What's Wrong with This Picture?

Several years ago, the dissident Soviet biologist Zhores A. Medvedev wrote that *Science*, along with many other foreign publications, is routinely censored in the Soviet Union before being photocopied and distributed internally. Whole articles—usually from the News and Comment section—were said to be clipped out, ads shuffled about, and contents tables purged (*Science*, 15 October 1971).

It turns out that Medvedev was not exaggerating.

Since 1973 the Soviet Union has been a party to the Universal Copyright Convention, and, under it, has annually asked the AAAS for permission to reproduce some 900 copies of *Science* in return for a 10 percent royalty. The agreement with the AAAS also calls for sending the association a subscription of the Soviet facsimile version. Until now, none had been sent. On 11 August, the first copies seen here arrived in the mail—confirming Medvedev's tale, as well as lending substance to his observation that the deletions seemed "senseless and inexplicable."

In the six issues received, two letters, two editorials, one lead article, and two news articles had been deleted.

Not all the magazines suffered deletions; those that did showed a sometimes unpredictable pattern of scissors work. Not surprisingly, articles on U.S. and Soviet strategic nuclear strength went to the cutting room floor. So did such touchy items as a letter about a Jewish scientist in the Soviet Union and an editorial on politics in Unesco. Also deleted, though, was a seemingly innocuous news story on the financial problems of Harvard and MIT.

If anything, the Soviet version of *Science* shows that censors, like everyone else, have their little trials and tribulations. Slicing pages out of a magazine, for example, leaves an odd lacuna in numbering. Soviet editors strive, not always subtly, to fill the gap by numbering pages of ads that in the original have no numbers. They also try to delete whole pages, apparently in preference to leaving telltale columns of white space. But this means reshuffling ads and renumbering pages of articles (sometimes without masking out the original numbers) when the volume of ads is insufficient.

The censor's trade, it seems, is more trying than one might guess.—R.G.

Soviet reproduction of Science for 14 March 1975 (top) shows deletion of a letter, editorial, and two articles from News and Comment. Original table of contents appears below.

¹4 March 1975

Volume 187, No. 4180

SCIENCE

LETTERS	X-ray Crystallography Techniques: E. T. Adman et al.; Ethiopian Revolution: S. D. Messing; Standardized References: M. Broudbent and E. J. Huth; F. J. Ingelfinger; Cultural Homology: J. Cohen; K. Lorenz	902
ARTICLES	Cultura Grammare, P. N. Culhu.	
ARTICLES	Culture Grammars: B. N. Colby	913
	Molecular Biology of Nitrogen Fixation: K. T. Shanmugam and R. C. Valentine	919
	A Historical Approach to Future Economic Growth: G. Hueckel	925
IEWS AND COMMENT	Genetics: Conference Sets Strict Controls to Replace Moratorium	9 3 1
	Photocopying: High Court Tie Vote Leaves Issue to Congress	938
RESEARCH NEWS	Human Evolution: Life-Styles and Lineages of Early Hominids	940
	Sports: Introducing the "Happy Non Hooker"	941
BOOK REVIEWS	Action at a Distance in Physics and Cosmology, reviewed by D. J. Raine; The Subjective Side of Science. D. Sullivan; The Natural Philosophy of Galileo and Galileo, M. S. Mahoney; The Cavendish Laboratory, 1874–1974,	

14 March 1975

Volume 187, No. 4180

SCIENCE

LETTE R S	Ilya Glezer's Struggle: A. Sattin et al.: X-ray Crystallography Techniques: E. T. Adman et al.: Ethiopian Revolution: S. D. Messing: Standardized References: M. Broadbent and E. J. Huth; F. J. Ingelfinger; Cultural Homology: J. Cohen; K. Lorenz	90
EDITORIAL	Politics and Unesco: J. R. Porter	91
ARTICLES	Culture Grammars: B. N. Colby Molecular Biology of Nitrogen Fixation: K. T. Shanmugam and R. C. Valentine	91 91
	A Historical Approach to Future Economic Growth: G. Hueckel	92
NEWS AND COMMENT	Genetics: Conference Sets Strict Controls to Replace Moratorium Strategic Weapons: Verification Keeps Ahead of Arms Control Photocopying: High Court Tie Vote Leaves Issue to Congress. Harvard, MIT Face Limits to Growth	93 93 93
RESEARCH NEWS	Human Evolution: Life-Styles and Lineages of Early Hominids	94 94
BOOK REVIEWS	Action at a Distance in Physics and Cosmology, reviewed by D. J. Raine; The Subjective Side of Science, D. Sullivan; The Natural Philosophy of Galileo and Galileo, M. S. Mahoney: The Cavendish Laboratory, 1874–1974, W. McGucken; Books Received	94

29 AUGUST 1975 703

An Obscure Front-Runner for Interior

If Senate Republicans have their way the new Secretary of the Interior will be Kent Frizzell, a hitherto little known official who has served as the Department of Interior's solicitor for the past 2 years and who is now also the department's acting secretary. Although regarded as competent by those who have worked with him closely, Frizzell's public record appears to be so modest and obscure as to permit no sure judgments as to the kind of secretary he would make.

Twenty or more Republican senators, or better than half of all Republicans in the Senate, have now written letters to President Ford urging him to nominate Frizzell. Moreover, White House Press Secretary Ronald Nessen acknowledged recently that Frizzell was clearly the front-runner among candidates for the job, although Nessen added that the President was "in no hurry" to pick a man for the job.

The dominant sentiment among the Senate Republicans seems to be that the leadership void at Interior should be filled immediately, and that this can be best accomplished by naming the man who is already on the job in an acting capacity. Secretary Rogers Morton left Interior on 1 May to go to the Department of Commerce. The controversial Stanley Hathaway was not sworn in until 13 June, some 3 months after his nomination. Then, little more than a month later, Hathaway resigned after being hospitalized in a state of "depression." To make matters worse, Interior has not had an under secretary since mid-January when John C. Whitaker was hospitalized with a heart attack.

In a joint letter to the President, four of the five Republicans on the Senate Interior Committee—Clifford Hansen of Wyoming, Paul Fannin of Arizona, Dewey Bartlett of Oklahoma, and Mark Hatfield of Oregon—said that Frizzell was fully qualified and "eminently confirmable." "He will need no learning time to confront the backlog of decisions facing the secretary," they said. These senators, together with senators Robert Dole and James Pearson of Frizzell's home state of Kansas, are the backbone of his Senate support.

Frizzell, who is 46, has been a state senator and state attorney general in Kansas, and, in 1970, he ran a losing race as the Republican nominee for governor. In 1971, President Nixon appointed him to the U.S. Department of Justice as the assistant attorney general for land and natural resources. Frizzell held this position for about a year, and is perhaps best remembered at Justice as the official who acted as the government's chief negotiator with the American Indian Movement leaders after their uprising at Wounded Knee in 1972.

Frizzell was at Justice when two major court actions were initiated against polluters, namely the action against the Reserve Mining Company on Lake Superior and the one against the Ford Motor Company. Although the basic policy decisions to bring these actions were made at a higher level, Frizzell is said to have moved expeditiously once told to proceed.

The picture of Frizzell one gets from talking with some of his former colleagues at Justice and with environmental lawyers is that of an affable, competent, but not very forceful individual who is in no sense an obvious choice for a Cabinet post. But one Justice Department attorney, who counts himself as much more of an environmentalist than Frizzell, said he thought Frizzell would be responsible and effective.

Although some of Interior's past solicitors have been at the heart of policy-making, there does not seem to be much visible evidence that this has been true in Frizzell's case. Top staff people on the Senate Interior Committee have gained little impression of him, one way or the other. "He hasn't been the front man on any issue that I can think of," said one.

Leaders of several national environmental groups have urged the President to nominate someone of demonstrated leadership and competence in mediating the growing conflicts between conservation and development. They have asked him to consider three Republicans who, in their view, meet that test to a high degree: former governor Tom McCall of Oregon; Governor Dan Evans of Washington; and Russell Peterson, a former governor of Delaware and currently chairman of the Council on Environmental Quality. But environmentalists will be more surprised than not if the job does not go to Frizzell, who has the advantage of already having a foot in the secretary's office.—L.J.C.

"Dungan is wonderfully open and sensitive, but he's not one of the crowd. For instance, he doesn't understand that you can't be a fully fledged faculty member unless you are given the opportunity to earn respect as scholar."

While Dungan's not being a member of the educator's club is often mentioned, his background in public administration is probably more important. He spent four formative years on the staff of the Budget Bureau before joining Kennedy's staff in 1956. William O. Baker, of Bell Laboratories, on the Board of Higher Education since it was created, says that DHE's record on planning, budgeting, and "costbenefiting" is unusually good when compared with the performance of other government departments in New Jersey and in other states.

DHE does do analyses of the institutions in terms of such things as the amount of lab space, hours of teaching, and so forth. According to Baker, the board uses this information in making its policy decisions, but what is indicated by "these parameters is not confused with quality."

Compromise in Computers

DHE doesn't win all the battles. The chancellor, for example, espoused the idea of setting up a computer system under DHE control to serve all higher education in the state. Rutgers argued that the big computer is to the university now what the library was a generation ago and that the loss of control would deprive the university of an essential resource. The board recruited a high-powered advisory committee, enlisting experts from Bell Labs, RCA, and other sophisticated research organizations and industries in New Jersey. As a result, a computer science network was set up with the center located at Rutgers science campus across the Raritan River from the main campus in New Brunswick. An association of institutions was created under the compromise, but in practical terms it is Rutgers' show, and the state colleges do not seem to have made any great gain in research capacity or in being able to tap in on Rutgers' computer research capabilities.

Like other states, New Jersey has a master plan for higher education, but New Jersey's plan is a deliberately flexible one—Dungan calls it a "rolling" master plan. The basic three-tiered structure of the New Jersey system is substantially complete. The state is now reasonably well served by 19 community colleges jointly funded by county and state governments. Eight state colleges provide 4-year college programs. Graduate and professional education and research are the province of Rutgers, which has branch campuses in Newark and Camden, and of the New Jersey College of

704 SCIENCE, VOL. 189

Medicine and Dentistry and the New Jersey Institute of Technology, both based in Newark. The system has so far not excelled in practicing interinstitutional or regional cooperation, but this is one of the things that Dungan sees as being cultivated in a new phase of filling in gaps and "fine tuning."

The higher education authority's major responsibilities are for planning, budgeting, and program approval, the latter being necessary to oversee the first two functions. Most critics of DHE concede that such prerogatives as program analysis and program approval are necessary for state monitoring of the system but argue that a dilemma is virtually guaranteed by the arrangement. Bloustein notes that "inquiry can become a form of management." Work-load studies, for example, can be used to deprive the institution of its legitimate role. The underlying argument is that

only if the institutions are permitted to control how the funds allotted them are spent will they develop the institutional morale on which quality education depends.

In a period of slow growth or no growth, DHE in New Jersey and similar agencies in other states become more powerful and the tensions greater. When budget cuts were made in New Jersey, a state which is still seriously in arrears in providing higher education opportunities for its citizens, every effort was made to avoid cutting enrollment, reducing student aid, or boosting tuition substantially. Research, therefore, by process of elimination, was vulnerable to the knife. (Although Rutgers was spared the bloodletting which would have been required if the governor's emergency cuts had been imposed, university officials are still struggling to effect internal economics to minimize firings and program cuts for the current fiscal year. Rutgers will

operate on total funding of some \$120 million, virtually the same as last year's budget, itself an austerity budget which necessitated a hiring freeze.)

It is revealing that most people within the higher education system assume that Dungan should be a defender and advocate of the system.

Another view is that DHE in New Jersey and similar agencies elsewhere should apply enlightened principles of public administration and that its views will sometimes be at variance with academic aspirations. DHE, in other words, should interpret the governor and the legislature and his board to the higher education system and vice versa. It is unfortunate that there is no consensus on how to reconcile public accountability and institutional autonomy, and the painful question for public higher education will continue to be where to draw the line.—John Walsh

Science in Vietnam: The Postwar North Seeks American Assistance

Arthur W. Galston, professor of biology at Yale University, who in 1971 was one of the first two American scientists to visit mainland China in 22 years, has just returned from a 3-week visit to another closed country—North Vietnam. As after the China trip, Galston has brought back masses of information about that country's science and also a message, that the North Vietnamese are anxious to increase contact with American scientists.

Galston visited North Vietnam from 7 to 28 June, only 6 weeks after Ambassador Graham A. Martin's helicopter exit from the American embassy in Saigon ended U.S. involvement in Vietnam and marked the North's victory over the South. Galston went representing the Scientists' Institute for Public Information (SIPI) as chairman of that group's task force on Indochinese scientific aid. He also shipped \$500 worth of scientific equipment and laboratory samples to Hanoi, which were donated by another private group, the Society for Social Responsibility in Science, of which Galston is the president. Besides touring and meeting with officials, Galston did some scientific work while there: he helped set up a three-room laboratory for

plant cell culture at a large new research center near Hanoi; he delivered six lectures on current topics in botany and plant biology to an audience of about 50 scientists.

Like his ground-breaking trip to China, which anticipated the later easing of tensions between that country and the United States, Galston's trip to North Vietnam could be a bellweather. The North Vietnamese allow very few Westerners-and very few Americans-to visit. Yet they allowed Galston in. Moreover, the message he brought back-that the North Vietnamese are interested in strengthening ties with Americans—could signal some break in the impasse that has had both countries hurling accusations at each other of having violated the terms of the 1973 peace accords. (The U.S. government now does not extend diplomatic protection to Americans who travel to North Vietnam, Cuba, and some other "enemy" countries. Moreover, most forms of assistance to North Vietnam are prohibited under the 1917 Trading with the Enemy Act. It is not known which forms of scientific aid would be barred as economic in character, and which would be allowed because it was deemed humanitarian.

Having sent its emissary to Hanoi and back successfully, SIPI now plans its own, private program of scientific aid to North Vietnam. The organization plans a 2-year fund-raising campaign to raise \$1 million to bring Vietnamese students and scientists to the United States, to send American scientists there, and to provide books and equipment.*

Scientific activity has continued in North Vietnam although hindered by wartime constraints on manpower, funds, and secure facilities, Galston says. Two outstanding features of North Vietnamese science are their commitment to long-term development of basic science, and a certain eclecticism in adapting the models of more scientifically advanced countries to their own needs.

Admiration of the South

Galston told Science that the way science is organized in North Vietnam reminded him somewhat of the Chinese system, somewhat of the Russian system, but mostly of the French system, stemming from several generations of French colonial rule. Now, North Vietman's leaders openly admire innovations made by the Americans in South Vietnam which they think have been successful, such as the widespread educational emphasis on engineering and electronics and the system of 2-year, community colleges.

The North Vietnamese leader who seems in charge of implementing this long-term commitment is a 39-year-old, Russian-trained solid state physicist, Nguyen

*The address for the Scientists' Institute for Public Information is 49 East 53 Street, New York 10022.