



Barbara Cummings/Los Angeles Times Syndicate

## *A rich, free nation must have creative learning*

Joan Beck's June 5 column begins with questions: Is it unfair to . . . allow some youngsters to move ahead faster, to learn more than others? . . . When the goal of providing all children equality of education conflicts with the goal of helping all children learn up to the level of their abilities, which should take precedence?

This sound article reminded me of similar problems vividly discussed in my native Russia. Being a mathematician, I was involved in many educational projects aimed to assist the development of those children who were most interested in mathematics. So I have some experience.

And it was typical.

For many years there was a well-known contradiction between the anti-democratic character of the Soviet society and the high standard of the Soviet mathematics. This has much to do with the existence of a mathematical subculture transmitted from one generation to another to a great extent by this informal education.

One of my conclusions is the children typically repeat priorities and attitudes of those who influence them in the family circle, and the influence of formal universal education is weak as compared with the informal influence of everyday life. Students active in teaching creative math-

laughed about this story, because it highlighted the absurdity of Soviet propaganda myths, which we were fed up with. But after coming to the United States, I begin to doubt if these myths were just Soviet. Maybe they were international?

Joan Beck writes: "What if the children in the faster classes are more likely to be white and middle class and most of those learning less are minorities and poor? Is tracking by ability then unacceptable racial segregation?"

In Moscow the most noticeable national inequality of abilities was and is the exceptionally high percentage of Jews in the abstract sciences. In my student

I am a strong proponent of helping every child develop and learn in the full range of his or her abilities. Artificial leveling seems absurd, having nothing to do with genuine democracy.

But, I think it very dangerous to injure feelings and self-esteem by a tactless label.

I have been here four months and one of my strongest impressions of this country is the abundance of explicit regulations and labels for every way of life. In many respects it is good and even necessary. But in a few, labeling is tactless and natural differences between individuals are among them.

Almost certainly, I would not be a mathematician were it not for informal evening mathematical studies held by students of the Moscow University and attended by interested high school students.

There were no tests, no grades, only voluntary creative thinking. The reward for solving a problem was having solved a problem and explained the solution to the teacher and peers. It inspired me to choose mathematics as a profession. Naturally, when I became a student of Moscow University, I believed it my honorable moral duty to teach schoolchildren in the same vein as I had been taught.

ematics had to accept this, even against our preconceived egalitarian convictions. So there was a psychological problem. Our democratic feelings prevented us from assuming we belonged to some superior caste. On the contrary, our voluntary educational activities were a token of willingness to share our interests and inspirations with any children. However, those who were eager to learn typically were children or pupils of those who had been eager to learn.

There was a funny story to highlight the problem. Once a newspaperman came to cover the presentation of prizes at the Moscow Mathematical Olympiad. He was shown the list of the winners and noticed one of them was a student of a village school outside Moscow. This seemed to be a good showcase, and the newspaper published the boy's picture with a caption written in the spirit of the popular egalitarian myth: that an offspring of a poor farmer's family is very smart in mathematics. But, if the columnist had cared to question more, he would get to know that the shy boy lived with all his family in a country house belonging to his father who was a prominent physicist, a member of the Academy of Sciences. We students active in teaching

years 30 years ago, discrimination against Jews was not as systematic as later, and about a third of the students of the Mathematical Department were Jews — against a small percentage of Jews in the population of Russia.

In later years, examiners used various tricks to diminish the percentage of Jewish students, and succeeded. Was it a victory for the country? Certainly not. It was a disaster, which was a major cause of irreparable loss of a valuable part of the nation by emigration.

What can and should be done here to develop and promote informal education, based on free will to learn and teach genuine interest in science and natural children's curiosity. I understand this recommendation goes against the strong American tendency for overorganizing and labeling. But I hope if creative studies with children were possible even in the poor oppressed Stalinist Russia, they should be possible in a rich, free, civilized country. Is this country capable of having creative teaching and learning? I sincerely wish it to be so.

**ANDREI TOOM**

Moscow University  
Visiting scientist  
Rutgers University  
Piscataway

The Central New Jersey  
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