

mores, is genetically debasing. However, he makes this into an argument for letting the technically underdeveloped peoples remain underdeveloped, in order to conserve their genes, rather than joining in my plea for higher mores of reproduction. If he really believes in his thesis, why does he not recommend that we abandon our machine technology and higher living standards so as to conserve our genes also? Or does he realize that if we manage to hold back technological development elsewhere, instead of aiding it, we ourselves will inevitably become engulfed in the overflowing global ghetto, and that the solution he proposes will thereby be arrived at throughout the world?

The only rational and humane position is quite the contrary. That is, the avoidance of world catastrophe demands the extension of technology everywhere, and its application not only to production but also to reproduction. The latter measure involves, most urgently, the effective quantitative limitation of population, and it also involves, no less inescapably in the long run, the adoption of mores and techniques that recognize the importance of genetic quality and permit its enhancement by voluntary means.

HERMANN J. MULLER

Department of Zoology,
Indiana University, Bloomington

Public Opinion in the U.S.S.R.

"You Americans don't know anything about the Soviet Union. You think bears still wander the streets of Moscow." How many times we heard this in Russia!

How right the Russians were is brought out by K. B. Krauskopf's article in *Science* [134, 539 (25 Aug. 1961)].

Krauskopf's discussion of Soviet public opinion seems both true and shocking, as for example in the fact that Russians believe: "How happy the world could be, if only America weren't so belligerent!"

But in other respects one sees in this article an American scientist, not specifically trained in Soviet politics, taken in like many American tourists. They resemble Catherine the Great, impressed by a few model villages her minister Potemkin wanted her to think were typical of the whole Crimea.

Krauskopf reiterates what high-rank-

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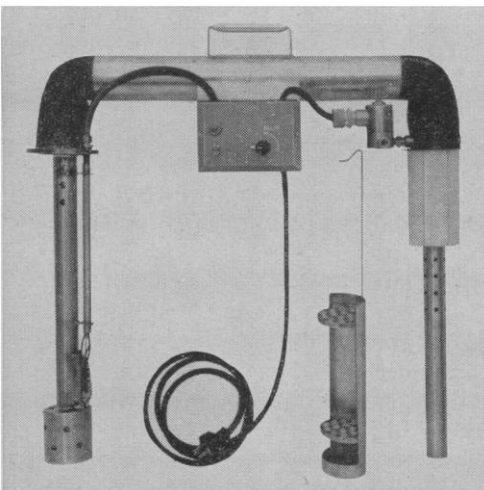
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ing Soviet scientists told him, and—despite the fact that their line was identical with what any Soviet Intourist Guide is trained to tell foreign visitors—he accepts this story as the real beliefs of these men.

Students, journalists, diplomats, and others who have lived in the Soviet Union know that many, if not most, Soviet citizens have serious reservations about the Communist regime. But these views are confided to foreigners only after a long period of trust and friendship. No Russian, particularly one with a good job, will risk his future by idle talk with foreigners.

Three of Krauskopf's assertions conflict harshly with the facts.

1) "That freedom of speech now exists in Russia is amply attested by our conversations, which were held in public places as well as private, and always without the slightest show of apprehension. . . . Neither the Russians nor I had any idea at the time that these impressions would ever be written down."

Of course, if Soviet scientists sit down and regurgitate only the Intourist line, they have nothing to fear from their government (or their colleagues, who could report them). Further, they could even expect to be rewarded for their loyalty to the regime. But in dormitories, in shops, in restaurants, and even in their homes, Soviet people still close the doors, turn up their radios, and speak in low tones when they say anything which deviates slightly from the official line. The possible penalty if they are caught? Expulsion from the Young Communist League, their school, or their job or possible arraignment on false charges.

Krauskopf says there are only common criminals in Soviet labor camps today. However, Russians will tell you that the men earlier convicted of political crimes are now simply relabeled thieves and are continuing to serve time.

And when Krauskopf says there is no fear of arbitrary arrest in Russia, he may be referring to his geologist friends, who are away exploring virgin forests; he cannot be talking about big cities, where we have seen children whisked away in police cars for talking with foreigners.

2) Krauskopf says his geologist friends have "a deep enthusiasm for communism." They have "a sense of mission . . . of being part of a progressive movement that will make the world a better place."

No doubt there are missionary ideal-

ists in the Communist as in the Christian world. But Russians themselves, coming from all walks of life, will tell you that the people, particularly the young people, aren't what they used to be. In the 1930's the Young Communist League volunteered to build the Moscow subway. But Russians today—much like the Americans—are mainly interested in a secure job, a nice home, and TV, a major difference being that they watch soccer instead of baseball! Many Soviet geologists, far from being missionaries of communism, are known

to have taken up geology so they could escape the big-city politicians who molest the lives and study of laboratory scientists.

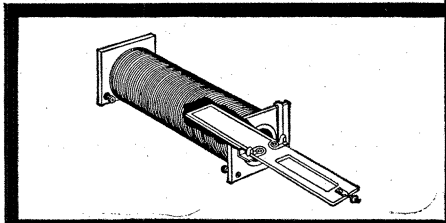
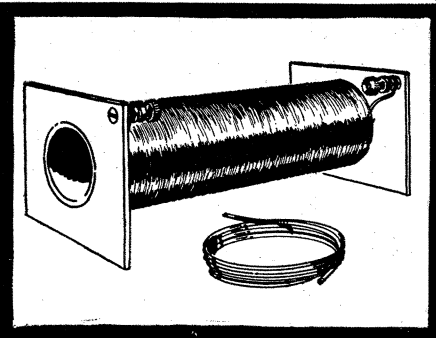
Many Russians agree that Soviet brains and imagination go first into mathematics, physics, and chemistry and last into economics, philosophy, and history. It is the former group which questions the old party doctrines and the latter group which attempts to refute mechanically the "revisionists'" ideas. "We need new forms of art and literature to express the complexities of

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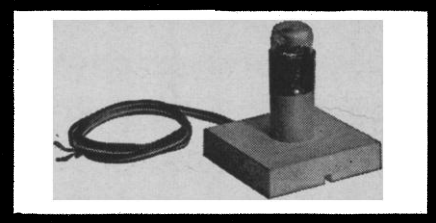
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the new world we're discovering," scream the physicists in public debates. But the philosophy students, whose careers will be in high school teaching of Marxism answer merely with dead dogmas.

Geologists are a breed unto themselves, as bright perhaps as physicists, but more rugged and individualistic. After hours, the physicist may attend a concert, whereas the geologist hunts Siberian bears or climbs mountains in Central Asia.

3) Krauskopf's "acquaintances seemed quite sincere in regarding [the

Soviet] way of choosing candidates as actually more democratic than the American method."

This was seemingly true of Soviet students forced by their Young Communist League to go from door to door urging the workers in the city to go to the polls early on voting day. But—as many students told us—the whole process is a farce, because there is but one candidate on the ballot. The voter can cross out the candidate's name and write in another, but this is a futile and risky business.

Even ardent Communists told us—

when they believed they weren't overheard—that they look forward to "free elections" some day in Russia. Americans in Russia in 1936 heard rumors that the new Stalin Constitution that year would provide for more than one candidate at elections. It didn't, however, and nothing more hopeful has appeared officially than the new Communist Party Program, which looks forward to the "dictatorship of the proletariat's" changing to a "state of the people."

If one meets Soviets on something more than a one-shot, semiofficial basis, he gets an impression very different from Krauskopf's. He learns that the Russians' ideas are more like the Americans' than Krauskopf suggests. The Russians' system of government, however, is not.

The U.S.S.R. is a long way from having freedom of speech, freedom from arbitrary arrest, free elections, and even equality of opportunity.

None of this means the Soviet Union is ripe for revolution. Most Russians are basically proud of their country and scientific achievements. This pride is one reason for the Soviet citizen's reluctance to criticize his government in front of foreigners.

But Russia is ripe for reform—from within—and the Soviet government and people know this!

WALTER C. CLEMENS, JR.

DIANE S. CLEMENS

*Department of Political Science,
University of California, Santa Barbara*



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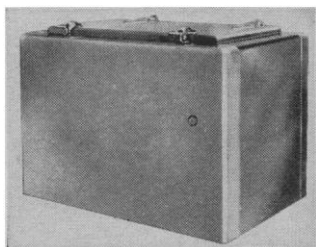
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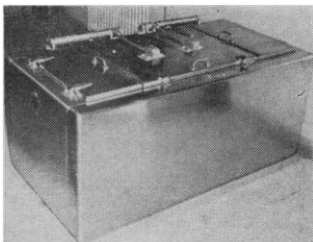


The sagest remark I have heard about the conflicting reports that visitors bring back from the Soviet Union is the simple statement, "Everything you hear about Russia is true." The country is so large and complex that almost any reported observation may well be true in some degree or for some part of the population. I have no doubt that the Clemenses' descriptions of Russian attitudes are accurate, and I welcome them as an antidote to the quite different impressions I received. To build up a reasonable picture of the Soviet Union requires, I am convinced, that we piece together fragmentary bits of information from many sources. The Clemenses' observations should very probably be given more weight than mine, because they have made a special study of Russia. They have toured the country on several occasions, and Dr. Clemens has spent a year as a student at Moscow University. The Clemenses also object quite properly that I am a scientist ven-

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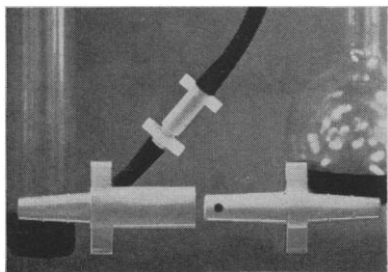
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turing to express opinions in a field where I have no special competence.

Nevertheless, I feel that their scorn for my unbounded naiveté is a little extreme. I would grant immediately that much of what my geologist friends told me is similar to the current Communist party line. Does it follow that my friends were necessarily being hypocritical? I have heard Intourist guides in action, and I have heard some geologists who sound like them—parroting stock answers to questions, with minds closed to argument, obviously unwilling to trust a foreigner with their real thoughts. But this is altogether different from the long and intimate discussions I had with men whom I learned to know over periods of several days. We explored various issues thoroughly, with no holds barred; sometimes they would score a point, and sometimes they would concede that I had picked on a weakness of their Communist regime. The "enthusiasm for communism," which so horrifies the Clemenses, was a commitment to the basic tenets of communist ideology, but it did not prevent my friends from admitting, and even pointing out voluntarily, weaknesses in governmental procedures and problems that the Communists have not yet solved. How, after all, does one tell when one's companion is being sincere? Is he sincere only, as the Clemenses imply, when he whispers dissatisfaction with his government under cover of a blaring radio? It may be—I can't really prove it otherwise—that I was continually hoodwinked by clever agents instructed to deceive me, that every Russian can by second nature "smile and smile and be a villain." To show why I believe differently would require a tedious cataloging of little incidents of interpersonal relationships. Tedious also would be a recitation of the many ways in which my activities did not follow a prearranged official plan—as the Clemenses imply they did by comparing them with the Crimean tour of Catherine the Great. One of the chief reasons I felt that my observations might indeed have some validity was the fact that (outside of the carefully prearranged official visits to laboratories and institutes) so much of what happened was entirely spur-of-the-moment, following either my whims or those of my companions.

The Clemenses are so eager to discredit me that they permit themselves some deliberate misquotations. For example: "Krauskopf says there are only

common criminals in Soviet labor camps today." Krauskopf did not, and never would, make any such statement; he quoted it as the opinion of two geologists, and at the end of the paragraph specifically emphasized that he had no direct information as to the truth of the assertion.

Again, regarding electoral procedures, the Clemenses have apparently willfully misunderstood me, in order to make their point that some ardent Communists yearn for free elections. It may well be true—I should be surprised if it weren't—that some Communists would like to see free elections in their country, but the point I tried to make was that in the eyes of my acquaintances the democratic process operates during the choosing of candidates in the assemblies (Soviets), not in the official balloting.

If I am to be accused of naiveté, I can perhaps claim with equal justice that the Clemenses have fallen victim to the all-too-familiar American stereotype: Russians resemble Americans; Americans don't like communism; hence Russians can't really like communism; and therefore we may infer a deep general resentment from the few examples of Russians who are willing to express their dissatisfactions to us. For as long as I can remember (and I think my memory goes back considerably further than the Clemenses') I have listened to would-be Russian experts describe the unhappiness and smoldering resentment within the Soviet Union. For years I have seen our newspapers magnify every hint of economic difficulty, every local flare-up of workers or peasants. And yet the Soviet Union, despite monstrous mistakes of its government, has grown steadily more prosperous; it has fought a bitter war and emerged stronger than ever; and under its influence communism has spread to one part of the world after another. This does not impress me as the work of a sullen, unwilling populace. It seems a reasonable inference, however unpalatable it may be, that communism has a genuine appeal to a large number of people; and it might be more realistic if we would accept this and try to see wherein the appeal lies, so that we can combat it, rather than delude ourselves with wishful thinking about the extent of popular dissatisfaction.

Regarding the validity of the Clemenses' conclusions about one segment of Russian opinion, there is no question in my mind. But I fail to see what pur-



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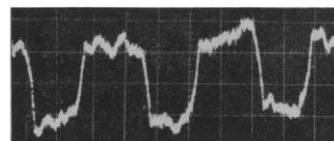
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pose is served by their vicious attack on observations of a group of Russians different from those in the circle of their acquaintance. The views I recorded were not the only ones I heard, but those that stood up under reasoned argument and that formed a pattern consistent with Communist ideology. They were expressed with every show of sincerity. We cannot agree with these opinions, of course, and we need not believe that their supposed factual basis is wholly correct. But as expressions of the way of thinking of one group of Russians, they should hardly be branded as false merely because they differ from the views expressed by the Clemenses' more critical Russian friends.

KONRAD B. KRAUSKOPF
Department of Geology, Stanford
University, Stanford, California

Dynamic Teaching

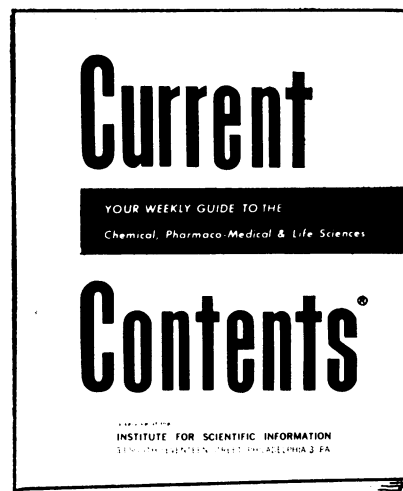
Probably few college teachers or others will take exception to a conclusion reached in the editorial "The system" [*Science* 134, 159 (21 July 1961)] that more than lip service should be accorded the proposal that teaching be made an even more rewarding career than it now is. However, an unfortunate fallacy is evident in the argument, in my opinion. The fallacy lies in the sharp distinction made between "teaching" and "research" at the university level. If "teaching" is rated "second class" by "the faculty," it may be because of the image of a stagnant pedant evoked by the term *teaching*.

Is it necessary to relearn constantly that students learn by their own efforts? Usually these efforts to learn (by listening, by talking, by reading, and, most trying, by writing for the consideration and criticism of others) can only be stimulated to a greater or lesser degree by teachers. Teachers who feel that they are still learning and who are as enthusiastic about the work of others in their discipline as they are about their own contributions are more apt to make the classroom situation the dynamic one that it should be.

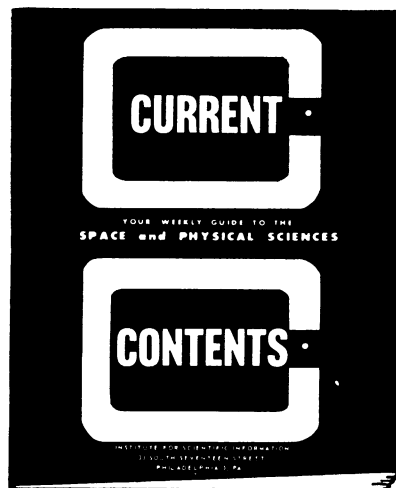
Perhaps the hardest types of work men can do are to think and to submit their thoughts in writing; to observe and then to report accurately their observations. To carry out these processes with "students" is a learning and teaching process for all concerned.

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