucasus mountains are found some 35 languages which are, as far as we can tell, unrelated to any languages spoken outside this area. Moreover, although they are often referred to collectively as **Caucasian** languages, even the internal relations within these languages are uncertain, and more cautious scholars identify three or four different language families within Caucasian. The largest Caucasian language, Georgian, belongs to the South Caucasian or Kartvelian family.

The chief remaining languages are spoken in Siberia and do not belong to any of the above-named families. They are referred to collectively as **Paleosiberian** or **Paleoasiatic** languages, but in fact, in addition to being not demonstrably related to any other languages, they are for the most part not demonstrably related even to each other. One small family, Chukotko-Kamchatkan, includes three languages: Chukchi, Koryak, Kamchadal (Itelmen), but the following languages seem to be genetic isolates: Yukagir, Gilyak (Nivkh), Ket. The largest of the Paleosiberian languages, Chukchi, had 11,231 speakers in 1970.

The categories of genetic affiliation and number of speakers provide us with one idea of the linguistic diversity of the Soviet Union. It should not be forgotten, however, that its languages are also quite varied in the kinds of culture which they traditionally serve. Only a handful of these languages serve cultures with deep roots in literacy: both Armenian and Georgian have a continuous literary tradition going back to around the fifth century (several centuries before Russian, or English!), while Estonia had achieved almost full literacy by the end of the nineteenth century. But many of the languages of the USSR, in particular those of the small Siberian speech communities, have generally served small communities of nomadic hunters and fishermen—communities often ideally adapted to their preindustrial environment and possessing a language rich

in terms to describe that environment, but poorly suited culturally or linguistically for the impact of western technology.

Unlike many multiethnic and multilingual countries, including the USA, the complex composition of the USSR is not, with only few exceptions, the result of extensive recent migrations. The last large group to immigrate into what is now Soviet territory is the group of Germans invited to settle along the Volga by Catherine the Great in the eighteenth century—this accounts for the large number of German speakers in Table 1. Otherwise, the USSR does not encourage or permit large scale immigration, and while emigration has fluctuated in recent years, in particular of ethnic Jews and Germans, it is not a major factor to be taken into account in language policy.

Language policy

The territory at present occupied by the USSR is almost exactly the same as that occupied by the Russian Empire at the beginning of the twentieth century. Thus both the Tsars and the Soviets faced essentially the same problems of multiethnicity and multilingualism, and it is interesting to compare the different reactions of the two regimes to these problems.

The policy of the Tsarist regime was one of active Russification, both culturally and linguistically: only a very few exceptions to this policy are to be found (for instance Finland, then part of the Russian Empire, had a considerable measure of internal autonomy). In certain extreme cases, the use of a language other than Russian was actually forbidden: this was the case with Ukrainian between 1876 and 1905. More generally, however, the other languages of the Empire were simply neglected: virtually no attempt was made to develop these languages as vehicles of literary expression or to set up vernacular-language education programs, and the few such programs that were established had as their primary aim conversion to Russian Orthodoxy rather than any educational aim as such. In order to rise within society during the Empire—and this was difficult in so rigidly stratified a society in the best of circumstances—it was necessary for the non-native speaker of Russian to acquire Russian and also to assimilate culturally to the dominant Russian way of life. But although this

was a prerequisite to social advancement, no official programs existed in order to help the non-Russian achieve this advancement. While some individuals did succeed—for instance the Muslim nobles who converted to Orthodoxy after Ivan the Terrible's capture of their stronghold at Kazan (the Tatar capital)—for most inhabitants of the Russian Empire there was neither the opportunity to develop their own culture and language nor the opportunity to acquire Russian to an extent sufficient to improve their lot.

When the Soviet regime came to power in 1917, it faced something of a dilemma in its ethnic and linguistic policy. On the one hand, the ideological basis of the new regime made it quite clear that all peoples, and all languages, should be treated equally—this is the cornerstone of what has come to be called the Leninist policy on the nationalities question. On the other hand, the regime faced the major practical problem of trying to weld 130 different peoples and languages into a single modern state, a state which would, moreover, because of its ideological-political basis, be heavily centralized. The Soviets adopted a twofold solution to this dilemma: on the one hand, encouragement of the various languages of the USSR, and on the other hand, encouragement of the spread of Russian as the *lingua franca* of the whole country. These twin aims, which are often antagonistic in practice, continue to be the hallmark of Soviet linguistic policy to the present day, though with shifts in the emphasis placed on one or other of the aims.

The choice of Russian as the *lingua franca* was the only reasonable practical choice: not only was and is Russian the language of an absolute majority of the population and the language of an important European culture (with such figures as Tolstoy in literature, Tschaikowsky in music), but it was also the only language already used in the Russian Empire as a *lingua franca*. In keeping with the new Soviet ideology, however, no law established Russian as the single official language: to this day, the USSR has no *de jure* official language, although Russian does serve the function of *de facto* official language, much as English does in the USA.

One of the major short-term aims of the new Soviet regime was to spread literacy to the whole of the population, this literacy being for the most part in the native lan-

guage. At the time of the last Tsarist census, in 1897, only 28.4% of the population between the ages of 9 and 49 was able to read. For some languages, implementing the new policy was essentially a matter of spreading the current written form to a broader population base: this was the case, for instance, with Russian, and also with Armenian and Georgian (both of which had long literary traditions). Even for such languages, some simplifications were made in the existing orthography (Russian spelling was reformed in this way in 1918). For most of the languages of the USSR, however, it was necessary either completely to reform the existing literary language (where this was highly removed from actual popular usage), or to create a written form for the language from scratch. In the period leading up to the early 1930s, new written forms were created for some 60 languages, i.e., approximately one half of the languages of the USSR. The languages which did not receive written forms are primarily those with a very small number of speakers (though even some of these were given writing systems), or those whose speakers were bilingual in a local *lingua franca* which did have or was given a writing system (e.g. speakers of Mingrelian, bilingual in Georgian, or of the Pamir languages, bilingual in Tadzhik). Though many of these languages have only a few thousand speakers, their written forms continue in use to the present day: in this sense, one can assess compliance with the ideological tenet that ethnic groups should be given the opportunity to develop their own language. By the 1959 census, illiteracy had been all but eliminated in the USSR.

In the early years after the October Revolution, preference was given to the Latin alphabet in setting up writing systems, the main exceptions being those languages with an established tradition in some other alphabet (for instance Russian, Armenian, and Georgian). In the very early years the Arabic alphabet was retained for some of the traditionally Muslim peoples, although it was soon abandoned in favor of the Latin alphabet. Starting in the 1930s, however, there was a marked change, and virtually all languages that had hitherto used the Latin alphabet had their writing systems converted to the Russian variant of the Cyrillic alphabet. The ostensible reason given for this

change was the difficulty experienced by students in literacy classes, who were often simultaneously acquiring literacy in their local language and in Russian, and were confused by the different alphabets. (Some symbols have the same shape but different sounds in the two alphabets, e.g. Cyrillic *B* is pronounced *v* and *H* is pronounced *n*.) It seems more likely, however, that this changeover is to be associated with the other major changes in Soviet society that took place under Stalin's leadership, in particular the increasing isolation of Soviet society from outside influences and the consolidation of internal unity: the Cyrillic alphabet is both an indicator setting the USSR apart from most other countries of the world, and also a visible unifying factor of most of the languages of the USSR.²

Language policy in the USSR was not, however, limited to devising written forms for a variety of languages and to teaching basic literacy in these languages. Languages which, under the Tsarist Empire, had enjoyed no official status found themselves elevated to the status of *de facto* official languages for local affairs. The USSR is nominally a federal state, and while no one doubts that policy is rigidly controlled from the central state apparatus in Moscow, the federal structure does allow considerable local cultural—including linguistic—freedom. Thus the governments of the fifteen constituent republics of the USSR conduct their internal business in both the local language and Russian; the languages of the constituent republics are: Russian, Ukrainian, Belorussian, Estonian, Latvian, Lithuanian,

Hello, how are you?

Languages using the Latin alphabet:

Lithuanian:	Laba diena, kaip gyvuoiate?
Latvian:	Labdien, kā jums iet?
Estonian:	Head päeva, kuidas elate?

Languages using the Cyrillic alphabet:

Russian:	Добрый день, как вы поживаете? Dobryj den', kak vy poživaete?
Ukrainian:	Добрий день, як ся маєте? Dobryj den', jak sja majete?
Uzbek:	Салом, эсон-омонмисиз? Salom, eson-omonmisiz?
Moldavian:	Бунэ зиуа, че май фачеџ? Bună ziua, ce mai faceți?
Tadzhik:	Салом, аҳволатон чи тавр аст? Salom, ahvolaton či tavr ast?

Languages with their own alphabet:

Georgian:	გამარჯობათ. როგორ ბრძანდებიან? Gamarjobat, rogor brjandebit?
Armenian:	բարեւ, ինչպե՞ս էք: Barev, inč' pes ek'?

Moldavian, Georgian, Armenian, Azerbaydzhani, Kazakh, Turkmenian, Uzbek, Kirghiz, and Tadzhik. A lower level of administrative autonomy is provided to the Autonomous Republics, which are constituent parts of one of these fifteen Union Republics; among the languages given official status for local affairs in this way are Tatar, Chuvash, Mordvin, Bashkir, to name only those listed in Table 1. Thus, for many languages of the USSR, the new regime represented an important increase in the functional range which those languages enjoy.

One obvious area in which the uses of many languages of the USSR have been increased is education. For roughly half of the languages of the USSR, at least some part of the educational process can be followed in the native language, and this includes a number of languages with only a few thousand speakers or less. For the most part, this is only part of obligatory schooling—for some of the smaller languages, for instance, only a couple of grades use the local language before education shifts to Russian. But at the other end of the scale, for several languages it is possible to complete the whole of one's education, including university, in the local language, and the number where it is possible to complete secondary education in the local language is even larger (most languages of Autonomous Republics). In most areas where a language other than Russian is spoken by a sizeable population, there is a choice between a school using the local language as medium and a Russian-medium school. In the non-Russian-medium school, Russian will be taught as a second language, while in the Russian-medium school some time will be devoted to the local language.

Although the percentage of ethnic Russians is decreasing in the population of the USSR, the percentage of native speakers of Russian is increasing and the relative importance of Russian is on the increase in the USSR. Virtually all ethnic Russians in the USSR are native speakers of Russian. Of the 61.3 million Soviet citizens who claimed an ethnic allegiance other than Russian in 1979, 13.1% nonetheless have Russian as their native language. A further 49.2% claim to speak Russian fluently as a second language, leaving only 37.7% of the non-Russian population claiming to be unable to speak Russian (a

marked decline from the corresponding figure for 1970: 51.4%).

The policy of the Soviet government has been—whatever the attitude to languages other than Russian—that knowledge of Russian should be spread among the population as a whole. Although Russian is not officially a compulsory school subject, in practice it is compulsory both in Russian-medium and other schools as well. On the one hand, this has a purely practical aspect: anyone wanting to play a full part in Soviet society other than at a strictly local level must have a good command of Russian. On the other hand, one can also see it as part of the internal consolidation of Soviet society. In addition, there are a number of more specific ways in which the Russian language has affected the other languages of the USSR.

Perhaps the most obvious way, already mentioned, is in the choice of the Cyrillic alphabet for virtually all of the languages of the USSR. Another way is the policy adopted when other languages need to create new terminology for technological or cultural innovations from outside their own culture. In the early post-Revolutionary period, languages were able to adopt whatever devices their speakers or local language-planners saw fit, and many languages created new terminology from their own lexical and morphological resources. Some of these neologisms did take root and remain, for instance Chukchi *kaletkoran* ("school," literally "place of writing"). In the 1930s, however, an official policy was introduced whereby neologisms should directly borrow from Russian. Indeed, such borrowings are spelled exactly as they are in Russian, even where this is not consistent with the spelling rules of the borrowing language, and they are supposed to be pronounced exactly as in Russian (though in practice local speech habits tend to prevail among those who are not actually bilingual in Russian). Compare Tadzhik (a relative of Persian) *gazeta* "newspaper" (from Russian *gazeta*) with Persian *ruzname* (literally "day writing"). Since many of the languages of the USSR have little indigenous vocabulary for dealing with contemporary social or technological issues, many texts ostensibly written in such languages often give the impression of consisting of strings of predominantly Russian words combined with a few native

morphemes and particles. Such texts are often incomprehensible to someone who does not also know Russian, and it is therefore not too surprising that many speakers prefer simply to use Russian rather than to perpetrate this strange mixture.

But it should not be thought that the spread of Russian at the expense of other languages of the USSR is entirely, or even primarily, the result of official policy. The simple fact is that, in the USSR, good knowledge of Russian is useful. Certainly if a Soviet citizen wants to get ahead in Soviet society, a solid command of Russian is virtually essential. Lack of good Russian effectively restricts a citizen to his own local area. In most parts of the USSR, any kind of technical career—and such careers are eminently popular—would require the need to manipulate concepts in Russian, whether as part of the training process or in keeping abreast of recent developments in the field.

Thus a non-Russian in the USSR who is proud of his local culture and language is faced with something of a dilemma when the choice arises of the language in which his children are to be educated. The school using the local language as its medium is, of course, where the child will gain fullest exposure to the local language and its literature; but the ambitious parent cannot but recognize that his offspring's horizons will be much broader with a firm command of Russian, and the Russian-medium school is the best place to ensure such a firm command of Russian. Moreover, wherever members of different ethnic groups work together on a single project, it is almost inevitable that Russian will be the only language they have in common, and Russian therefore becomes the only language shared by the community as a whole. Rapid developments in the exploitation of the natural resources of Siberia have vastly increased the incidence of such multiethnic projects. Improvements in communication have also increased the incidence of marriages between members of different speech communities, and once again Russian is usually the only language shared by such a household, therefore usually the only language acquired by its children. No doubt such practical considerations will continue to enhance the status of Russian in relation to the other languages within the USSR.

For some of the smaller languages of the USSR, the combination of practical pressure and official encouragement of consolidation means that these languages will die out in the very near future, and this process of extinction will certainly not be hindered by any official actions. Some languages which had writing systems in the 1930s have already had their status as written languages discontinued (e.g. the Uralic languages Ingrian and Veps with, in 1970, respectively 208 and 2,837 speakers). The expectation of eventual transition to another language, usually Russian, may be seen in the following words of an author who closely mirrors official Soviet thinking on language planning: "The mother tongues of the small ethnic groups continue to function as a means of communication in everyday life. In cases of this type bilingualism should be viewed as a transitional stage to monolingualism which will be reached by the small ethnic groups when their assimilation into the corresponding nation is complete."³

But for the larger languages of the USSR, in particular those spoken in consolidated areas and those spoken by societies with high birth rates, it is clear that they will continue as viable communication systems serving their societies into the foreseeable future, i.e., that the USSR will, for several generations to come at least, remain a multilingual society.

Given the controversy that rages in many countries around bilingualism in official life (e.g. the use of Spanish in the USA), perhaps the main lesson to be learned from the Soviet experience is that it is possible both to preserve minority languages and to foster the unity of the country as a whole by encouraging the spread of one *lingua franca*. I believe that this policy has also been remarkably successful in gaining the support of many of the non-Russian speakers of the USSR, in particular members of smaller speech communities who are proud that their own language is used as a vehicle of literature and education. There is no doubt much cause for disaffection in the USSR, but the rights given to local languages form one of the most successful aspects of internal Soviet public relations.

NOTES

¹The ideas contained in this article are a distillation of some of the ideas presented in Bernard Comrie, *The Languages of the Soviet Union* (Cambridge University Press, 1981), especially chapter 1; for further details, reference should be made to this larger work. For an official Soviet statement, in English, reference may be made to M.I. Isayev, *National Languages of the Soviet Union* (Moscow, 1977). Census statistics from the 1970 census are taken from *Itogi vsesojuznoj perepisi naselenija 1970 goda, IV: Nacional'nyj sostav naselenija SSSR* (Moscow, 1973), those for 1979 from *The USSR in figures for 1979* (Moscow, 1980); detailed statistics for languages based on the 1979 census have not yet been published.

²Stalin is an intriguing figure in Soviet language policy. Himself an ethnic Georgian (real name: Dzhughashvili) who spoke Russian with a Georgian accent to his death, he presided over a period of increased Russification. He must also bear responsibility for the internal exile, during World War II, of whole ethnic groups (e.g. Volga Germans, Kalmyks) accused of collaboration with the enemy: as much as half of the deported population died during the deportation.

³Isayev, pp.100-101.

WORD WATCH

by David B. Guralnik, Editor-in-chief of Webster's New World Dictionaries

Productive Suffixes III: *-speak*, *-scam*, *-orama*

The verb *speak* is as old as just about any verb in our language, appearing in writings of the early ninth century in the forms *sprecan*, *spreccan*, *spreocan*, and others, and akin to Modern German *sprechen*. The *r* began to be dropped from the word in the eleventh century and had completely disappeared by the middle of the twelfth. As a noun meaning "the act or manner of speaking," *speak* had a brief fling from about 1300 to 1450, surviving later only as a rare dialectal usage in Scotland. And then in 1949, Eric Blair, better known by his pen name, George Orwell, published his novel *1984*, in which he chose to use this verb to form a noun, *Newspeak*, which reinforces the point of the coinage, to designate the official language of the totalitarian government he was describing. That word soon entered English, usually written *newspeak*, with the general meaning of "the deliberate use of ambiguous and deceptive talk, as by government officials, in seeking to mold public opinion." In the same novel, Orwell also coined *doublethink*, which he defined as the ability "to hold simultaneously two opinions which cancelled out, knowing them to be contradictory and believing in both of them." And that word, too, quickly entered the language, with the gen-

eral meaning "illogical or deliberately perverse thinking in terms that distort or reverse the truth to make it more acceptable."

A few years later was coined *double-speak*, as an analogue to *doublethink*, and meaning "obscure or ambiguous language, especially if meant to deceive," although there already existed the term, *double talk*, which in addition to its original application to a humorous gibberish composed of real words mixed with meaningless syllables, had by 1950 also acquired the meaning later given to *doublespeak*. In 1973, the National Council of Teachers of English began publishing its *Quarterly Review of Doublespeak*, dedicated to exposing instances of such language, and bestowing annually the *Double-speak Award* upon "public figures who have perpetrated language that is grossly unfactual, deceptive, evasive . . . , with pernicious social or political consequences." In 1983, the award was given to the President of the United States.

And now, beginning in the late 1970s, the second element of *Newspeak* and *doublespeak*, a verb masquerading as a noun, is being used freely to form nouns, and meaning usually, and somewhat insipidly, "the characteristic jargon of (that specified in the first

element).'' Among the coinages we have uncovered are *artsspeak*, *diplomatspeak*, *discospeak*, *Haigspeak*, *leftspeak*, *mellowspeak* (bland, restrained language), *nukespeak* (such as ''megadeaths'' for ''wholesale slaughter''), *Olympspeak* (with reference to the recent Olympics), *recessionspeak*, *safespeak*, *sportspeak*, *tabloidspeak*, *Valleyspeak*, *videospeak*, and *warspeak*. A babble of gabble, so to speak.

Another full word that has of late become an active combining form is *scam*, a slang term for ''confidence game'' that entered the language in the mid-1960s, of uncertain origin but thought to be an alteration of *scheme*. In our citation files, there is already a gam of *-scams*, whose progenitor was clearly *Abscam*, a 1980 coinage for the FBI investigation of the bribability of certain Congressmen. The initial syllable of the word is not, as was first reported, a contraction of *Arab*, but, as revealed by the trial judge, a clipping of ''Abdul Enterprises, Ltd.,'' the bogus import-export firm that the FBI agents used as their front. Almost immediately thereafter, an undercover probe into some pharmaceutical irregularities was dubbed by a paronomastic reporter *labscam*, and the past few years have brought us *cabscam* (a New York City taxi driver investigation), *Hornscam* (involving the illegal sale of deer antlers), and a number of other stings variously termed *coke scam*, *Japscam*, *Neuscam*, *petro scam*, *Quackscam* (a raid against duck hunters violating game laws), *shampooscam*, and *snakescam*.

In 1788 a Scottish painter, Robert Barker, exhibited a scene of Edinburgh that he had painted on the interior of a large cylinder, within which observers stood and turned to view the painting. He called it a *panorama*, formed from the Greek words *pan* (all, every) and *horama* (a view). In the nineteenth century, similar or related scenic representations were given names patterned on *panorama*, such as *cyclorama*, *diorama*, and *cos-*

morama, all referring to an exhibited scene and retaining the etymological integrity of Greek (*h*)*orama*. But then at the New York World's Fair of 1939-40, General Motors titled its exhibit the *Futurama*, and in the mid-1940s, *Cinerama*, a new motion-picture technique, was developed, and the commercial, advertising, and show-biz worlds had discovered a new, presumably useful, combining form, still widely employed in nonce coinages. This new morpheme now appears in various forms (*-orama*, *-o-rama*, *-O-Rama*, *-arama*, *-a-Rama*, *-A-Rama*, and just plain *-rama*), and has been diffused in meaning to denote anything from a display (*auto show-arama*), through a performance (''a one-woman *shriek-arama*''), to a mere happening (*boozarama*—also called a *drunkathon*). Nearly a hundred such coinages have come to my attention, and in just the last two years, the following items—more or less self-evident from the first elements in the words—have entered our files: *funkarama*, *Spook-a-Rama*, *avant-gardearama*, *snackarama* (a cart of dim sum), *Cabalarama* (the heading above a review of a number of Cynthia Ozick's books), *Stock-O-Rama*, *Fuckorama* (a porno movie festival), *displayorama*, *SUIT-O-RAMA* (a sale sign), and *Lamb-o-Rama* (a barbecue or burn-off). Still to come, perhaps—a Hindu festival in honor of Vishnu, one day of which could be a *Ramarama*. The fruitful possibilities of the suffix early struck the French author Balzac: characters in his novel *Le Père Goriot* (1834-5) invent humorous French variations such as *santéorama*, *froidorama*, and *soupeaurama*.

Postscript to *Productive Suffixes II* (*The Gamut*, No. 12): the latest addition to the words formed with *-collar* is *rainbow-collar worker*, a production-line employee in Japan who has been upgraded to train a robot (*steel-collar worker*) as a replacement, and who will then be retrained for another, probably white-collar, job.

Jesse Bier

Switzerland—Paradise Renounced

On a balmy spring day ten years ago, at a street crossing opposite the railway station of Lausanne, looking briefly at a movie theater billboard announcing a forthcoming Charles Bronson film, at exactly 2:03 p.m., I narrowly missed assassination. Yes, this was in civilized Switzerland, which travel books and some Americans who have vacationed there in the past recall as a paradise of natural scenery, sprinkled with quaint, tidy villages nestled in valleys, and a citizenry renowned for courtesy and honesty.

At approximately 1:55 that afternoon a young native disaffected Swiss, who had been recently fired from the Banque Union Sociale, entered the bank headquarters at the corner of the central Place de Lausanne and a short block from the movie theater, took the elevator to the second floor and, at 2:05 p.m., shot and killed the vice president in charge of personnel. Then he crossed the room to the large window that overlooked the tributary street and, with the automatic weapon that every home guard Swiss has and sometimes carries about, he sprayed his disaffection in the form of bullets up and down the avenue. He wounded some people and killed six in what one newspaper called a "crime Americain." Two of the fatalities came from the Vevey area, where I was living with my family for the year. A stream of bullets struck the movie billboard at the height of three or four feet, two minutes after I had left it and entered a nearby department store. Everything was more or less cleaned up and in order

when I returned three hours later, except for the bullet holes in the glass. The *Tribune de Lausanne*, which I bought at the station stand and opened to read only when I had my seat on the train back to Vevey, ran the story on the front page. I don't remember the paper's shaking in my hands. As a combat soldier of WW II, I realized simply that none of those bullets had "had my name on it." It was not my time to die. But, I also realized, neither was it my time to remain in paradisaical Switzerland. Not, I hasten to add, that this particular danger was frequent or real in Switzerland. I left Switzerland and returned to a declining America for other reasons that bear examination.

By virtue of a lecture I had given in Geneva the year before—university "chairs" are still competitively won in Switzerland—and an interview I had with the Vice-Rector of the Université de Lausanne, I was awarded the chair in American literature. Actually, I was *professeur extraordinaire* at first (i.e. non-tenured), but during that year my "ordinary" (permanent) professorship was awarded. So I was now secure in my job and future.

Moreover, my colleagues were agreeable people. True, there was that quarterly faculty meeting, held at night, in the oldest medieval quarters of the university, during which the secretary of the faculty scratched down the minutes with an old fashioned fountain pen. In my mind's retrospective eye, we proceeded by candlelight, but that

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was only because the tapered bulbs were set dim. The sessions themselves were filled with good will and sweet reasonableness, deference was made to my slow comprehension in French, and I felt welcome.

During the latter part of the year we lived in Chardonne, a high suburb just outside Vevey, not far in fact from Charles Chaplin's home. Our house was small but pleasant, with a spectacular view of Lac Léman—which Americans continue to call Lake Geneva—when days were clear, with the high bluffs of the French shore directly opposite, and the mountains soaring behind them.

But not all terms of life were clear and beautiful in Switzerland, certainly not renting. That was our third house in Switzerland in which the situation was, one might almost say, untenable—largely because the Swiss have become such litigious profit-gougers, not only with foreigners but among themselves. Landlords seek always to devise "damages" which will allow them to keep the required deposit. The famous Swiss frugality plays a part, of course; I have witnessed an accounting for electric light bulbs left in sockets. But the small claims courts of Switzerland are jammed with adjudications and "settlements," which are really from the beginning premeditated and relentless mercantile contests over the most paltry amounts.

So, Switzerland is a good place to visit but one would not want to live there? Unfortunately, Switzerland has become a country where an enjoyable, or certainly prolonged, visit is problematical, too. For one thing, the sound of music has been replaced by the sound of the jackhammer. For a generation now the Swiss have been busy not only renovating but over-building their country. At first there seemed nothing wrong about a country taking advantage of its prosperity and imported foreign labor to update itself. But it soon became apparent that the Swiss rage to tear down and modernize and construct and pave and cement was, right before one's eyes, transforming a natural wonderland into a more or less urban community that, verticality aside, could be duplicated anywhere. Hotel towers have gone up at Montreux and other sites along Lac Léman, obscuring the view of the lake. It is as if the Swiss had been totally ignorant of the infa-

mous examples of Miami Beach and Hawaii and the virtually destroyed Riviera coast almost literally under their noses. One sensed a sort of gleeful frenzy in the excess, as of a parvenu country leaping out of a stage of charm and kitsch to sophisticated disaster. The new, huge underwater garage at Geneva, for instance, was greeted as an unmitigated triumph. All it did was discourage efforts to expand public transportation and to encourage more and more private cars to come into a city where the narrow streets were already canals of the thickest palpable carbon monoxide in the world. The fumes and traffic of other Swiss cities as well—Lausanne, Zurich, Bern, Lugano, and Lucerne—match and exceed anything in the civilized world, for which the majority of Swiss heartily congratulate themselves.

In highly bureaucratized Switzerland one governmental department rarely knows or cares about what another department is doing. A street newly paved by the Highway Department may be ripped up by the Telegram and Telephone Department for underground conduits. I sensed a kind of rage to do and redo all possible streets, while time and money lasted. The result is that most streets are in a constant state of repair, a sight which cheers the Swiss. They like the prospect of bulldozers, concrete mixers, tar wagons, and busy street repairmen, the daily evidence of progress. You can never get anywhere in a straight line anymore in Switzerland, what with all the roadblocks and detours. The whole undertaking has symbolic meaning, like a concerted exercise in strenuous self-defeat.

Nowhere can self-defeat be seen better than in the famous mountainside resorts. Here, one would think, national restraint and canniness might govern the situation as they don't in the cities and lakeland plains. Instead, the same pell-mell over development has converted ski resorts into virtual mountain cities. Already, in the early 1970s, knowledgeable tourists, who used to come for the old reasons of escape and uncluttered skiing *pistes*, were staying away in significant numbers, especially the Europeans who had known better days. Not only were Swiss ski spas like St. Moritz or Montana Kranz becoming metropolises in the mountains, but the very ski slopes above the resorts had, in

terms of technological development and traffic, become urbanized. There were now so many *téléferiques* and *téleski* pylons on resort mountainsides that you felt yourself in the midst of a network of vertical highways. By 1971 a place like Montana Kranz begged for a system of traffic lights. Traffic police, in snowmobiles perhaps, would have absolutely completed the picture. Indeed, by 1972, there were ecological movements at last, like the "save Kranz" campaign to stop all other development. But, as in the States and everywhere else, when that point is reached, it is usually already too late.

All of which is to say that, if there had been an erosion in American life and character, similar things were happening in Switzerland. The continuing profitable sale of Swiss arms all over the world (supported by the *Christian* centrist majority) is indicative. Other moral erosions were clear. My family and I were all struck by the daily instances of short-changing and petty trickery in the local marketplace. Whatever the Swiss may have been in the reduced past, my French wife, who spent regular summer vacations in Switzerland in the thirties and even late forties, rated the Swiss high in personal honesty. But the old scrupulousness was gone. Every transaction was a contest—unless the foreigner or tourist did not even know it was going on and failed to notice a missing franc or 50-centime piece. Moreover, the Swiss were doing it among themselves, as we could tell from frequent overheard "corrections" or disputes. In the bakery, loaves of bread burnt on the underside were passed off as "*bien cuit*," just "well done," and at any shop an out-of-stock item was never so candidly described but either was "not made any more" or had never existed.

It seems that one half of Max Weber's famous formulation has subdued the other: the spirit of capitalism has overcome the Protestant ethic. No more crass and striking illustration of this point occurs than the preparations of commercial Christmastime in Switzerland, surpassing even the American. Decorations go up in early November, with vast civic monies going into the enterprise, and the splendid advertising and spending steadily mount to its expected crescendo. What all this mercantile urgency has done to a historically restrained and Puritanical people is predictable. It has produced

strong guilt feelings and re-inforced the self-contempt that the whole process of prosperous deterioration has occasioned in many Swiss.

Such self-division has activated a certain defense mechanism that is increasingly obvious in their character—a new challenging aggressiveness. People regularly scold one another now. I saw someone actually thrown out of a bakery shop for having picked up instead of politely pointing to a loaf of bread he wanted to buy. I know that there is a philosophical as well as practical difference of opinion between Americans like myself and all Europeans over the question of manners: against American permissiveness there is the argument for an everyday social corrective, making society more bearable as we constantly school or remind one another of decorum and proprieties. But when you meet with a hostile corrective in every transaction at the post office, or when you are jabbed from behind by supermarket shoppers thrusting their baskets into your withers because you are lingering too long over a can of sardines, or when you cross the street and get to the opposite curb a little later than some headlong cyclist or motorist believes is the optimum time for crossing a street and the driver honks loudly and shouts maddened imprecations at you, something is out of proportion.

The Swiss not only say "That is not done here" on any occasion, joyously licensing their superiority over tourists and the legions of imported labor, but they fling correctives and curses with regular abandon at each other as well—on the street, in stores, in offices and even elevators. I have seen one Swiss have another Swiss arrested at a ski resort parking lot because his fender was flecked—not quite scratched, I would have testified in any court, much less wantonly gouged, as accused—by the other's car door. A now contentious people, smoldering and explosive on every occasion, the Swiss have made ordinary living an unpleasant experience at best, and at the worst a morally killing one. Put it this way: in the United States you are all right until the moment somebody shoots you; in Switzerland, on the other hand, a rare homicide or mass shooting aside, you are basically safe but are murdered morally somewhat every day.

Of course, one cannot dismiss xenophobia—or the great reason for it, the virtual outnumbering of the Swiss by foreigners in their own land. But the volume of tourism is now far less than that of imported labor, and, anyway, both kinds have been invited. All sorts of native Swiss with whom I have talked confess that a resentment of themselves, for bringing on their own problems and for bringing others in to do their dirty work, is the presiding emotion in their depths. Guilt and self-contempt have become powerful elements in Swiss psychology, explaining their aggressiveness and xenophobia.

Swiss history also reveals this compensatory psychology operating in reverse. The Swiss formed the Red Cross partly out of humanitarianism, true, but also in reaction to their own history of regularly selling their men as mercenaries to the wars of Europe. In modern times not a thing goes wrong in the world that does not produce an instantaneous committee and a "cause" somewhere in Switzerland. Aid was rushed to Biafra, to Bangladesh, to Cambodia. There are constant talks by ex-Presidents of the republic about "our responsibilities as a privileged nation"; the self-commendation is as sweet as the burden is heavy. And there are more campaigns for crippled children and victims of assorted afflictions in one month in Switzerland than in a year in that other bastion of well-being and rectitude, the United States. The Swiss avidity for causes and doing good is really a standard Protestant exercise in subduing conscience, especially a conscience troubled by political guilts of the recent past—like giving the Nazis a route of transport to Italy during World War II.

No doubt envy lies behind the extraordinary Swiss imitation of things American (which of course nourishes Swiss guilt and self-contempt). An American in Switzerland even a decade ago could almost feel that he had never left home. The first signal was not only the gaudy gas station on the American model—still with full service—but the prevalence of American-style bumper signs, including even an eastern seaboard wisecrack, "*Tais toi/Et passe*": "Shut up/And pass." American pop music records far outsell their European competitors, and American music groups predominate in pop festivals at Montreux and elsewhere. Indeed the American

impact on all youth culture is pervasive: blue jeans and sweat shirts, pinball and pizza (American, not Italian style), bubblegum, dry cereals, potato chips, hamburgers and, more recently, Kentucky Fried Chicken. Physical exercise is also assuming American modes: basketball, bowling and, subsequently, jogging. TV ads not only are modeled on the American example but are often exactly the same American ads dubbed in French or German.

When I lived in Switzerland, Mother's Day was gaining fast as a continental and Swiss calendar event. They may be laying hands on Labor Day or Thanksgiving any year now—certainly Halloween. In view of the fact that Mother's Day, Father's Day—and, recently, Grandparents' Day—are manufactured American fete days, it is curious that the Swiss, though with an adequate celebratory calendar of their own, are turning to the ersatz so determinedly.

The linguistic influence of America on all three Swiss languages has been clear and forceful, but especially striking in Suisse Romande—that is, Swiss French. "Franglais" has become a second language, and American English a third operative *lingua franca*. I remember the famous Swiss shoe store chain advertised its wares as "Bally Chaussures city." A laundromat was a "Self-Lavoir." The Swiss go "shopping," are exhorted to "drink" Coca Cola and buy "baby food" or a new "housedress." One seldom says "*ça va*" anymore or "*oui*" very much in Swiss French, one says "ok." One does not answer someone neutrally "*comme ci, comme ça*," one replies "fifty-fifty."

In the end, then, whatever you have concluded about xenophobia in general and a certain jealousy or ambivalence toward America, the deep and intimate revelations of language confirm the overwhelming psychic appeal of the United States. Europeans, including the Swiss, might protect themselves from the United States by anti-war or anti-nuclear demonstrations and the like, but in a profound way they are powerfully drawn to America. The more their international politics in fact are disengaged from the American, the closer they approach us psychologically—the one probably as a function of the other.

I believe that the Swiss impulse to model themselves on America is also related

to an effort at defining themselves as a true entity beside other real national powers. Switzerland was, after all, a political or historical accident: three peoples living together, still culturally unintegrated, in a loose confederation. Each of the population groups would have been more at home with its own linguistic family: the Suisse Roman with France, Schweitzer Deutsch (even for all its internal separatist dialects) with Germany, and Italo-Swiss with Italy. It was too late, of course, for that. But it was evidently also too early for any meaningful amalgamation of the three groups, a question that is now being profoundly affected by the importation, on a massive scale, of southern European labor. No wonder that there is a question of identity—and that, in psychological compensation (like Americans?), the Swiss fly their flag from every possible flagpole in order to remind themselves that there is a national entity.

These self-divisions in Switzerland are supplemented by other conflicts of interests: between the rural and urban populations and between agricultural and real estate interests (again strikingly as in the United States)—especially grape growers and home developers. Yet beneath these economic struggles is another, underlying conflict between modernists hurtling into the future and sentimental antiquarians desperately trying to hold on to the past. The Swiss display great hanging copper cauldrons, old repainted wagon wheels, always overfull flower pots, Disneyesque figurines like Snow White and the Seven Dwarfs, plastic ducks padding the grass or marching artfully along the walk (as anywhere in middle America), diminutive grape presses recalling the dim past, wooden shoes hanging from a rafter, cow bells somewhere. Towns and villages being renovated have broadened their through-streets, built up their new impressive buildings and widened their central squares, but conspicuously retained a little old church or water fountain, cute bygone vestiges among the new traffic and domineering office buildings and apartment complexes. The effect is always the same: a reminder of what has been truly lost rather than of what has been urgently maintained.

These conflicts also account, I think, for the ongoing semi-mobilization of Swiss armed forces, which include the whole adult

male population up to the age of 55. The whole program is their single inheritance of the past, a reminder that they were once held together forcefully by the cause of useful self-defense. They have gone on needing their common effort more than they need the self-defense, and that is why they keep popping off at their targets every Sunday and going on an earnest two-week bivouac every year.

Of course the Swiss universal military service puts guns in every man's hands. But the Swiss are not inclined to use their assorted pistols, rifles and hand-carried automatic weapons on one another. They have a phenomenally low homicide rate, compensated only by their auto fatalities. The young bank clerk who sprayed the Lausanne street that spring afternoon in 1973 was an anomaly.

But he started me thinking—and started me on the road home. The university classes I taught that day and every other day that year were exercises in ventriloquism. My students hung on my words in order to catch them and return them on examinations. There was no freedom of critical response, least of all candid give-and-take. I found that, as an American, I very much missed that free exchange. More than all my disappointments about over-developing Switzerland (fish went belly-up in Lac Léman faster than in Lake Erie), about the changing Swiss character, about the everyday hostility which surpassed that of our own Northeast from which I had run long ago, or about both the superficial and profound Americanization of the country—more than all these, the *one* American trait that I felt crucially famished for was freedom. I mean, in and out of the work-place. And not to boast: freedom with a certain reflexive lawlessness that inevitably went with it, I knew. At the shore of Lac Léman, what was the non-compliance to a dog-leash law? I estimated zero percent. Across the border at Lac de Bourget, near Aix-les-Bains in France, I calculated 20 percent. At Flathead Lake, not far from where I live in northwestern Montana, I would gauge 100 percent.

I was spoiled by that. And spoiled by the great western space I had lived with for over half my life. The price was more bar-room murders, no question of that, especially during the Montana winter. But for the statistically-minded: our highway casualty

rate, while unacceptable, was still only one-fourth of the prodigious Swiss rate, including drunk driving fatalities. I and my family were still safer, on the whole, in Montana.

Yet all such arguments, I recognized, were, in the final analysis, rationalizations for going home anyway. Going home, that was it: back to the States as well as the state of mind where we belonged. It weighed on me also that, in fact, my young children might grow up and spend their whole lives in Switzerland without the chance of becoming Swiss citizens, a privilege reserved only for people born there. But I did not want them to be Swiss. Indeed, had I had the opportunity myself, I would not have become Swiss. We were Americans, we were Montanans—as my children emphatically were—conditioned by space. And though they

would have received by now a genuinely free higher education, without debts on considerable student loans, though they would in other ways be better off today in Switzerland than in the States, they would feel “up-tighter,” as they have repeatedly told me, and altogether more cramped.

And, to a degree, they would always have been strangers in an adopted country. In the end, like most people, we would rather have come back to familiar trials than to stay elsewhere amid strange opportunities. If there are spots where Julie Andrews might still run surrounded by beauty—but that was on location in a spared corner of Austria, by the way—so were there, and are still, after ten years, back home in Montana. And home, I decided, is where I belong.



Running the Gamut . . .

To the editors:

The Gamut is always interesting. But as I read the questions in the penultimate paragraph of Hester Lewellen's "Back Matter" account of a jury trial, I was left with the sense that the thirteenth issue had provided something more than was customary. Something had emerged that was more than the simple sum of insights and information in the individual articles. I was no more clear about this emergent unity, however, than Ms. Lewellen was about the motives of her recalcitrant juror.

So I started again at the beginning, and was struck by the leitmotif "illusion" running through Dick Feagler's commentary: was this the issue's subcutaneous theme? Louis Gianetti's discussion of Neorealist cinema dealt with the cinematic illusion of realism, and with the paradox of a realistic intent given focus and (illusory?) form by Marxist politics. The multiple frames of reality perceived by Gary Engle in surrealism and Krazy Kat are matters of illuded perception. The child Fay-Anna, in Jennifer Gostin's story, arranges pine-cones to create an illusion of permanence and order, as does "the framework of oral narrative" in Whitney Azoy's story of Habib. The photographs of Jerry Uelsmann are deliberate illusions treated as reality in Michael Cole's "prose poems," and Carole Venaleck's comments on color outline the physiological effects of chromatic illusion. Finally, the difficulties faced by Hester Lewellen's hung jury reflect the distance between the truth and what seems the truth—and is not the metaphorically "hung jury" itself a verbal illusion?

As I put by the issue for a second time, however, that uniting theme seemed unsatisfactory, perhaps even illusory. Looking again at the "Back Matter," I noted that John Bellamy's comments on Gissing reflect a failure of critical perception—and perception and illusion are closely related. What about "perception" as the thread I felt but could not locate?

The photography contest entries, of course, represent individual perceptions of reality. Carol Felder's first-person story revolves around the narrator's perception of an odd colleague, Elizabeth Searle's around the child Wilson's limited perception of the world on the video screen. The Gypsies' self-perception as an ethnic group is, according to John Greppin, tied closely to the way their language has developed and declined. David Mason shows Whitehead's concern with "a thorough philosophy of . . . space, time, matter and perception" in which Peace is not a matter of how the universe *is*, but of how we perceive it, as harmony or as turbulence. Our misunderstanding of the nature of computer memory is, according to Louise Boston and Edward McNeeley, a result of our failed perception of the nature of human memory. And finally, Karl Kempton's "concrete poems" are exercises in metaphoric perception whose import, at least through the third "reading" of this thirteenth issue of *The Gamut*, I fail to perceive.

Illusion, perception, or the illusion of perception: these are part of the pattern, but not its whole. As a medievalist I know that patterns may lie in the unlikeliest places, and so I note that Louis Milic's foreword is full of numbers. 1208 pages (that's $1 \times 2 \times 2 \times 2 \times 151$), 170 pieces (that's $1 \times 2 \times 5 \times 17$), and 12 issues ($1 \times 2 \times 2 \times 3$): no great numerological significances there. Add the current issue and the page total is 1304 ($1 \times 2 \times 2 \times 2 \times 163$), the "piece" total is 189 ($1 \times 3 \times 3 \times 3 \times 7$)—now there finally we're getting somewhere. Three is the symbol of creation and synthesis, seven of perfect order, a completed cycle. This is the thirteenth issue, and 13 in the ancient *Kabbala* is symbolic of death and birth, or beginning afresh. It is perhaps the illusion of completion, the perception of a new birth, that motivated Milic's foreword and provides this thirteenth issue with the special character I perceived.

The 13 also, says Cirlot's *Dictionary of Symbols*, "has unfavorable implications," tied as it is to black cats and Fridays. But all symbols are ambiguous: we have only the illusion that we perceive their meaning; and so, as Whitehead suggested, it is better to perceive harmony than turbulence. I'll take this thirteenth issue as a new birth, and look forward to the eternal thirty-ninth.

—Bruce A. Beatie

Bruce Beatie is a professor of German at Cleveland State University and has been a contributor to past issues of The Gamut.

Vonna Adrian

Dogs in Church

I've never met a dog in church. If I ever do, I'll be pleased to shake his paw after service—depending, of course, on the dog. I'd shy away from a muddy-pawed, flea-bearing, snarling canine just as I would from an unwashed, foul-mouthed, gun-toting human. A house of worship demands good will and decorum.

Actually, dogs of good will and decorum have gone to church before now. We find their traces in English literature and biography, even in current news. The Victorian era, reputedly an age of strict decorum, provides several examples. None, however, suggests that Fido is devout, that he profits from the sermon, or that his sensitive ears are enchanted by the soprano climax of an anthem. I fear we must consider him an infidel, but only in the sense recognized by Dr. Samuel Johnson, who characterized an acquaintance as "an infidel as a dog is . . . , that is to say, he has never thought upon the subject."¹ No, it is not religion that has endeared the church to Fido, but rather the companionship of his human family. At church, in a sense, he can enjoy his natural habitat, for the dog, more than any other animal, has become most at home with human beings.

Emily Brontë's pet, a huge mastiff named Keeper, was thoroughly at home in church. How could he not have been? His mistress was the daughter of a Yorkshire clergyman, and Keeper lived in the parsonage beside the churchyard. When Emily died, Keeper walked with the mourners into the church for her funeral and, so a family friend records, "stayed quietly there all the time the service was being read."²

Less fraught with melancholy was the possible appearance in church of the spaniel Flush, subject of a biography by Virginia Woolf. The occasion was the romantic secret marriage of two Victorian poets, Robert Browning and Flush's mistress, Elizabeth Barrett. The setting was Marylebone Parish Church in London.

Because no firm documentation of his presence has been found, neither Flush's biographer nor any other dares to state unequivocally that the dog attended the cere-

mony. Most avoid the subject. One or two cautiously venture that he seems not to have been a witness. Unlike Hamlet, who asserted, "I know not *seems*,"³ I refuse to know *seems not*. Though Flush's paw print does not appear beside the signatures of the two official witnesses, and though the evidence for his presence is only circumstantial, I shall believe what I want to believe. Whenever Elizabeth and her maid, Wilson, went out they habitually took Flush. Left behind contrary to custom, would not this pampered pet have routed Wimpole Street with his howls? Oh yes, his flop-eared ghost haunts Marylebone Church still. Haven't I seen him sitting on Wilson's lap in a shadowy back pew beside the baptismal font? "As certain am I of the spot/ As if the chart were given."⁴

Later, in the freedom of his undisciplined life with the Brownings in Italy Flush is known to have trotted in and out of church doors. In the sunny Italian summers he followed his keen nose into cool, dim sanctuaries and sniffed the incense without rebuke. Whether he stayed for Mass is not recorded.⁵

A dog who did attend Mass, however, was observed in 1844 by Charles Dickens's family on the way to Italy. At the Cathedral in Avignon the service, Dickens tells us, was sparsely attended by "several old women, a baby, and a very self-possessed dog who had marked out for himself a little platform for exercise, beginning at the altar and ending at the door, up and down which he trotted during the service."⁶ Such unsupervised attendance at church, like that of Flush in Italy, is not recommended even by the most sentimental of dog lovers.

Clearly, Flush Barrett Browning and Keeper Brontë, both Church of England dogs with literary connections, were socially a cut above that stray dog in Avignon, as they were also above Bobby (named for Burns), the hardy little Skye terrier who defied the authorities of Greyfriars Kirk in Edinburgh, won them over to become virtually a ward of Presbyterianism and eventually the worthy subject of a biography by Eleanor Atkinson.

When his master, a humble shepherd called Auld Jock, died in 1858 Bobby followed him to the grave, ignoring the sign on the kirkyard gate: NO DOGS ALLOWED. Again and again during the days following, Bobby was chased away, but he cleverly managed to return at night and sleep on Auld Jock's grave. At last the sacristan and a nearby tavern keeper were so touched by this fidelity that they adopted Bobby. From then on he accompanied the sacristan on his daily chores in the kirk and enjoyed the liberty of the kirkyard, a privilege given to no other dog in Edinburgh. Scottish opinion was thus blind to Bobby's undistinguished connection: a dog's a dog for a' that.

Though it is not recorded whether he ever occupied a pew during service, Bobby was buried in holy ground, in the very grave which he had guarded for a dozen years—buried secretly to avoid local scandal. ("Laid awa' in consecrrrated grrrooond—a wee doggie? Hoot mon!")⁷

Some years later a red granite marker, the gift of Americans, openly acknowledged the presence of Bobby's bones in Auld Jock's grave.⁸ A more familiar memorial, however, is Bobby's life-size statue on a pedestal beside the entrance to the kirkyard. The sign NO DOGS ALLOWED disappeared long ago.

Far from Edinburgh the humble little mountain chapels of Wales once drew a sizeable canine congregation. It was the custom among shepherds to bring their working dogs down to Sunday worship service. This was a practical matter; left behind, the dogs might get into mischief. Besides, the close daily rapport between man and dog made this peaceful seventh-day companionship congenial to both. The poet Clive Sansom has presented such a scene from the point of view of a well-behaved sheep dog—who speaks in Welsh accents, naturally, and with the flawed grammar of the humble working class:

Us-u-al it was then to follow Mister to church.
Yes, and up the aisle too, and sit down.
'And what next?' you'll ask today, 'a cat preach-
ing?'
But look you: dog and shepherd is together the
whole year,
Six days in seven. Why not on Sundays? Isn't it?

Mister would walk in, humble-like, grab off his old
hat
And smell the lining, then lower himself very slow
and solemn.
I would follow, head down, not looking at no one,
And we'd sit there comfortable, shoulder to shin-
bone, very pleasant.

In time though, a few "vulgar" dogs, "barking in the aisles, fighting and snarling under pews" disrupted the service. They and all the others were then banished forever. Our canine narrator sums up the current situation thus: "Ah, today no dogs at all in church or chapel, / The Misters go there alone—or to the pub more likely."⁹

"Today no dogs at all in church?" Actually our Welsh dog's lament is not strictly true. Can you visualize six hundred dogs with their human companions under the lofty roof of Westminster Abbey? In August, 1981, a jubilee service was held in the Abbey to commemorate the fiftieth anniversary of the founding of Guide Dogs for the Blind. The six hundred variously colored dogs—Labradors, retrievers, Alsatians—were obviously members of a professional class, well schooled, impeccably groomed, smartly turned out with ribbon rosettes and flowers fastened to their harnesses. In her "Letter from London" Mollie Panter-Downes describes the chancel aisle as "a startling sight, with what looked like thick, handsome yellow and black rugs laid down on either side—the guide dogs belonging to people in the end seats peacefully resting up, while the others leaned against knees between rows."¹⁰

The service included an address by the Speaker of the House of Commons (during which some of the congregation slept), a rousing Hallelujah Chorus, and a jubilant fanfare on the trumpets. This last called forth a "polite bark or two from the congregation."¹⁰

Perhaps few would quibble at the presence of this elite canine corps in Westminster Abbey. Customarily, Seeing-Eye dogs are granted the privileges they have earned. Nevertheless, the pastor of an Indiana church recently banished one Casey, a blind man's dog, from Sunday services. The dog would disturb others, the pastor maintained. "Casey wouldn't hurt anyone," his master protested. "He would just sit at my feet."



An eighteenth-century dog in church (lower left)—specifically in St. Peter's basilica, Rome, as represented in Piranesi's *Vedute di Roma* (1748).

Another church subsequently welcomed Casey to fellowship.¹¹

Dogs who serve the blind are, of course, a limited class among the general canine population. How about less distinguished but well-trained pets—yours and (less likely) mine? Can liberalism be carried too far? Some might prophesy horrendous sacrilege as the logical end of liberal practices. Suppose someone's pet should appear at the altar rail and demand a consecrated wafer for himself? Nonsense! We are considering only the well-schooled animal.

Nonetheless, if dogs should ever invade the sanctuary in significant numbers, one might well recommend a Screening Committee. To play further with this touchy subject, what care should be taken of preschool puppies? Perhaps a *Hundkinderkennel* under the supervision of a suitable Kennel Matron—me, for instance?

To resume more serious reflection upon my proposal, might not public outrage and protest give way to tolerance and finally to full acceptance? Doesn't the dog's loyalty and devotion, his lack of malice and guile, entitle him to serve as an innocent example to us human sinners whose pew he might share? I, for one—am I the only one?—would welcome him there.

Vonna Adrian has taught English at Case Western Reserve University and the Cleveland Institute of Art; now retired, she enjoys traveling in such places as England, Japan, Romania, and the Soviet Union. Despite her advocacy of canine rights, she maintains that she is "currently dogless."

NOTES

¹James Boswell, *The Life of Samuel Johnson* (New York: Dutton, 1949), I, 370.

²Elizabeth Gaskell, *Charlotte Brontë* (New York: Harper & Brothers, 1900), pp.393-394.

³*Hamlet*, I, iii 76.

⁴Emily Dickinson, "I Never Saw a Moor," *The Poems of Emily Dickinson* (Cambridge: Harvard University Press, 1958), II, 742.

⁵The material in the preceding three paragraphs is found, *passim*, mainly in the two following sources: Dorothy Hewlett, *Elizabeth Barrett Browning* (New York: Alfred A. Knopf, 1952); and Virginia Woolf, *Flush* (New York: Harcourt, Brace & Co., 1933).

⁶Charles Dickens, *Pictures in Italy*, in *The Works of Charles Dickens*, Gadshill Edition (London: Chapman and Hall, 1897), p.325.

⁷For the main source of the preceding two paragraphs, see Eleanor Atkinson, *Greyfriars Bobby* (New York: Harper & Brothers, 1929).

⁸L. Russell Muirhead, Ed., *The Blue Guide to Scotland*, fifth ed. (London: Ernest Benn Ltd., 1967), p.60.

⁹Clive Sansom, "Welsh Sheep Dog," *The Countryman*, Sheep Street, Burford, Oxford, OX8 4LH, England (Winter 1979), p. 106.

¹⁰Mollie Panter-Downes, "Letter from London," *The New Yorker*, August 10, 1981, pp.80-81. Reprinted by permission; © 1981 Mollie Panter-Downes.

¹¹*The Plain Dealer*, Cleveland, Ohio, July 7, 1984, p.2-C.

Carsten Ahrens

Cultural News from Danbury, Ohio, 1879: The Danbury Literary and Debating Society

On the evening of May 14, 1879, in the little town of Danbury on the Marblehead peninsula in northwest Ohio, a group of young men and women from nearby farm families met in the home of John Sperber to form the Danbury Literary Society (some months later, "Debating" was added to the name). Three of the young people carried the name Bredbeck, two were named Sperber, and there was a Bergman, a Bredehoft, a Kihlken, a Koeppen, a Roth, a Von Glahn, and a Zeller. Most of them were offspring of German immigrants whose surnames are still often heard in the area.

My father and my Aunt Anna became members of the Society, but most of my knowledge of it comes from a book of Minutes, a seven-and-one-half by twelve-inch hard-cover notebook with leather-reinforced corners and spine, that Mrs. Elmer Borman of Danbury recently found in the attic of her father-in-law's house when readying it for sale.

John Von Glahn was elected the society's first president and, happily, C. C. Koeppen became the first secretary; his Spencerian script, still a joy to see, and his impeccable spelling are evident in the Minutes. None of the subsequent secretaries could approach Koeppen's skill in reporting a meeting.

Officers (president, vice-president, secretary, and treasurer) were elected four times a year. There were no secret ballots: one had to receive the majority of the "yeas pronounced at the election." Smoking and profane language were prohibited in the meeting room.

The group decided that only the unmarried might become and remain members. A man could not join until he became 16; a woman, 14. One joined the society when introduced by a member and upon the approval of two-thirds of the membership. The initiation fee was a quarter; a fine of a dime was levied for an unexcused absence; a nickel for tardiness. The treasurer's account was audited quarterly by three elected members. Once the funds mounted up to \$3.40.

Meetings were to be held every week but this practice was often interrupted by the weather and by the necessity for farm work such as planting, threshing, and fruit harvest. The Minutes reveal that 68 meetings were held from May 14, 1879 to March 21, 1881, when all the pages of Book #1 were filled. Subsequent books are unknown.

The membership was divided into two "classes," each of which provided a program for the other at alternate meetings. A member "unprepared to speak or read his piece" would be fined as though he were absent.

At first, the society met in the parlors of the members' homes, but the organization must have made an impression in the community, for it soon had permission to use a one-room school building. That necessitated buying a coal-oil lamp (\$1.00), purchased in Sandusky, and later a second lamp (\$1.25), purchased in Toledo. This required the election of a new officer to keep the lamps filled with oil (\$.09 a gallon), the wicks trimmed, and the glass globes or chimneys cleaned. The move to the schoolhouse was celebrated by Franklin Roth in his "Society Poem," an opus of 26 stanzas, that appeared in the Ottawa County News:

We gather together in this spacious room
To give intelligence a sort of a boom.

Each meeting was divided into two parts with a recess between. It began with a song, invariably a hymn, such as "Come to the Savior," "All Hail the Power of Jesus' Name," "What a Friend We Have in Jesus," "From Greenland's Icy Mountains," or "Yield Not to Temptation." The program ended with a second hymn. Occasionally, the Minutes observed, the opening song was overlooked and was sung after the recess.



The Danbury Literary and Debating Society (circa 1880). Seated in front: President William Borman.

Those members of the society providing the program for the other half had a wide variety of forms of communication to choose from. The Minutes showed that "Select Readings," usually verse, were most popular: "Betsy and I are Out," "Brought to the Bar," "Hans Donnerbeck's Wedding," "Lost Jewels," "Maud Muller," "Smile Whenever You Can," "That Hired Girl," etc.

Dialogues were numerous, such as "A Wonderful Dream," "Sheep Shearing," "An Irish Servant," "Oh Silent, Silver Moon." There were several sets of siblings among the members, my father and my Aunt Anna, for example, who could easily collaborate.

Declamations (loud, rhetorical stuff) were so popular that a by-law stated that no one of them might be repeated at following meetings. But some were so beloved that repetitions were allowed by popular demand (two-thirds vote). The society disbanded over 25 years before I was born, yet I heard my father deliver, after a threshing and much coaxing, a parody of Poe's "Raven" he had years before memorized for a society meeting. Declamations had titles like "A Dying Hymn," "The Elm and the Vine," "The Green Mountain Boys," "Don't Leave the Farm," "Old Ironsides," "Paddy and His Musket."

At no time did a secretary consider it necessary to give the name or any information concerning the original author of a dialogue, declamation, or select reading. It may be the authors were so well-known that including their names with the titles of their works was considered superfluous.

Evidently the members were more given to the writings of others than to literature of their own. The Minutes record only three original essays, "Life of Washington," "Oberlin City and University," and "Water," and one poem, the "Society Poem," by Roth, mentioned above.

Another activity that must have involved everyone in the organization was the sham lawsuits, with the members serving as judge, jury, defendant, plaintiff, attorneys, and witnesses. In one, "Theft of Coat," the defendant was found not guilty; in another, "Assault and Battery," the case was dismissed for lack of evidence.

But the activity that seems to have been most engrossing, to the point of even changing the name of the society, was debate. The subjects were diverse and the secretary always noted whether the negative or the affirmative team had won:

Resolved that . . .

- anticipation affords more pleasure than participation. (Neg.)
- church property should be taxed. (Aff.)
- drunkenness is a greater evil than indolence. (Aff.)
- fire is more destructive than water. (Aff.)
- the horse is of more use than the cow. (Aff.)
- more knowledge is gained by reading than by traveling. (Neg.)
- the Negro was more cruelly treated than the Indian. (Aff.)
- the printing press is more useful than the steam engine. (Aff.)
- Washington was a greater military genius than Napoleon. (Neg.)
- the wife should build the morning fire. (Tie)

For a literary organization, if one can judge from all the secretaries except Koeppen, the attention given to spelling was not exceptionally rigorous. In fact, spelling provided a field for considerable originality: "anonimous" (anonymous), "comming" (coming), "except" (accept), "hyme" (hymn), "Laidies" (ladies), "mist it" (missed it), "past him" (passed him), "stoped" (stopped), "weather" (whether), "whished for" (wished for). The surname of my father took a beating: Ahrens became "Aarans," "Aherns," "Aharens," "Ahrendt," "Ahrend." But, maybe, a hundred years ago, spelling, like many things, was freer!

Although the By-laws authorized a member to be expelled for being "disorderly or discreditable," no mention of such severe treatment was recorded. Twice, however, poor conduct was mentioned: Oct. 15, 1879, "Owing to the fact that the attention to the proceedings was infinitesimal [sic] and the behavior being generally disorderly, the president justly remarked that he would resign from his office if no better results were obtained through his remarks at the next future meetings." (Koeppen was secretary.) February 11, 1880. "There being a great deal of applause made with the feet during the Select Reading, it became nec-

The Danbury Literary and Debating Society (excerpts)

When the golden season of the year had come,
Bringing gladness to every happy home,
We gathered together in this spacious room,
To give intelligence a sort of a boom.

Of literature we had not a large store,
So we formed a society to acquire more;
And as we proceed to tell our winter's work,
You will see very clearly that none did shirk.

Our knowledge was somewhat shallow, indeed,
And of culture there was a great deal of need,
But like an acorn that has formed a little root,
We steadily rose up like a tiny shoot.

Ah, well do I recall, when the lights were dim,
And on many a countenance there was a grin;
Now and then we would see a sort of a smile,
But that would only remain a little while.

Our remarks in the beginning were very brief,
And often our voices quivered like a leaf,
And long before the winter went on its way,
Our loud voices had rung in many a fray.

Thus the society was doing a good deed,
And beginning something of which there was a need;
And with a feeling of success we went our way,
To renew the work begun some other day.

* * *

In thinking of the discussions that we had
We find that none were altogether bad,
But we hope that memory will oft recall
How we made the great nations to rise and fall.

How nature and art were pictured before you,
Art fixed all over and nature real new;
How we abused the spend-thrift and the miser,
And how the soldier was greater than the orator.

But when it came to give the women a right,
Many of the stronger sex would dearly fight,
Yet the weaker ones with their inferior mind,
Would march ahead, leaving the stronger behind.

* * *

Our banner of advancement is now unfurled;
Let us pick it up and march through this world
Like Washington, Lincoln and others have done
In the days when victory was dearly won.

Though we do not see every member's name
Brightly shining on the long roll of fame,
Let us hope to see it in that Great Book above,
Where our Lord is ruling with eternal love.

Danbury Literary Society

Origin

At the meeting, called by Mr. William Bredbeck, and held on the evening of May 7, 1849, for the purpose of getting a literary society in existence, the proceedings were as follows:

William Bredbeck was elected chairman, and Chas. C. Koeppen sec'y. The chairman briefly stated what was the object of the meeting and requested those, that had the intention, when the constitution would be made, to join the society, to sign their names. The follow-

The beautiful "Spencerian script" of C. C. Koeppen, the Society's first secretary.

essary to stop such disturbance. A motion was made and seconded, and the motion prevailed that applauding with the feet should be stopped." (Again Koeppen was secretary.)

The status of women in the society is vague. They put out a newspaper that was read in its entirety at each meeting by the president. It would seem that since women were admitted to the society at an age two years younger than the men, they must have been considered more able. Yet in this first book of Minutes, while on two occasions a girl was nominated for office, none was ever elected president, vice-president, secretary, or treasurer. On the other hand, the debate "Resolved that the morning fire should be built by the wife" resulted in a tie vote.

Just when the Danbury Literary and Debating Society became an organization of the past is uncertain. Only the first book of Minutes is extant. But judging from a "Programme" I found among sundry items in one of Father's folders, the organization was still active in 1888 when it offered an entertainment to the public. But by 1895, it must have faded completely away, for on February 12 of that year, a new literary association appeared, the Ladies' Noonday Club, with Aunt Anna and my mother as members. Father couldn't join. All the members were ladies and officers, and the light of literature again gleamed on the Marblehead peninsula.

Carsten Ahrens, a retired National Park ranger-naturalist who now lives in Pittsburgh, reported on another aspect of the Marblehead peninsula in "Ottawa County's Very Special Daisy," *The Gamut*, No. 12 (Spring/Summer, 1984).

Sanbury



Tuesday Evening, May 1st, '88.

The chief art of learning is to attempt but little at a time.
—LOCKE.

Men give a reputation to literature, and convince the world of its usefulness.

Programme.

MUSIC.

ADDRESS OF WELCOME, BY THE PRESIDENT.

DECLAMATION—"The Polish Boy,".....BERTHA WUHRMAN
INSTRUMENTAL MUSIC.....CHARLES HARTMAN
ESSAY—"Money,".....JOHN SASS
"Chip Basket," JOHN WUHRMAN AND CHAS. SCHWARDEBECK
SONG—"The Old Bell,".....CHRISTINA AND MARY SPERBER
DECLAMATION—"Asleep at the Switch,".....P. H. BORMAN
ABSTRACT FROM "GOLDEN CENSOR,".....HENRY AHNENS
INSTRUMENTAL MUSIC—"Alleghany March,".....GEO. EBERWINE
RECITATION—"One in Many,".....REGINA LULLMAN
SONG—(Duet)—"Do You Think of the Days that
are Gone, Jennie,".....FRANKLIN ROTH AND EMMA WUHRMAN
ESSAY—"A Council of Nice,".....WILLIAM MILLER
INSTRUMENTAL MUSIC—"Sounds from the Ohio,".....MARY SPERBER
DECLAMATION—"Betty and the Bear,".....GEO. EBERWINE
"LITERARY BUDGET,".....HATTIE BREDBECK, Editors
MUSIC—"Forest Home Waltz,".....BESSIE SCHWECK
ESSAY—"Advantages of Literary and Debating
Societies,".....FINKE JOHANNSEN
SOCIETY POEM.....FRANKLIN ROTH
MUSIC—"Le Chant Du Hivouso,".....MARY SPERBER
SELECT QUOTATIONS (from different Authors) by

ANNA AHNENS, EDWARD BENRMAN, JOHN GULAU,
REBECCA LULLMAN, EDWARD SPERBER, HANNAH
SCHWARDEBECK, HENRY WAHLERS, JOHN WILKINS,
CHARLES WISCHEL, JOHN WAHLERS AND CHARLES
RADEMACHER.



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