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Central Washington University

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SCHOLARSHIP·IN·REVIEW

THE MAGAZINE OF RESEARCH & SCHOLARLY ACTIVITIES AT CENTRAL WASHINGTON UNIVERSITY

NEW
PHOTOGRAPHICS/87,
CWU.



HO, Francis, *We thought - in fifteen or so years from now, it would be heaven sent to us if we were granted the ability to perform the remainder of our life's work here in Alsea Heights, located near the town of Waldport, Oregon: What an idyllic notion it all seemed on Sunday morning, August 17, 1986.* Silver-chloride print, 22" x 14".



FALL, 1987



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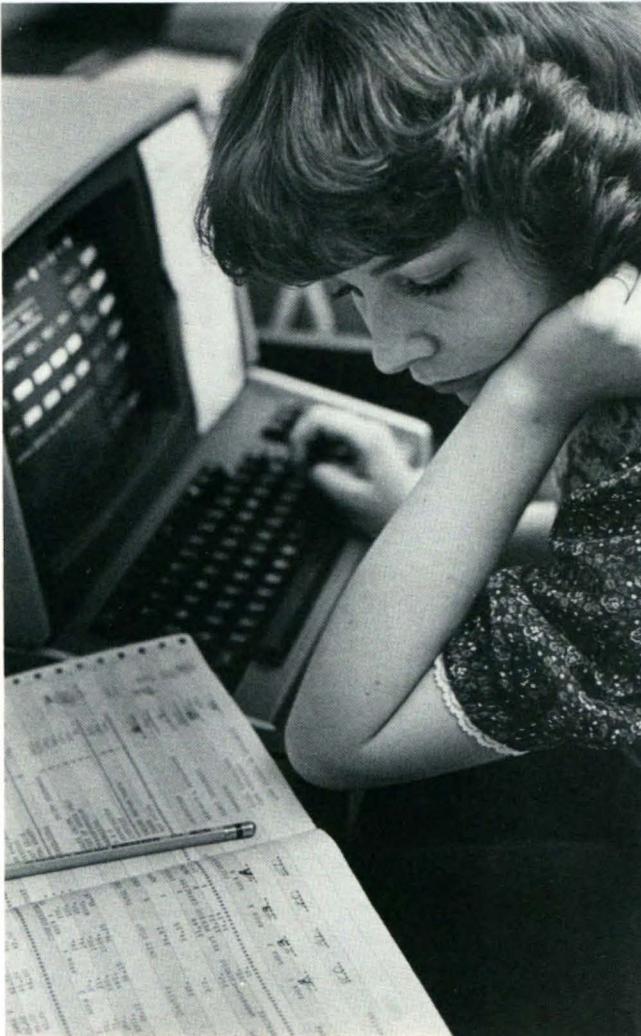
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A Message From Graduate Studies & Research



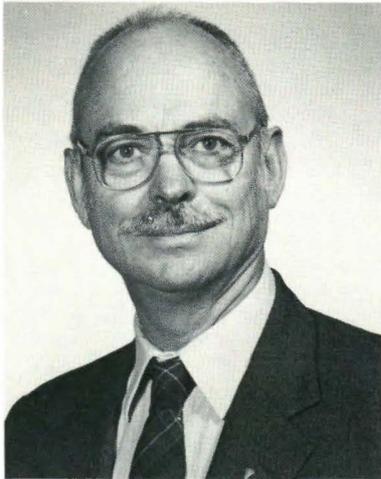
This is the fourth annual publication of **Scholarship • In • Review**, recognizing the research and scholarly activities of the faculty of Central Washington University. As an observer of higher education's planning and other efforts to address the complex issues involved in its advancement, I am more convinced than ever that research and scholarly activities are an essential and integral part of the learning process. Such activities support and enhance teaching. They enable the University to improve its quality and value to the public it serves. And they distinguish this institution as truly a university.

Higher education in this country, as in other industrial countries, is crucial to our successful participation in the world economy. In a recent discussion on technology transfer, Paul Freedenberg, Assistant Secretary of Commerce for Trade Administration, pointed out that one very large-scale technology transfer program now underway is the 19,000 Chinese students from the People's Republic of China enrolled in universities in the U.S. Too often, we forget the vital role that higher education plays in the progress of our people and our country as well as in developing countries.

Central plays an active role in this effort by accepting a number of students from the People's Republic as well as having an active exchange program for faculty. Professor Heimbeck's report in this issue on China's religions is the direct result of this activity.

Research and scholarly activities at Central help to make it an exciting university for students and faculty, and makes a significant contribution to our state and to the nation.

Dale R. Comstock
Dean of Graduate Studies & Research



Robert C. Mitchell, Professor of Physics, has had a longstanding interest in astronomy. In 1986, he led a group to the heights of the Andes Mountains in Peru to observe Halley's comet pass by the Earth.

Astrophotography For Teaching

By Robert C. Mitchell

When I started teaching astronomy in the early 1970s I was struck by two observations. One was that textbooks presented astronomy in such a way that one could study it for several years and still be totally lost if suddenly cast on a deserted island without references and instruments. Information on the apparent motions of the sun, moon, planets and stars is limited in most books and there is little or no information on how one would start reconstructing the model developed by Kepler. The second observation was that there were no good slides showing large scale features in the sky, such as the asterisms of major constellations. An asterism is an easily identifiable group of stars, often mistakenly thought of as a constellation. A constellation is a



Figure 1 (a). A portion of the winter Milky Way.

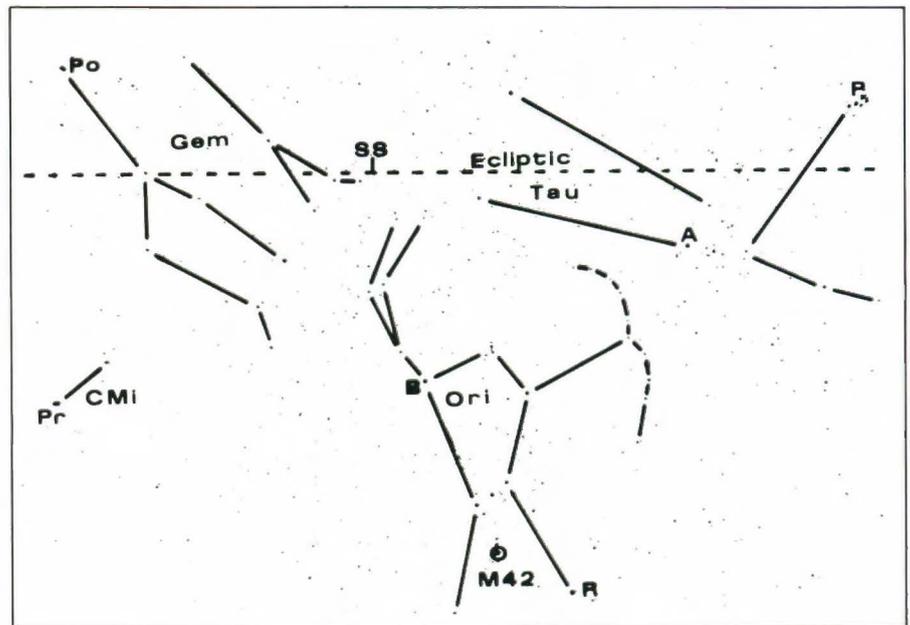


Figure 1 (b). A negative print of Figure 1. Gem - Gemini (The Twins), CMI - Canis Minor (The Little Dog), Ori - Orion (The Hunter), Tau - Taurus (The Bull), P - Pleiades, A - Aldebaran, Po - Pollus, Pr - Procyon, magnitude 0.38, 11.3 light years from Earth. B - Betelgeuse, a red giant, variable, mag. 0.5, 520 light years from Earth. R - Rigel, mag. 0.0, 12,900 light years from Earth, a very hot blue star. M42 - The Great Orion Nebula is a very large cloud of hydrogen gas and dust in which new stars are being formed. Ecliptic - The apparent path the sun takes through the background stars during the year. SS - Summer Solstice. This is the position of the sun on the first day of summer when it reaches its northern-most point on the celestial sphere. These stars are visible in the early evening from December 15 to May 10. The center of the slide coincides with the local meridian at 8:00 PM PST on February 10. (See NOTE 1.)

region of sky. For example, the Big Dipper is an asterism in the constellation Ursa Major. Those that did exist were processed with such high contrast it was impossible to distinguish magnitude differences and thus pick out asterisms.

My interest in astrophotography started with the desire to take a set of photographs on color 35-mm slides which showed all the asterisms visible from 47° N latitude. At the time, the fastest film was ASA 400 Ektachrome. I needed a wide angle lens, 28-mm focal length, with reasonable aperture, F/2.5, and a drive unit which would allow me to follow the stars for 5 to 10 minutes. The drive was made from a World War

II surplus antenna rotator driven by a 3-volt motor and mounted on a wooden transit tripod. With this equipment I was able to obtain the desired set of slides.

Color film shows the color temperatures of some of the fainter stars—those not so bright as to wash out the color—and the red color of several hydrogen nebulae. It is particularly good for the very hot, type O stars and the large cool supergiant type M and N stars. The 28-mm focal length lens shows a starfield which measures about 60° by 40°. This is enough to include all of most constellation fields and portions of those adjacent. This is important for learning the relative positions of the constellations. With a

50-mm lens I am able to show more detail in the smaller constellations, and with a 200-mm lens it is possible to take photos which approximate a binocular view. This is particularly useful for showing the positions of the Messier objects relative to their starfields. There are many very fine telescopic photographs of these objects, but these do not give their positions relative to background stars which is useful for naked-eye or binocular viewing.

Soon after I started the project I received permission from Hansen Planetarium in Salt Lake City to copy a set of constellation postcards which they sell. The scale and orientation of these photographs was such that they

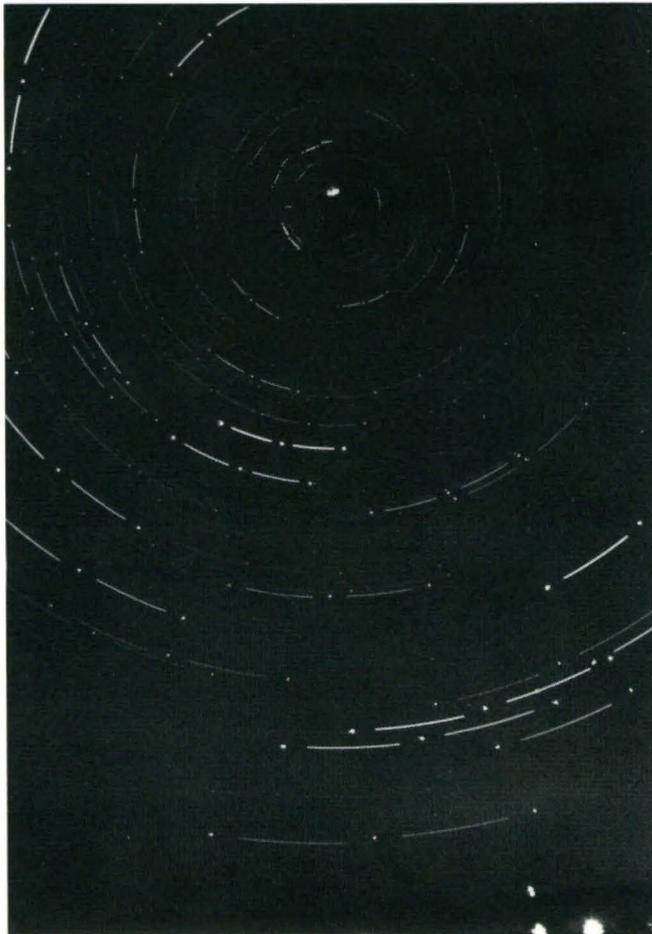


Figure 2 (a). Star trails on the northern horizon showing the effects of the rotation of the earth. Wide angle lens.

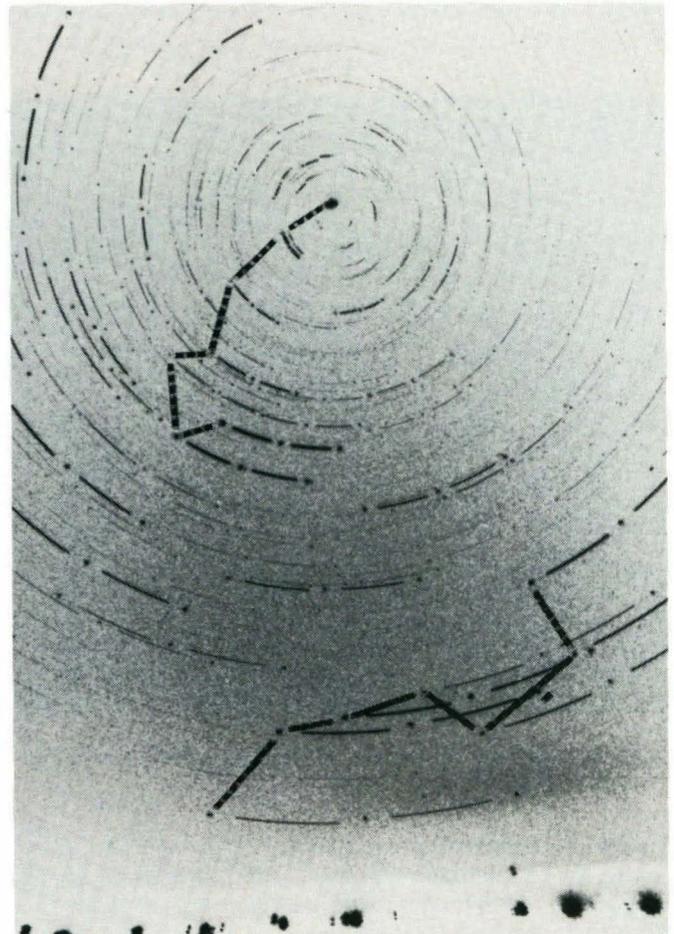


Figure 2 (b). A negative print showing the stars of the Big and Little Dippers.

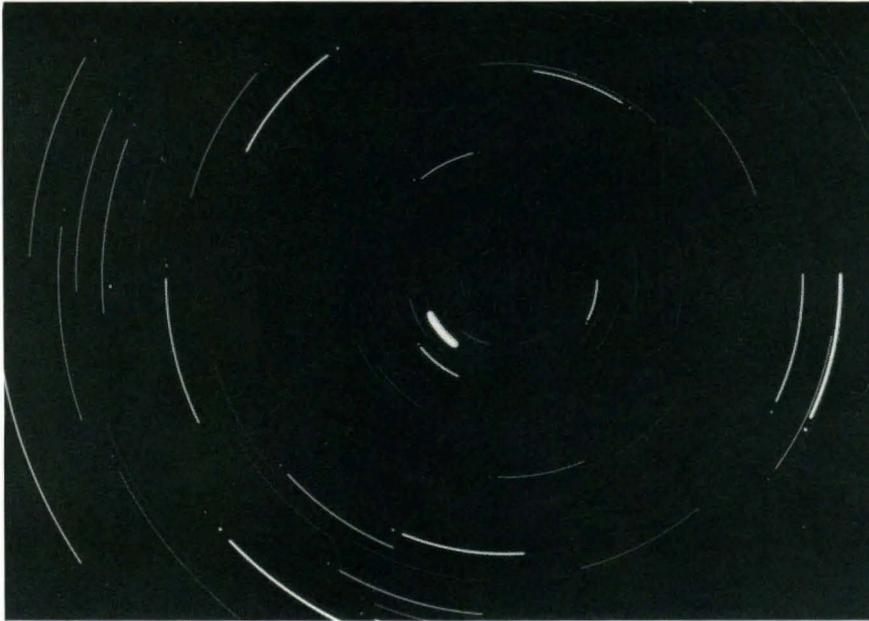


Figure 3. Star trails of Polaris and other stars near the North Celestial Pole. Telephoto lens (200-mm).



Figure 4. Star trails of the belt of Orion and other stars rising.

could be copied onto the starfield slides by double exposing the duplicates. These have been useful for my students to picture the ancient figures associated with the constellations. Hansen Planetarium became interested in the starfield set and added them to their catalog. Later, Baader Planetarium

in Munich, Germany asked that I prepare a set for them also. There are 20 slides in each set. Their value lies almost entirely in helping people learn the sky. They do not help develop models of the solar system or the galaxy.

Figure 1 (a) is a print of a slide of Orion. The slide was taken on

September 29, 1984. The exposure was for 5 minutes on 3M color film, ASA 1000, pushed to 2000. Figure 1 (b) is a negative print with the identification of the brighter stars in the asterism similar to the drawing published by Baader for this slide.

The first set of slides taken for showing motion were "star streak" photographs which show the apparent rotation of the celestial sphere near the horizons. Figure 2 is from a 2-hour exposure of the northern horizon. First, a 20-second exposure was taken to show the star positions, then the lens was covered for 5 minutes, and then the aperture was closed to F/8 and left for 50 minutes. The lens was then covered for another 5 minutes and the entire process was repeated. Figure 3 is from a 2-hour exposure with a 200-mm lens showing the motion of Polaris. The 1-degree orbit Polaris makes around the Pole is so small it is rarely observed without careful measurement. This slide shows it nicely. Figure 4 shows the rising of the belt of Orion. The procedure for taking this photograph was the same as for Figure 2. Photographs of stars near the celestial equator rising, taken from different latitudes, are useful for showing the effect of latitude on the angle of rising and setting.

In another set, the diurnal (daily) motion of the sky is shown by fixing the camera on the eastern horizon and taking a photograph, driven (without streaks), every hour from sunset to sunrise. This set was done in September of 1979 from Table Mountain, WA and shows the direction of the movement of the stars as well as the distance moved each hour. The planets Jupiter, Mars, Saturn, Venus and Mercury were captured as well as the waning crescent moon.

The photographs showing diurnal motion added to the general starfield set, but there still remained the problem of Kepler and the planets. In 1975 I started taking 50-mm photos of Jupiter in the background stars. By 1978 I realized these could be used to

develop a laboratory exercise in which students could obtain the orbit of Jupiter with the slides and a little information from the *Astronomical Almanac* about the position of the sun at the time of each photograph. To do this I made a series of star charts showing the brighter stars along the ecliptic, the apparent path of the sun, on a scale 1 cm = 1 degree. For these charts I used the 1980 coordinates for the stars. I had observed that the precession of the equinoxes since 1950 (one of the standard epochs) was enough to produce a systematic error in determining the times of opposition of about 10 hours. This chart also contained the ecliptic with a celestial longitude scale plotted on it. When the Jupiter slides are projected on this chart from a distance of about six feet the stars of the slide can be made to coincide with the plotted stars on the chart. Then the celestial longitude of Jupiter can be determined. With these longitudes of Jupiter as seen from earth, and the corresponding longitudes of the sun as seen from earth, taken over a period of at least two years, it is possible to obtain reasonably accurate positions of Jupiter, as seen from the sun. The details of this exercise were published in the September 1980 issue of *The Physics Teacher*. The period of Jupiter, relative to background stars, is 11.6 years. By the end of 1987, I will have completed one orbit of Jupiter with a little overlap. This project has been very helpful for students to understand several of the concepts related to planetary motion.

A second set of slides related to planetary motion was taken during the fall of 1981 and winter and spring of 1982. This was the period of the infamous "great planetary alignment." It was also a period when Saturn, Jupiter and Mars were going through their retrograde loops at about the same time. (The retrograde motion of a planet is its apparent westward motion through the background stars when it is on the side of

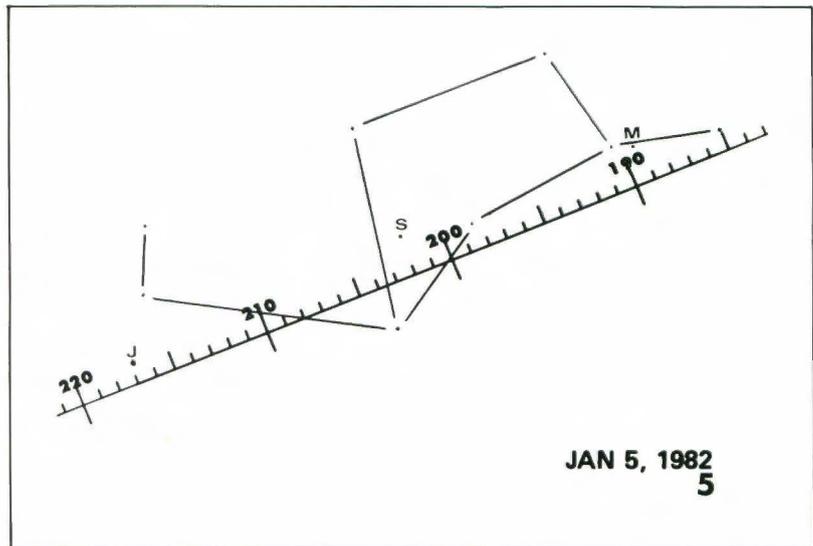


Figure 5. Negative print showing Mars, Jupiter and Saturn with ecliptic superimposed, January 5, 1982. Number 5 of a set of slides showing retrograde motion of planets. A portion of the asterism of Virgo is outlined.

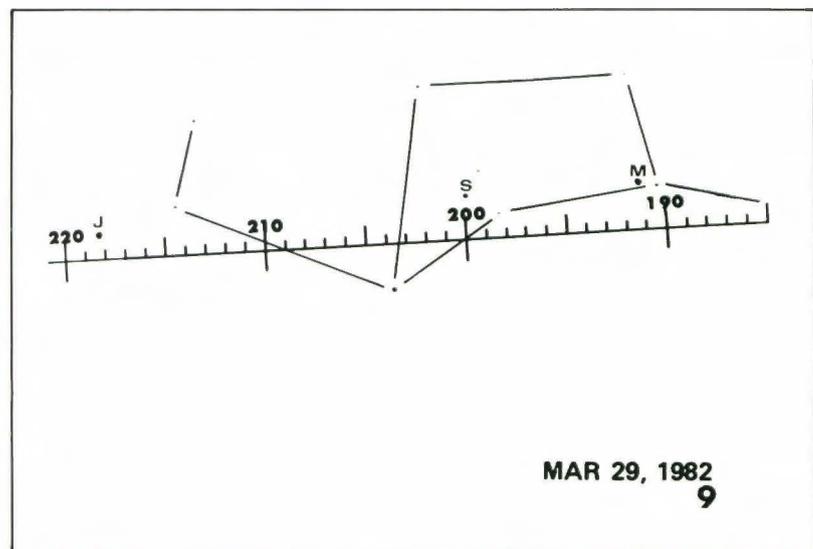


Figure 6. Number 9 of Retrograde Motion set.

earth opposite the sun. This apparent westward motion followed by the normal eastward motion of a planet makes it appear to make a loop against the star field.) It was an opportunity to show retrograde loops and how they vary from planet to planet. With this set of slides I used considerable darkroom time superimposing dates and the ecliptic scale on the starfield slides. Figures 5, 6 and 7 are three pairs of positive and

negative prints of these slides. Figure 8 is a representation of the positions of the planets and sun as viewed from a point above, north of the solar system. This view helps students understand the apparent changes in the motion of the planets. March 14, 1982 was the date of the infamous "alignment" of the planets which was the basis for the so called "Jupiter Effect." This "Jupiter Effect," which received much attention during 1981 and early 1982, was purported to produce massive earthquakes when all the planets were "aligned" on one side of the sun. Figure 8 shows just what constituted that "alignment". It is interesting to note just how soon all that was forgotten when there were no earthquakes.

Although the camera drive I had been using was adequate for normal and wide angle lenses, it was not stable enough to give consistently good results with a 200-mm telephoto lens. Figure 11 shows a new drive I designed to be both more stable and more flexible with respect to changes in latitude. This drive was constructed in the winter of 1986. With this 200-mm lens I was also able to show objects as they would be seen with binoculars. They also show color which is too faint to see with the eye even using binoculars or a telescope. An example of such a photograph is shown in Figure 9. The large gas cloud in the dagger of Orion, just below the belt, is easily seen in this photo. Its red color is unmistakable on the color slide. I am in the process of photographing the Messier objects such as M42 (the Orion nebula) which were listed by Charles Messier to help comet seekers avoid objects which look like comets but are not.

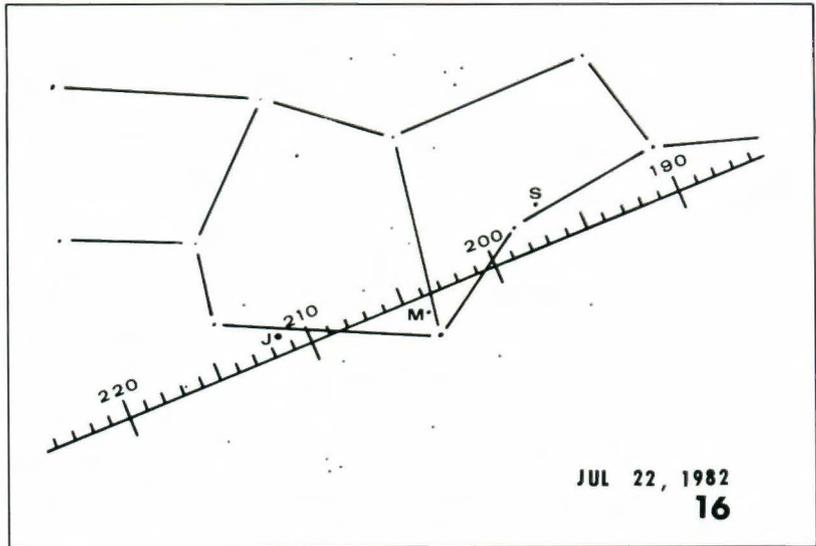


Figure 7. Number 16 of Retrograde Motion set.

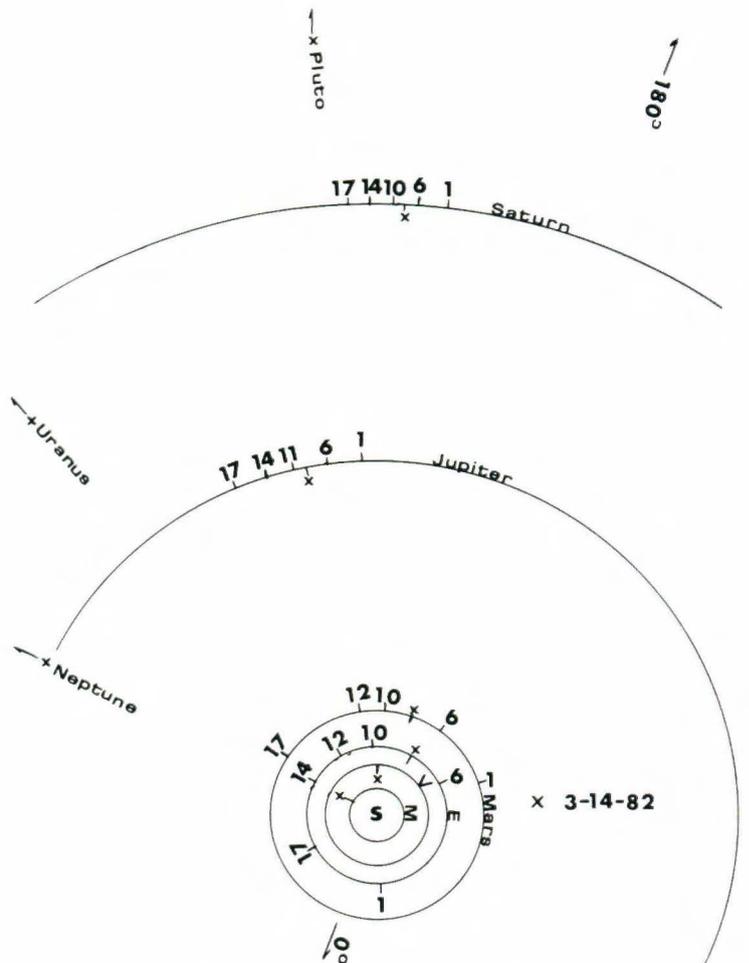


Figure 8. Diagram showing the relative positions of Sun, Earth and planets during the period covered by the Retrograde Motion study, November 7, 1981 to August 12, 1982.

Another area of interest for photography is variable stars—stars which change in brightness. Some of these like Mira change brightness in a very regular and predictable way. The period of Mira is 311 days between maxima. Figures 10 and 12 show Mira a month before and at maximum, respectively. Both slides show the distinctive red color of this red giant star. Some stars' novae (new stars) are variable in a more eruptive and unpredictable way. The nova in Cygnus, The Swan, shown in Figure 13 is an example. In a few days this star increased in brightness by about forty million times. It is shown here at its maximum. Within a month it was no longer visible to the naked eye. On February 23, 1987 a more spectacular event occurred in the Large Magellanic Cloud (a nearby galaxy). This supernova increased in brightness 1,600 times. This change in brightness was not as great as that of the nova in Cygnus, but its absolute brightness is much more. This star was similar to Rigel in Orion. See Figure 1. Even though the Large Magellanic Cloud is 160,000 light years away, the supernova was one of the brightest stars in its neighborhood. At this writing it has not reached its predicted maximum brightness. Supernova remain bright for several months. The last one in our galaxy was in 1066. Its remnants now make up the Crab nebula, or M1.

Finally, there are comets. Figures 14 and 15 show two of the more famous comets seen in the past ten years. Comet West, visible in March, 1976, was one of the brightest comets of this century. It had a very interesting striated dust tail which is not common. It also broke into four pieces sometime during its closest approach to the sun. Then there was Comet Halley—although not the brightest of comets, it is certainly the most famous. It is by far the brightest of the short-period comets, those whose periods are less than 200 years.



Figure 9. M42, the Great Orion Nebula in the Dagger of the Hunter. (The fuzzy object in the lower right.) (200-mm lens at f/3.5 for 1 min.)

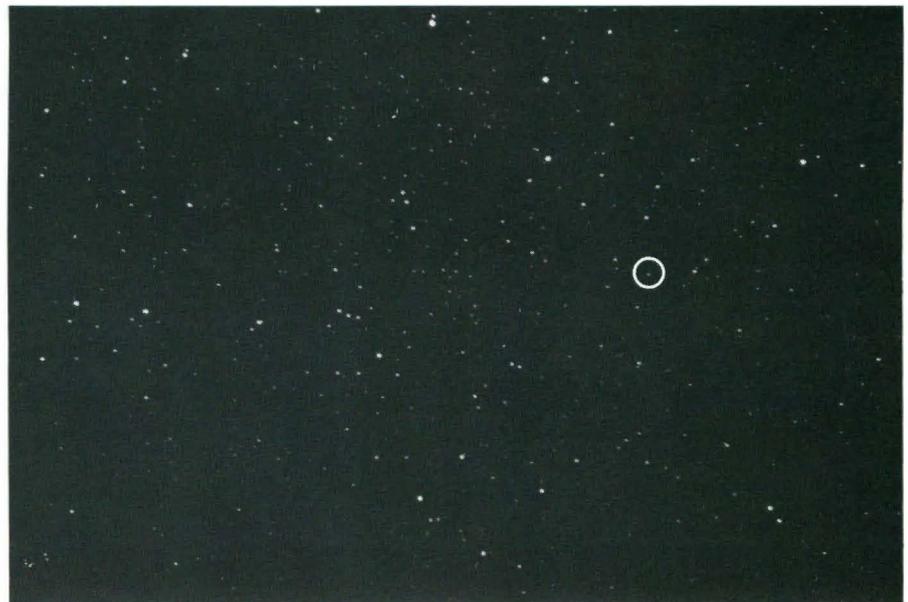


Figure 10. Mira, a variable star in the constellation Cetus, The Whale, about a month before maximum brightness. Period is 311 days. Magnitude changes from 9 at min. to 2.5 at max. Naked eye limit is 6 (1-5-76).

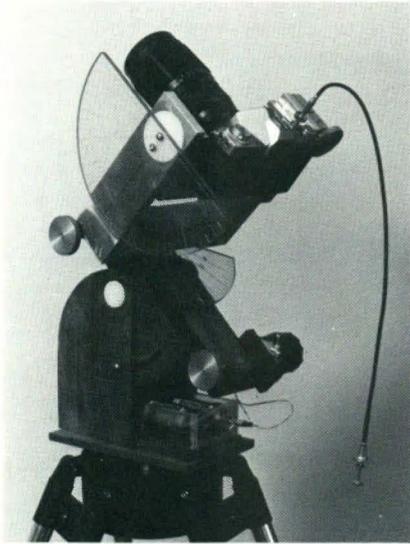


Figure 11. Camera drive uses a 1 rpm motor powered by two 1.5-volt batteries to turn a screw which rotates the camera to follow the stars. At the end of about 5 minutes the screw is disconnected from the motor and is backed up to its starting position again. Setting circles are used to point the camera without having to see the star through the viewfinder.

The process of photographing the sky with a variety of lenses and exposures brings to life many phenomena which are difficult to observe in other ways. For some things a large telescope is necessary, but there is much to learn and much to enjoy without anything except a camera and some fast film.

Although it is difficult to measure the effectiveness of a teaching strategy, I have found that the use of photographs stimulates interest and, when used in conjunction with graphs, charts, and student observations, enhance the learning process. It seems to be important to maintain an ongoing photography program rather than rely on archival material taken in years past. For this reason I urge anyone teaching astronomy to take their own photos and buy or borrow from others only to fill in gaps in the record.

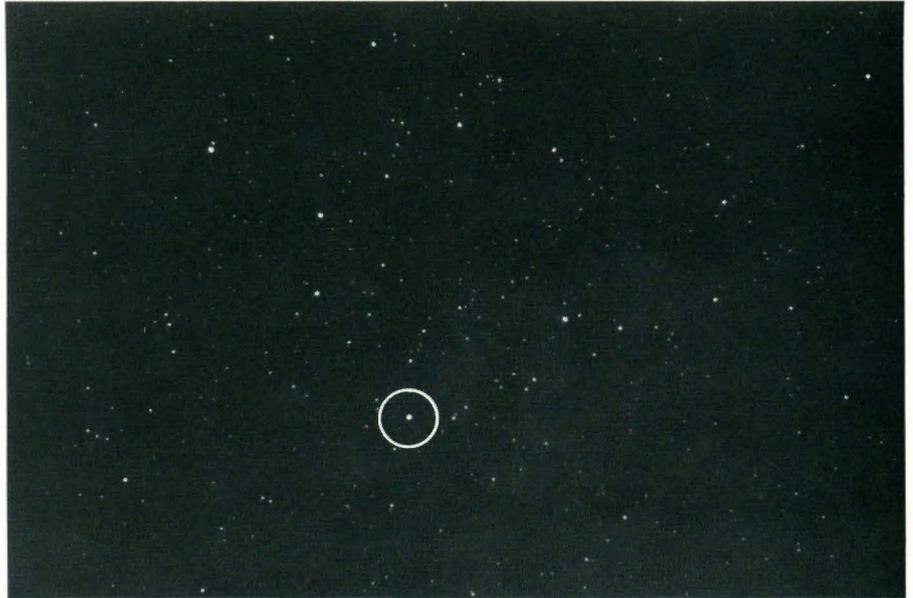


Figure 12. Mira at maximum brightness.

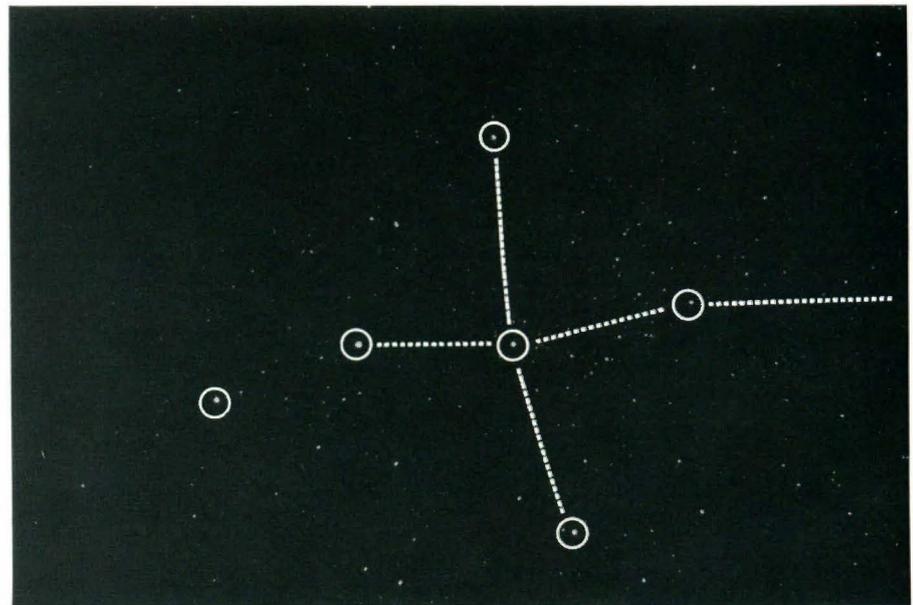


Figure 13. Nova Cygni, 8-30-75. This star was too faint to see on Mt. Palomar plates, suddenly brightened on 8-29-75, and faded from view in about two weeks.

NOTE

1. *Grossfeldaufnahmen des nördlichen Sternenhimmels*, (Wide Field Photographs of the Northern Starfields), Baader Planetarium, Munich, Germany, 1985.



Figure 14. Comet West, 3-4-76. This comet was one of the brightest comets of this century. It appeared in the morning sky, rising just before the sun for about a week in early March, 1976.



Figure 15. Comet Halley, 3-24-86, from the desert southwest of Arequipa, Peru. The constellations are Sagittarius just above the comet and Corona Australis, The Southern Crown, above and to the right.

TV and the American Voter: Do We Really “Turn On, Tune In, and Drop Out?”

By Laura Lee Appleton

Americans appear to have two conflicting images of their own political behavior. On the one hand, there is the image of democracy, with voters regularly exercising their rights of free choice. On the other hand, there is the image of the fickle and uncaring voter, who is easily persuaded to “drop out” of the electoral process.

Currently, Americans are following with great interest and approval China’s struggle with liberalizing the electoral process so that it is more competitive. Similarly, Communist Party theoretician Georgi Shakhnazarov’s recent call for reform in Soviet Union elections, away from the present system of slating only one party-approved candidate for each office, is greeted with American editorial endorsement. These trends toward greater democratization elicit our enthusiastic support because we cannot believe that citizens can have genuine interest in a one-party, one-candidate political system. We attribute the high voter turnout rates in these countries to the fact that citizens vote only because they are “forced” to.

Despite being beneficiaries of a democratic system, with presumed meaningful choices, the U.S. has the dubious distinction of ranking near the bottom of voter turnout rates for countries with competitive elections. Further, in the 1980 and 1984 presidential elections, we heard about untold numbers of voters leaving the polling place, or not bothering to go to the polls at all, in response to media broadcasts of election returns and projections on election day. To remedy this assault on the integrity of the democratic process—and reassure voters that every vote “really counts”—both federal and state governments are considering proposals to restrict the media from conducting exit polls, to prohibit broadcasting of election returns while polls remain open, and to create a uniform poll closing time across the nation.

Are American voters as “bad” as these popular images would suggest? Are we really that negligent about voting? Are we really so fickle, and our commitment to voting so tenuous, that hearing some information about an election’s possible or probable outcome is sufficient to cause us to desert the polls?



Laura Lee Appleton, Professor of Sociology, specializes in the theory and study of social movements. Her work on media election projections and their effects on the 1980 elections was recognized by an invitation to testify before the U.S. Congress.

Since “debunking” is a classic sociological pastime, I took this opportunity to examine these questions in light of research on voting behavior that John R. Dugan and I have been conducting, using data from elections since 1980. While our purpose was to accurately assess the effects of election day media broadcasts on voter behavior in Kittitas County, our findings have broader implications for public policy. Although our research dealt with many issues, I will deal with only two of these here.

How Many Voters Were Affected by Media Reporting on Election Day?

Since Lang & Lang’s 1964 study of California voter reaction to media projections of a Johnson victory four hours before the polls closed, social science research has consistently shown that media broadcasts on election day, reporting both probable and actual returns, have a negligible effect on both the non-voting rate and the outcome of presidential elections. However, in both the 1980 and 1984 presidential elections, West Coast state officials, election

TABLE 1. PERCENTAGE OF PEOPLE HEARING ELECTION RETURNS BEFORE VOTING BY TIME VOTED, 1980 AND 1984

Election	Status		Time Voted								Sub-Total	Total	
			Before Noon	12-2 pm	2-3 pm	3-4 pm	4-5 pm	5-6 pm	6-7 pm	7-8 pm			
1980	Heard Before Voting	F	1	-	-	-	4	16	34	53	108	N = 252	
		%	0.4	-	-	-	2	6	14	21	43		
	Did Not Hear Before Voting	F	56	15	5	14	7	19	19	9	144		102%
		%	22	6	2	6	3	8	8	4	59		
1984	Heard Before Voting	F	6	-	4	2	10	12	29	34	97	N = 361	
		%	2	-	1	0.6	3	3	8	9	27		
	Did Not Hear Before Voting	F	100	28	13	19	13	31	32	28	264		100%
		%	28	8	4	5	4	7	9	8	73		

a. Total exceeds 100% due to rounding error

workers, unsuccessful candidates for office, and the general public claimed on the basis of anecdotal evidence that large numbers of voters were deterred from voting by media reporting. Some also feared that the media influenced voters to change their minds about whom to vote for, resulting in "bandwagon" or "underdog" effects. Which view is correct?

To assess media effects on Kittitas County voters, for the 1980 election, we selected a random sample of 283 registered voters who had actually voted according to official county records; similarly, a random sample of 448 actual voters was obtained for the 1984 election. These samples are in addition to the samples of registered non-voters discussed later.

As Table 1 shows, substantial numbers of voters in our samples could potentially have been influenced by media reporting on election day in both the 1980 and 1984 elections. In 1980, 43% of the voters in our sample said they had heard something about the election results before going to the polls; in 1984, 27% of our sample similarly had information before voting. The greatest exposure to

TABLE 2. VOTER RESPONSE TO HEARING BROADCASTS OF ELECTION RESULTS PRIOR TO VOTING, 1980 and 1984

Race	1980		1984	
	Frequency	Percent	Frequency	Percent
PRESIDENT				
More Eager to Vote	15	14	8	8
No Change	51	47	57	58
Less Eager to Vote	42	39	34	34
TOTAL	108	100	99	100
STATE GOVERNOR				
More Eager to Vote	12	11	12	12
No Change	89	83	83	85
Less Eager to Vote	6	6	3	3
TOTAL	107	100	98	100
COUNTY COMMISSIONER				
More Eager to Vote	14	13	10	10
No Change	87	82	85	88
Less Eager to Vote	5	5	2	2
TOTAL	106	100	97	100
STATE SENATOR				
More Eager to Vote	12	11		
No Change	90	84		
Less Eager to Vote	5	5		
TOTAL	107	100		n.a.
COUNTY SUPERIOR COURT JUDGE				
More Eager to Vote			16	16
No Change			80	82
Less Eager to Vote			2	2
TOTAL			98	100

n.a. Not applicable: race was not on the ballot that year

media broadcasts occurred among persons who voted after 6 p.m. Of those who said they had heard something about how the election was going before voting in the 1980 election, 81% voted after 6 p.m. in the evening; in the 1984 election, 65% of those exposed to information before voting cast ballots after 6 p.m.

What effects did this exposure have? On the one hand, it aroused a lot of anger and frustration. People in our 1984 sample, for example, made statements such as: "I heard Reagan was going to win—it didn't seem worth the while to vote;" "My vote didn't matter;" "They should keep their mouths shut;" and, "I think it's wrong to show results."

More importantly, as Table 2 illustrates, hearing broadcasts of election results prior to voting made some people less eager to vote. This decrease in interest in voting, however, is almost exclusively related to the race for President. A striking 39% of those in our sample who had information before voting in the 1980 election reported feeling less eager to vote for President, compared to 34% in

the 1984 election. The vast majority—over 80% in each election—stated that their eagerness to vote for other races on the ballot, including state governor, county commissioner, state senator and county superior court judge, remained unchanged. And, in startling contrast to popular conceptions, hearing election results before voting actually made 10% or more of voters more eager to vote for the races in each election.

The critical questions remain: Did this substantial decrease in eagerness to vote for President likewise result in a substantial boycott of the election? And, did media exposure result in a significant "bandwagon" or "underdog" effect?

From our research on Kittitas County voters, the answer to these questions is clearly "NO." In both elections, despite significant disaffection with media broadcasting of election returns before the polls closed, only a handful of registered voters actually altered their voting behavior.

Table 3 shows the changes

made by registered voters in our sample in the 1980 election, the election in which the most voting changes occurred. We found four types of effects in our sample: (1) 1.9% of the voters reported that they switched their votes in the presidential race. In projecting this county-wide, we assume that this effect is limited to that proportion of the electorate who had information before voting; we estimate that 83 persons switched their votes. (2) 0.7% of the voters said that they decided selectively not to vote for a presidential candidate, but did vote on the other ballot races. County-wide, we estimate that 33 persons selectively omitted voting for President. (3) 1.3% of the registered voters said that they decided not to vote at all, although they had originally intended to. In projecting this county-wide, we factored in the estimated spurious non-voters (discussed below) and assumed that this effect was limited to the proportion of people who finally decided not to vote after 12 o'clock on election day. We estimate that 32 registered voters boycotted the election. (4)

TABLE 3. MEDIA EFFECTS ON OUTCOMES OF SELECTED RACES, KITTITAS COUNTY, 1980 PRESIDENTIAL ELECTION

EFFECT	Estimated number of affected persons in County	Net Number of Votes Gained or Lost														
		President						Senate			Governor			Commissioner		
		Carter	Reagan	Anderson	Clark	Commoner	Vote Margin Reagan-Carter	Magnuson	Gorton	Vote Margin Gorton-Mag.	Spellman	McDermott	Vote Margin Spellman-McDermott	Ooka	McCune	Vote Margin Ooka-McCune
Switch Vote	83 (1.9%)	-17	-33	17	17	17	--	--	--	--	--	--	--	--	--	--
Selectively Non-Vote	33 (0.7%)	--	-17	--	--	--	--	--	--	--	--	--	--	--	--	--
Not Vote	32 (1.3%)	-16	-16	--	--	--	-16	-16	-16	-32	--	--	-32	--	--	--
Motivated to Vote	17 (0.4%)	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Total Net Effect	165 (2.4%)	-33	-66	17	17	17	1284	-16	-16	1741	-32	--	961	-32	--	829

TABLE 4. MEAN PERCENTAGE TURNOUT IN NATIONAL ELECTIONS, 1960-1978

Italy	94	Norway	82	Chile	71
Netherlands	90	Israel	81	Japan	71
Austria	89	New Zealand	81	Uruguay	71
Belgium	88	Venezuela	80	France	70
Denmark	87	Philippines	77	Turkey	62
Australia	86	Ireland	75	Jamaica	61
Sweden	86	United Kingdom	74	India	60
Greece	85	Costa Rica	73	United States	59
Finland	84	Sri Lanka	72	Lebanon	56
West Germany	84	Canada	71	Switzerland	53

Source: G. Bingham Powell, Jr., "Voting Turnout in Thirty Democracies," in Richard Rose, editor, *Electoral Participation: A Comparative Analysis* (Beverly Hills & London: Sage Publications, 1980) 6.

0.4% of registered voters reported that they were motivated to go vote even though they had not intended to. County-wide, we estimate that 17 persons were galvanized to vote.

Overall, at a 95% level of confidence, we estimate that between 0.4% and 3.1% of our sample—some 10 to 76 people—changed their voting behavior in response to media broadcasts on election day. County-wide, again at a 95% confidence level, we estimate the number of people affected in any way to be between 64 and 262. As Table 3 illustrates, these voting changes were too small to alter the outcome of ballot races in Kittitas County.

How Many Non-Voters Are There?

Statistics on voting turnout in national elections are usually calculated on the basis of the percentage of persons of eligible age who cast ballots. As Table 4 shows, on the average, less than 60% of Americans of eligible age voted in national elections in recent years.

Political scientists offer several explanations for the comparatively low U.S. voting rate. The statistical base used in the U.S., unlike other countries, includes many who are ineligible (aliens) or unable (institutionalized) to vote. While the governments of other countries assume responsibility for

maintaining voter eligibility lists, most registration laws in the U.S. present barriers to voting by requiring in-person registration in advance of the election. States with simplified provisions such as North Dakota, Minnesota and New Jersey have substantially higher turnout rates. And, in some countries like Belgium, voting is compulsory, with penalties imposed for non-voting.

The voting rates of Americans who actually register to vote are somewhat less dismal. In the 1980 presidential election, for example, 79% of registered voters in Washington state—but 77% in Kittitas County—cast ballots; in 1984 both rates were 79%. Our research suggests, however, that these figures seriously underestimate the effective voting rates of American voters, because

they fail to distinguish between "phantom" registered non-voters (those who have moved, died, or become incapacitated) and "genuine" registered non-voters (those who were present but chose not to go to the polls).

As discussed above, a critical objective of our research was to estimate accurately the percentage of registered voters in Kittitas County who stayed home in response to hearing election results before the polls closed. Since we hypothesized that this would in fact occur relatively rarely, we went to great lengths to track down and interview, either by telephone or in person, the non-voters in our samples. Systematic efforts were made to locate those without working telephone numbers and those who had moved, by contacting neighboring addresses, searching records of the telephone company and local university, and requesting forwarding service through the post office.

For the 1980 election, we selected a random sample of 195 registered non-voters from official county records; and similarly, a random sample of 274 registered non-voters for the 1984 election. Table 5 summarizes the results of our efforts to interview these people: A striking 74% of the 1980 sample and 82% of the 1984 sample were actually institutionalized, dead, or had moved away. Thus, they represent

TABLE 5. STATUS OF NON-VOTER SAMPLES, 1980 AND 1984

Status	1980		1984	
	Frequency	Percent	Frequency	Percent
Persons Available				
Completed interviews	34	19	25	9
Refusals & incomplete interviews	7	4	14	5
On vacation, temporarily not home	6	3	11	4
(Subtotal)	(47)	(26)	(50)	(18)
Persons Not Available				
Deceased	6	3	5	2
Hospitalized, incompetent	6	3	8	3
Moved out of county, documented	34	19	15	5
Moved, no forwarding address	85	48	196	72
(Subtotal)	(131)	(74)	(224)	(82)
TOTAL	178	100%	274	100%

a very different category of registered non-voters from those who were present and able to vote, but who chose not to go to the polls.

What then is the rate of "genuine" non-voting? The answer depends upon what assumptions are made concerning the whereabouts of those who moved with no forwarding address.

According to census data for 1980, 44% of Washington state residents lived in the same house as they had 5 years earlier, 28% moved but stayed in the same county, and 26% had moved out of the county or to a different state.

Assuming that roughly half of all the movers in our samples likewise moved out of the county or state—and adjusting for the deceased and institutionalized—the net result would be that 40% of the 1980 sample and 43% of the 1984 sample should not be considered as genuine non-voters.

Rather, these are phantom non-voters who will be carried on the rolls until they are purged for one of three reasons: (1) The person registers to vote in another county and voluntarily fills out a cancellation card to be forwarded to the county of prior registration. This practice is not uniform, nor is it required by any state or federal law. (2) The county is notified of the person's death by relatives or by quarterly lists from DSHS. (3) The person has not voted at all for 2 years, and/or the person failed to vote in the last presidential election. Thus, a person registered in Kittitas County, who voted in the 1980 presidential election, then moved out of state and re-registered without notifying the auditor, would be counted as a non-voter in Kittitas County in the 1984 election; he or she would not be purged from Kittitas County lists until after failing to vote in the 1984 presidential election. Should the person move several times, he or she could be counted as a "registered non-voter" in even 2 or 3 counties.

Clearly, the effect of these practices is to exaggerate rates of non-voting. Assuming that the same ratio of spurious non-voters found in our samples holds true for the county and the state, then the true voting rates for registered voters are in the range of 85% to 87%.

Conclusions:

Our research shows that some popular images of American voters—as people who are likely to not bother to vote, or who are easily deflected from their duties as citizens by media broadcasts on election day—are clearly at odds with empirical reality. Due to voter registration policies, a significant number of people are spuriously counted as non-voters, resulting in an underestimate of actual voting rates of registered voters. While registered voters express outrage at media broadcasts of election results before the polls close and report that this makes them less eager to vote for president, this decrease in motivation does not carry over to other ballot races. More importantly, these feelings are expressed in actual changes in voting behavior by only a handful of voters, too few to affect the outcome of ballot races in the 1980 and 1984 presidential elections.

Our findings raise some troubling questions for public policy. What are the long-term effects on voters who become less eager to vote because of media reporting? Will voting rates over time be depressed if people are repeatedly annoyed? And, will voters become increasingly alienated from the democratic process if they believe—research to the contrary—that media broadcasts seriously affect other voters?

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Goal Setting: Realizing Instructional and Management Objectives in the Elementary School Classroom

By Mary Jean Potter

Many classroom instructional and management goals are set for teachers. The state dictates through rules and regulations; the courts through decisions and orders; the local district through its student learning objectives, curriculum personnel, and advisory groups; the individual school through its administration, its curriculum committees, and its grade level teacher teams; and parents through political and personal involvement. Even book publishers set goals for teachers through the activities listed in the teachers' guides and formats of the textbooks they publish.

As a result, teachers have decreasing opportunities to be creative or provide alternative learning situations for their students and teaching options for themselves. They feel restricted from capitalizing on their own interests and experiences and from taking advantage of impromptu and incidental learning opportunities which arise in their classrooms.

How, then, do teachers accommodate these outside pressures and expectations and their own professional and personal insights and needs? How do they project their own priorities and expertise into their classrooms?

In this essay, we will examine how elementary teachers use goal setting to achieve their classroom instructional and management objectives. Goals will be examined as clarifiers of values, thoughts, and desired experiences,

expressions of intent, and guides for achieving goals.

Creating and managing learning centers will be used to illustrate these aspects of goal setting in achieving teacher instructional and classroom management goals and objectives. A learning center is defined as an area in a classroom intentionally planned and located for specific purposes such as practice of a needed skill or enrichment and exploration of a new topic. It contains a wide variety of learning materials and utilizes an informal management system.

Goals are defined as the aims toward which effort is directed. Goals which teachers set usually involve or affect others. Considerations such as having the authority, expertise, resources, acceptance of others, and appropriateness of the goal must be considered, i.e., does the teacher have the authority to implement the goal of adding learning centers to the instructional system in the classroom or must the administration of the school and the parents be consulted and approve?

Goal statements should be worded so that they are well defined declarations of intent. They should state clearly the conditions or aims that are desired. They may also include the process and benefits expected. Goal statements should be formed when it is helpful in clarifying thoughts, communicating goals to others, or establishing a plan of action.

Goals as Clarifiers

For elementary school teachers, the process of determining goals acts as a clarifier. Teachers commit to a project if they see its value to themselves or others. As teachers work through the process of reaching specific and identifiable instructional, environmental, and social outcomes for their students and classrooms, they examine and prioritize their own concepts and beliefs about human and educational values, skills, and experiences. The result of this prioritizing is the representation of their professional thoughts, wishes, and plans.

To illustrate, to set goals for the use of learning centers in the classroom, teachers name, sort, and prioritize many areas. These include their role as “teacher,” the experiences they desire for their students and themselves, and the skill range and skill level to be included in the curriculum. Below are examples of a teacher’s clarification process.

Putting Philosophical Beliefs Into Words and Actions

Students should have use of the spaces in the classroom beyond the area occupied by their desks. Therefore, all space in the classroom competes for student need, such as a learning center, and is not arbitrarily assigned to teacher or storage use.

Providing Opportunities for Academic Enhancement for Students

The curriculum and management system of a classroom should be flexible and broad enough to enhance the academic experiences for all students. Therefore, learning centers will be planned and equipped to extend and enrich concepts taught in the traditional lesson setting, provide practice and review, and provide a range of activities to accommodate students’ learning styles and interests.

Facilitating Social Development for the Students

The school provides the opportunity and environment for student’s social, ethical, and moral development. Therefore, learning centers will be planned and equipped to assist students to: Work together on common tasks in small groups, help one another, learn cooperative use of space and materials, and make and follow through on decisions by themselves and others.

Assisting in Classroom Management

Successful classroom management is enhanced through student involvement in decision making, accommodation of students’ varying learning interests and needs, and respect for students’ social and physical needs. Therefore, learning centers will be equipped and managed to

provide a place for students to go for additional activities, social or academic.

Encouraging Creativity in the Teacher

The opportunity to express creativity is an essential element in teacher job satisfaction. Therefore, learning centers will provide an opportunity for teachers to personalize a classroom. Furniture, floors, window coverings, equipment are all standard from room to room, but what teachers do with them is an opportunity to reflect their personalities and philosophies. Textbooks, workbooks, and worksheets are standard from room to room, but teachers can demonstrate their knowledge and abilities by developing learning packages, varying formats and difficulty of instructional materials, and applying task analysis in sequencing individualized learning tasks.

Outcome: Teachers clarify their professional and personal classroom goals by naming, sorting, and prioritizing their personal concepts and beliefs about human and educational values, skills, and experiences.

Goals as Expressions of Validity

Teachers know they are likely to commit themselves to a project and to have it respected and supported by others if they have a well defined statement of the process, benefits, and outcomes of their project. The following is an

example of such a statement.

It is my goal to set up a math learning center in my classroom. The area of concentration will be money. My goal is to provide materials from learning activities already in the classroom, a math kit to be checked out from the library, and objects for the store brought by the students. Parents and sixth graders will be asked to provide assistance.

In addition to having a place where small groups of children will practice the concepts introduced in instruction and the textbook, they will also have an opportunity to achieve two subsidiary goals: (1) learning such social skills as sharing materials, helping those who need help, being accepted by others and being dependable and responsible; and (2) learning such intellectual skills as problem solving, verbal interaction skills, and record keeping.

Outcome: Teachers give their thoughts, values and plans validity by expressing them in goal form. They are more likely to receive the support of others because formalized goals represent organization, careful thought, and attention to the needs of students.

Goals as Direction Guides

With their philosophic base established, values clarified and goals firmly established, teachers can then decide upon the desirable and necessary steps to achieve their goals. To illustrate, some will be major steps such as making the commitment and arranging the

classroom environment. Some will be relatively minor such as adjusting the way instructional materials are used and students are grouped. But all will be focused on the realization of their goals.

The teacher's rationale and strategy might look something like this: Our math program is currently being taught through whole group instruction followed by supervised practice and monitored seatwork. This seems to be satisfactory for some concepts, but for others a hands-on approach would be more effective. Money is one of those concepts. I would like to try a learning center. I see the following as necessary steps: Make a time line for setting up, opening, and closing the center, decide on location in the room and furniture needed, take inventory of materials available at school and plan to borrow, make, or buy anything else needed, decide how the center will be operated, plan for helpers, the record keeping system and a plan for introducing the center to the students.

Outcome: Teachers have a plan of action and a direction through determining their goals. Once teachers have clarified their concepts and beliefs and determined their goals, careful thought follows as to the necessary and expeditious actions. Once this has been achieved, with the support and cooperation of others, teachers will follow through to the achievement of their goals.

Summary

This short essay is an examination of the influence of goal setting on the elementary teachers' achievement of their personal instructional and classroom management objectives in an era of considerable outside influence and direction. It has shown that teachers can counter these restrictive influences by clarifying and prioritizing their concepts and beliefs about human and educational values, skills, and experiences. The expression of their beliefs into goal statements encourages their commitment to a project and the respect and support by others. Together, these guide teachers in their planning and strategy for achieving their goals, thus enhancing their opportunities to provide alternative learning experiences for their students and alternative teaching options for themselves.



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China's Religions in the Wake of Communist Revolution

By Raeburne S. Heimbeck

Religion has been a glory of Chinese civilization. The achievement in religious art and architecture alone is a marvel to behold. Chinese religious history itself resembles an art work—intricate, ornate, like a dragon and tiger design lightly etched upon four millennia of collective Chinese experience. The Chinese have invented religions, imported religions, exported religions, reshaped religions, and discarded a few. The question is whether or not the Chinese will now, in defiance of their strong tradition, abandon religion altogether. Since the People's Republic of China was founded in 1949 with the Chinese Communist Party led by Mao Zedong¹ in power, massive changes have profoundly impacted religious life.

Curiosity about the fate of religions in the new China prompted me to go and have a look. Teaching duties at Anhui University during Fall 1985 and Spring 1986 did not prevent me from spending more than seven weeks on the road. I climbed sacred mountains, over-nighted in monasteries, chanted and meditated with monks at ungodly hours, visited temples and mosques and churches in key cities, observed, asked questions,

and interviewed leaders. Since returning, I have read and thought about little else. What follows is the distillate of my discoveries.

The official theology of the Chinese Communist Party is atheism and its intent the ultimate elimination of all religion from Chinese society. Marx taught, however, that religion need only be contained and regulated, not actively opposed in the socialist state, for religion would wither away by itself once science and class struggle remove the reasons for religion, which are fear of nature and suppression of the masses. The Chinese Constitution therefore guarantees freedom of religious belief. Religious practice and propagation, however, are restricted to religious premises and homes but disallowed in marketplace and media. Superstition is excepted from constitutional protection. All religions thus protected must cooperate with the state in the building of socialism.

The new government's first major act toward religion was the creation in 1950 of the Bureau of Religious Affairs, charged with the ideological re-education of religious leaders and the setting up of government-linked associations within each religion. These associations have, in the name of the government, exercised regulative and to some extent restrictive authority. But the fate of China's religions since Liberation has resulted more extensively from policies, actions, and mass movements of broad economic and political complexion rather than from those that

targeted religion specifically.

What has been the issue for China's religions individually? They will be reviewed in their order of historical appearance, which happens, oddly, to correlate inversely with the importance I think they might have in the future mix of Chinese religious life. Folk religion has been omitted, because nothing I know of has been written about it for the period under consideration (1949 - present).

Confucianism

Confucianism is a Chinese invention. It has a dual meaning in China, naming on the one hand the philosophy of Confucius (551 - 479 B.C.E.), and on the other a religious cult. The philosophy—largely ethical, social, and political—has done double service as a surrogate religion for some intellectuals. The cult featured animal sacrifices and pageantry honoring Confucius as teacher, king, or god (depending on the historical period) in handsome urban temples on certain holidays such as the great man's birthday.

Once Liberation descended, Confucian philosophy was promptly dethroned (in deference to Marxism-Leninism-Maoism) as the state orthodoxy—a position it had enjoyed during the Han Dynasty (206 B.C.E. - 200 C.E.) and since the Song Dynasty (960 - 1279 C.E.)—and all public ceremony elevating Confucius was terminated peremptorily. The cult vanished in a twinkling, its temples converted into public museums. To my knowledge, only the resplendent Confucian Temple (Kong Miao) at Qufu, Confucius' birth place in Shandong Province, remained what it always had been.

The Cultural Revolution (1966 -1976) brought a savage campaign against Confucius as the quintessence of feudalism, reactionism, and indeed everything old that the new China must be rid of. It also brought on Red Guard vandalism at Qufu.

Today Confucianism, both as philosophy and as cult, is

experiencing a modest rehabilitation. A major manuscript discovery of the Confucian *Analecets* (pre-dating other manuscripts of that work by two hundred years) should infuse new vigor into academic Confucianism. Such Confucian ideals as the golden rule, the golden mean, and the power of example are beginning to find their way into the official socialist ethic. Most astonishingly, Confucius' birthday celebration has been revived in Qufu within the last few years—little more than a gesture to history perhaps, but something ostensible nonetheless. The rehabilitation will probably not progress much beyond this point. It goes without saying, however, that Confucius retains his pre-eminence among many overseas Chinese and a high reputation in World Philosophy.

Daoism

Daoism was also born on Chinese soil and names two separate but distantly related movements in China, Daoist Philosophy (dao jia) and Daoist Religion (dao jiao). Daoist Philosophy stems from two late Zhou Dynasty (1122 - 221 B.C.E.) classics attributed to Lao Zi and Zhuang Zi, and has become a private religion for certain individuals. There have been no important innovations in this heritage for seventeen centuries. After Liberation, Lao Zi remained above the tide through an ingenious materialistic reinterpretation, but Zhuang Zi sank under the stigma of subjective idealism. Both figures continue to be taught (by Marxists) in universities as part of the history of Chinese philosophy.

Since Liberation, Daoist religion has suffered repression more severe than any other Chinese faith. It has been suspected of seditious secret activity, branded as superstition for its complicity with ancestor worship and divinization, derogated for lack of any redeeming social or ethical

value, and condemned as an impediment to science and progress. Most Daoist temples have been closed and converted to other uses, such as shopping bazaars for the post-Mao, commodity-consumer generation of Chinese.

The Cultural Revolution was a total disaster for this religion, intensifying to the extreme the pressures put upon it in the previous seventeen years. Today the stench of decay hangs heavy over Daoism. Its buildings for the most part are dilapidated, its clergy appear untrained, dispirited, and decrepit. Very few worshippers or pilgrims (though hordes of tourists) frequent even its most famous temples and sacred mountains. Its hold on peasants in the countryside is indeterminable.

Chinese Buddhism

Chinese Buddhism is an Indian import redesigned for Chinese consumption. It made its debut in the old Chinese capital of Chang-an (the modern Xi'an in Shaanxi Province) about 50 C.E. The Chinese at first thought it bizarre and impossibly un-Chinese, but in time it secured a foothold. Off came the Indian way of being Buddhist and on came the Chinese. During the Tang Dynasty (618 - 907 C.E.) four new schools of Buddhism, all of them authentically Chinese, blossomed: Tiantai, Huayan, Chan, and Jingtu. The land became filled with monasteries, temples, shrines, pagodas, and colossal rock sculptures. A Daoist-inspired imperial persecution near the climax of the Tang Dynasty (842 - 848 C.E.), however, arrested the drive, and Chinese Buddhism has advanced no major innovation since. It approached the threshold of Liberation as the largest (by far), wealthiest, most powerful religion in China, but entrenched in frozen traditions and disorganized by the upheaval of the republican period (1911 - 1949). It is reported

that in 1949 Chinese Buddhism commanded forty thousand monasteries and temples, half a million monastics, and one-hundred million lay adherents.

Liberation dealt it a stunning blow. Most of Buddhism's vast property holdings (land, buildings), from which it derived its income, were nationalized under the Land Reform Act of 1950, reducing the religion to the poverty level at a stroke. Temples were confiscated. Even more shocking, perhaps as much as 80-90% of the Sangha (monastic community) was dispersed and returned to lay life as "workers," no longer "parasites." Lay activity such as temple worship and pilgrimage to sacred mountains was discouraged.

The Cultural Revolution, especially its first three years, meant an intensification of these repressive measures, to the point that the religion was completely paralyzed. After 1976, however, matters took an upward turn. Forty to fifty monasteries reopened, damaged buildings were restored, the Sangha came out of hiding and returned to post, young monks were ordained, lay people appeared again at temples for worship and set out on pilgrimages in the company of co-religionists from Japan, Hong Kong, America, and elsewhere.

Two points need to be underscored about the vaunted Buddhist recovery in the post-Cultural Revolution era. The first is that nowhere in China did the recovery exceed levels established during the period 1949 - 1966. The Sangha today is still operating at 80-90% reduction in force as measured against pre-Liberation levels. The second point concerns regional variations in recovery. Zhejiang and Jiangsu, coastal provinces just south and north of Shanghai respectively, have been the epicenter of the Buddhist movement in China since Song Dynasty days. Contemporary Buddhism is at its best in those

two provinces and a far cry worse elsewhere in China. I found monastic life at two sacred mountains in Zhejiang Province, Putuo Shan and Tiantai Shan, to be robust and authentic, but that at Jiuhua Shan (Anhui Province) and Emei Shan (Sichuan Province) effete.

Chinese Buddhism will surely survive at present levels into the predictable future. It certainly has the foundation and momentum, especially in Jiangsu and Zhejiang. Furthermore, the government has vested interests in its preservation: tourism and diplomacy with Buddhist nations in the Third World which China aspires to lead. Hence the vast sums of money the government has lavished on restoration of certain "showcase" temples and monasteries. Hence also its toleration of the Sangha's recovery to serve as the custodians of those showcases. In retrospect, the policy toward Buddhism of reduction and containment makes perfect sense. There seems little prospect for genuine revival, from either the standpoint of government permissiveness or Buddhist zeal.

Lamaism

What about China's other Buddhism? Lamaism is another remodelled Indian import, receiving its distinctive personality when Tantric Buddhism was brought to Tibet in the Eighth Century C.E. and there fused with the indigenous shamanistic religion known as Bon. Confining discussion to Lamaism in Tibet (for it spread to other areas), the power of that faith over those people almost defies imagination. The Tibetan has been called the most religious culture in world history. It is claimed that in 1949 one-sixth of the Tibetans lived under monastic vows.

Disaster struck Tibetan Lamaism in two waves. A Tibetan revolt in 1959 against its Chinese masters was savagely crushed in a purge the International Commission of Jurists termed "genocide." The Dalai Lama fled to India with a

large retinue where he remains today. Not long after, in 1966, the Cultural Revolution deluged all of China, including remote autonomous regions such as Tibet. The Red Guard wreaked havoc on religious property and personnel. The famed Jokhang Temple in the center of Lhasa, thirteen centuries old and Lamaism's Holy of Holies, was vandalized and its precious art treasures dragged through the streets.

Today Lamaism in Tibet is a pale shadow of its former self, but for all that surprisingly spry. True, the Tibetan Sangha has been decimated, with only a skeleton crew in residence at such monasteries as the Drepung and Sera, two of the ten or twelve that remain open. The Drepung in its day had been the largest monastery in the world, with a complement of ten thousand lamas. The reduction in force of the Tibetan Sangha may approach 99%! Still, numerous prayer flags flutter over every home in Tibet, and the prayer wheels spin in the streets of her towns. The Jokhang is a beehive of activity with masses of participants circumambulating the temple, doing multiple prostrations before its entrance, and depositing melted yak butter in lamps before uncountable sacred statues in its cavernous interior. I saw no greater display of religiosity in all of China. Lamaism too will surely last, most probably in the state to which it had been reduced in 1959 and contained ever since.

Islam

Like Buddhism, Islam in China points to two ethnically distinct though religiously affiliated groups. The urban Han (ethnic majority in China) Muslims are the religious heirs of the Arab and Persian traders who arrived in China's coastal ports early in the Eighth Century. The ethnic minority Muslims, on the other hand, are the religious and ethnic heirs of Muslim camel caravaners who entered China along the Silk Route in the middle of the Tang Dynasty.

People's Republic of China

▲ FOUR SACRED MOUNTAINS

1. Emei Shan
2. Jiahua Shan
3. Puto Shan
4. Tiantai Shan



They populate the northwestern interior of China.

After Liberation, the Communists approached these peoples more gingerly than any other religious group. The Constitution of 1954 promised both regional autonomy and protection of cultural integrity (including religion) to all ethnic minorities in China. Some of these peoples occupied territory considered critical for border disputes with the U.S.S.R., and their distance from the capital made control more tenuous. Furthermore, China's new rulers wished to avoid giving offense to Third World Muslim countries. Special treatment, however, did not resolve frictions always felt by the culturally proud, separatistic groups of the Northwest. The People's Liberation Army had to quell a Muslim insurrection in Gansu Province in 1952. And in the early 1960's, one hundred thousand Muslims, fearing erosion of their cultures, fled from Xinjiang Province to kinsmen on the other side of the

Soviet border.

During the Cultural Revolution, the same kinds of miseries rained down upon the Chinese Muslims as upon other religious communities. All mosques were closed, and many leaders were publically disgraced. In the opinion of some, Islam was wracked less severely than any other Chinese religion during this period. It mustered and met the whirlwind with more pluck and resilience than any religion discussed thus far. One indication is that the great Huajue Mosque in Xi'an managed to reopen almost immediately in 1967 and to remain open for the duration of that troubled decade.

Islam seems to have emerged in the decade after 1976 numerically stronger than ever before. The most reputable source reports there are perhaps thirty-five million Muslims in China at the present time, thirteen million ethnic minority Muslims in the Northwest and the remainder urban Han Muslims in the East. Growth in both categories during the past

several decades is of the order of 25-30%.

Islam is emerging on several continents as the standard-bearing religion of the Third World, of which China fancies herself the leader. There must be good social-economic-political-theological reasons for that development. Is it any wonder then that Islam should find an expanding sphere of influence in the new China?

Indications are that the climate for Muslims in China today is relatively warm and sunny, and morale is generally strong, especially in the big city mosques, which are thronged for noon prayers on Fridays. Islam seems to be on the move in China.

Catholicism

Christianity has been knocking on China's door for over thirteen hundred years. In modern times,

the Jesuits led by Matteo Ricci secured a foothold after 1583. The Christian mission in China, Catholic and Protestant combined, entered the Twentieth Century with the onus of foreignness (little else is more damning in China) and a legacy of complicity in colonialism, imperialism, opium wars, and unequal treaties. On the other hand, it had brought the Chinese the blessings of high quality medicine and education.

Liberation entailed changes. All foreign missionaries were forced to quit China, the Protestants by 1951, the Catholics by 1955. Slated for nationalization were all the helping institutions the missionaries had founded: schools and universities, clinics, hospitals, orphanages, and publications facilities. This done, the government turned its attention to the Chinese Christians. Dissidents such as Pastor Wang Mingdao of the Protestant Church in Beijing, Watchman Nee of the Little Flock, an indigenous Chinese Protestant movement, and Catholic Bishop Gong Binmei were imprisoned. Nee died in prison; Wang was released in 1979 after twenty-two years; Bishop Gong remains behind bars.

The scenario of the Cultural Revolution reads about the same for the Christian faith as for other religions. All churches were closed, many vandalized, many remodeled into other sorts of facilities. Bibles and hymnals were burned. Christian homes were entered and searched. Confessions were extracted from clergymen; some were sent to work camps in the countryside for political re-education. The Red Guard had its day, and the Catholics absorbed the punishment without creative rejoinder.

The Roman Catholic Church in China stands today about where it stood before the Cultural Revolution—entrenched in the past, clinging to the Latin Mass, bypassing the opportunities opened up by Vatican II for

renewal and a better adaptation to the Chinese context. Its biggest headache in China is association with a Rome that opposes all Communism and recognizes the legitimacy of Taiwan. The official headcount on Catholics in China today is 3.5 million, the same figure one finds mentioned for 1966 and even for 1949. Chinese Catholicism would seem to be caught in a holding pattern.

Protestantism

The Protestant Church in China alone refused to take the onslaught of the Cultural Revolution lying down; instead, it mobilized the Home Church Movement as a Christian *modus vivendi* during those tumultuous years—the only effective answer to Red Guard action in the entire script. To call it a “movement” is misleading, for that word implies leadership, planning, and organization. There was none of this. Small units of family and friends or neighborhood groups met from their own inner urging, aware perhaps of a few similar groups in their immediate vicinity, but oblivious to the fact that this was happening spontaneously throughout China.

They secreted their meetings, varying time and place, to avoid opposition from local cadres or the Red Guard. They prayed, sang, shared experiences, but above all read the Bible together, the supply of which was extremely short. Some groups made do with handwritten fragments. Itinerant lay preachers, many of them women (“Bible women”), most of them self-taught, made networking possible on a very small scale. The situation was so fluid, so dynamic, that what issued forth was a Christianity of, for, and by the Chinese themselves. The Church was transposing itself in China. The result? Unprecedented growth, by mitosis as groups grew and split, then grew and split again.

The Chinese Protestant Church resumed operations after the

Cultural Revolution with a schism between “Open Churches” and “House Churches.” Open Churches unite under the aegis of the Three-Self Patriotic Movement (TSPM) (self-governing, self-supporting, self-propagating), while the House Churches take a separate stand. In the intervening eight years the Open Church movement has gained so much momentum that the total today stands at about four thousand churches and the growth rate at one more per day. Services are packed to capacity, if not overflowing, and many churches have to offer a second or third service on Sundays to accommodate the crowds. An abundance of conversions and baptisms is reported. The complexion of the Church is ecumenical, hampering denominational lines having been somehow erased by the Cultural Revolution. Chinese Bibles are being printed and distributed at a rapid rate.

Chinese Protestantism, having overcome denominationalism, finds itself afflicted today by a new order of divisiveness. Now that TSPM churches are open for business again, House Churches have not quietly faded away. House-Church Christians tend to be distrustful of the whole TSPM because of its cooperation with an atheistic government and its emphasis upon patriotism and socialist construction instead of spirituality and building the Kingdom of God. The official position of the TSPM toward the Home Church Movement is conciliatory; in some areas, however, TSPM leaders have been hostile toward the separatists and have tried to coerce them to join up. There have been betrayals by open-church Christians of home-church Christians, since in the eyes of the government the Home Church Movement exists outside the law. As a result, the Home Church Movement is moving back underground.

The official count for open-church Protestants at the present is about 3.5 million—up from 1.5 million in 1949 (133% growth). No one knows how many House-Church Protestants there are. If there is reasonable accuracy in the estimate of half a million in Henan Province alone—Henan being mentioned with some frequency in the literature as a test case—then five million would be a conservative approximation. That would yield a grand total of twelve million Chinese Christians of all categories. The rate of growth is stunning but the sum is only a tiny fraction of China's masses (1% of 1.1 billion people).

Secularism²

In the aftermath of Communist revolution, China's indigenous religions have retreated, her alien religions advanced. Confucianism and Daoism have been hardest hit by developments since 1949, in part because they were the weakest for centuries prior to it. Their prognosis is expectably the bleakest. Chinese Buddhism and Lamaism have had to endure painfully drastic reductions in clientele, scope, and force. But for all that, they seem to have regained equilibrium and will probably hold steady at present levels, limited as much by internal energy as the government's policy of containment. Islam and Christianity in the wake of Liberation have managed to increase in size and popularity, despite foreignness, smallness, and limited sinicization. Those gains, matched with Buddhism's losses, indicate the possibility of a shift in the balance of religious power in China. The two longshots may pull into the lead in the decades ahead.

What might we expect for the Chinese religious situation in the long-range future? My prediction for all of China's extant religions is attrition due to secularization and modernization. An analysis of the full sweep of human religious history teaches that as culture

changes so does theology. The theology that correlates with modernity is secularism.

China today is intent on modernization. China today is also well advanced in secularization. The theology of 85% of the Chinese people is secularism, not Marxist atheism. The state has managed to coopt considerable religious energy for "socialist construction," which in the post-Mao decade means one thing—modernization. China's religions, in assisting modernization, are assisting in their own demise. As China modernizes she will secularize.

Is that bad? Is that cause for despair? If secularism is a force contrary to spirit ("the work of the Devil," "decadence"), then it is bad. But secularism can be interpreted in other ways. It can be seen, with the Marxists, as liberation from a gross human impediment—"the opiate of the people." Or it can be seen with the Hegelians as the negation necessary to push forward one more step the dialectical advance of spirit. I like the notion that the prevailing secularism of today is a ground clearing for higher spirituality. My intuition is that the spirituality of the future will be tacit, diffuse, defocalized—you might say "religionless." Such spirituality is attested by Lao Zi's *Dao De Jing* but would have been more faithfully exemplified if the book had never been written! Who should understand such things better than the Chinese?

Notes

1. All Chinese names and words will be romanized in Pinyin rather than Wade-Giles.

2. Absence of any consciously held, conceptually focused religious conviction, including atheism and agnosticism.

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