

brandt were essential for its impact; in the second stanza the poet asks the master's forgiveness because of the absence in his own scene of these bystanders. We do not think that the second stanza contains "vague images of unease and guilt" (page 585), but an explanation and justification for this absence, introduced by the word "no" (but). Lines 3 and 4 of this stanza are the most difficult of the poem, but the biographical information that we are given provides no clue. To interpret the words "oko sokolinogo pera" as a pen that sees sharply, as a poet seeing sharp and clear, does not go beyond traditional boundaries. We need not go so much further to interpret the hot jewel boxes in midnight's harem as the stars, perhaps the Soviet stars; these lines thus function in the opposition between light and dark that is taken up in the first line, runs through "goriashchego" and "spiat," through "chernozelenoi temi," and on to the dusk of the last line. Both the poet looking at the life of day and the stars in the night disturb—to no good, for they do not bring good tidings to—a people that is alarmed by its *clair-obscur* situation, by the dusk it lives in. And in this alarm they do not want to come out of the dusk either to the lure of the midnight stars or to the fully clear day.

The amount of conditional in this explanation shows clearly that I do not consider it final. In particular, the net of associations could be spun further and clearer, first within the cycle, and then beyond it to other works. We will find several references to Rembrandt, to *mekh*, to the featherlike fire of two sleepy apples for eyes, to "kholshchevyi sumrak," etc. There will remain uncertainties, but more of them will be solved in this way than by direct biographical reference. No more than for Blok's or Pasternak's poetry do we depend on biographical evidence for our admiration and understanding of Mandel'shtam's poetry.

February 26, 1968

JAN M. MEIJER  
Utrecht

TO THE EDITORS:

In his very generous review of my *Tolstoy and the Novel* [*Slavic Review*, XXVI, No. 3 (Sept. 1967), 510–11], Professor [Ralph E.] Matlaw notes that there is no word *samodovol'nost'* in Russian. He is of course right: in the dictionary sense there is no such word as "self-satisfiedness" in English, but I think a critic could use it if he thought it more accurately descriptive in a critical context than would be "self-satisfaction." I intended *samodovol'nost'* as a coinage of this kind and for this purpose, which I should have made clear when I first used it in the book.

Professor Matlaw is a far more experienced Russianist than I, but I think he would agree that the *-ost'* suffix—like *-ness* in English but usually more euphoniously—has often been used to confer a generalizing and conceptualizing sense; see *narodnost'* and Pushkin's *samobytnost'*. As Viazemskii said, "Okonchanie *-ost'*—slavnyi svodnik."

January 15, 1968

JOHN BAYLEY  
New College  
Oxford

TO THE EDITORS:

The recent review of the second volume of Siegfried Müller-Markus' *Einstein und die Sowjetphilosophie* by Maxim W. Mikulak (*Slavic Review*, December 1967, pp. 696–97) provides us with some useful information but also, it seems to me, with a misleading statement which should not go unchallenged. Einstein's relativity physics was not "officially banned," says Dr. Mikulak, and in fact its "title to ex-

istence" was not challenged at all; the whole debate was over how best to fit it into the structure of dialectical materialism.

While I am not sure to what extent this statement represents the views of Dr. Müller-Markus and to what extent it represents an interpretation by Dr. Mikulak, in either case I must strongly disagree. Every relevant primary and secondary source I have seen, including previous publications by Dr. Müller-Markus, lends support to the impression that before the 1950s Einstein's relativity was strongly opposed and was considered entirely incorrect by a large number of writers (not all scientists, of course) who enjoyed the toleration or support of the Party. They were not trying to accommodate relativity to *diamat*; they were trying to eliminate it from serious consideration altogether. One of their most notable spokesmen was A. A. Maksimov, who argued that both space and time are absolute and that the velocity of light is not constant, all in direct opposition to Einstein.

Now this may not mean that relativity was "officially banned," nor does it mean that other Soviet scholars did not accept it and try to interpret it consistently with *diamat*. Among those who were satisfied with revising but not overthrowing Einstein was V. A. Fock, who emerged after the shift in the Party line in 1955 with increased prestige and remains today one of the world's leading gravitational theorists. Yes, there definitely *was* a shift in opinion. It was marked only a month after Einstein's death, by a necrology full of lavish praise, including an attempt to prove that his work was somehow foreshadowed in the writings of Engels and Lenin (*Zhurnal eksperimental'noi i teoreticheskoi fiziki*, v. 28, May 1955, pp. 637–38; translation in *Soviet Physics JETP*, v. 1, 1955, pp. 409–10). When someone shows me such a tribute to Einstein anywhere in the Soviet literature *before* 1955, then I will begin to concede that his theories were not being so widely disputed under Stalin, after all.

This whole matter is crucial mainly because the Western world faces a knotty problem in reinterpretation, once it is finally realized, as eventually it must be, that the critics of relativity who flourished under Stalin, however ideologically motivated some of them may appear, were on the right track. Relativity *was* a step backward in science, on a scale never matched before or since. (Doubters may consult Alfred O'Rahilly, *Electromagnetics*, 1938, still the most scientifically respectable refutation of Einstein; or, for a more philosophically oriented critique with more recent bibliography, my article "Georges Sagnac and the Discovery of the Ether," *Archives Internationales d'Histoire des Sciences*, v. 18 [1965], pp. 175–90, which shows that experimental evidence against relativity was obtained in 1913.) And it happens that dialectical materialism somehow provided a reasonably good platform from which to view the subjectivist dogmatism of relativity in its true light—even if it did not also give sufficient basis for a decisive scientific critique. Actually, one cannot be sure that the latter has not been developing also, since if it has, the authors would probably be unable to find suitable outlets for their work; even in the free and democratic West, anti-Einsteinians today are being driven perforce to private publication, to small and seldom read physics journals, or to journals in other fields more open to new ideas.

Another scientific problem which future interpreters of Communist ideology will have to face much more squarely than they have so far is the fact that Trofim Lysenko was not entirely wrong on the purely theoretical level: it *is* possible to change the genetic characteristics of plants and animals by changing their environment. But it must be done either in the early lives of their parents or in the early stages of growth of the fetus or larva. In fact, no one has proven decisively that it could not also be done after birth of the individual, although I do not know of a case where this has been accomplished. The point is this: Lysenko erred not so much in

his belief in what could be done as in his claim that he could do it. Organic beings, including their germ cells, are indeed largely products of their environments; but even under communism man does not yet have as much skill or power in changing them through changing their environments as he would like.

In some crude and abortive manner, then, but still in some manner, scientific thought did maintain its creative edge under Stalin's tyranny. We should not be too surprised at the possibility, if we look back at the Century of Genius that produced Galileo, Descartes, Newton, Huygens, and so many other fundamental innovators. Most of these natural philosophers worked under absolute monarchies; and yet it was also a time of great change and turmoil—economically, politically, and religiously, as well as intellectually. In the midst of the chaos a few men thought far, broke new ground, and gave to later generations something to perfect and to apply. The parallel with Stalin's time is far from ideal, but at least it points to the important truth that new directions in thought go hand in hand with fundamental changes in life situations. Of course, Stalinism per se may not have inspired any new ideas, any more than Cromwell or Charles II produced Newton's law of gravitation, but it certainly is possible that a few sound and honest thinkers were found among those allowed to speak, especially in a field so comparatively remote from politics as theoretical physics.

Or instead, perhaps Stalin's era is best compared with the sixteenth century, which failed to appreciate its Copernicus, or its pre-Galilean physicists. For the Soviets have now turned their backs on the chance to lead physics out of the impossible conflict between relativity and quantum theory; they have failed to realize that in Fock's modification of general relativity there is the potential to undermine all of Einsteinian relativity at its roots, in preparation to moving up to a higher level of understanding. The fact is that Fock's theory, as well as independently achieved views now held in the West, clearly implies that the speed of light is not constant, contrary to the postulates of special relativity. It also implies the existence of an ether, which relativity cannot admit, but which Sagnac proved experimentally in 1913 (his proof has been masked by false claims that general relativity explains his results without reference to an ether). This is not the place to launch a detailed scientific and philosophical argument, but merely to observe that the most elaborate and impressive scientific monument to emerge from the Einstein debates in the Stalin and early Khrushchev years, Fock's theory, has as yet not realized its potential for productive combination with the more basic philosophical insights achieved by less mathematically gifted workers implacably hostile to relativity. Therefore, through inertia, the job may be accomplished instead in the West, which witnessed its share of opposition to relativity in the same years. But at present, with both great powers in awe of everything even remotely connected with nuclear energy (which does *not* depend on relativity, as even the Einsteinians admit), it seems more like a contest in who can be the most dogmatic and unimaginative than in who can initiate a new wave of scientific breakthroughs.

None of this is intended to sound very comforting; on the contrary, it is intended to disturb those who read it into spending more time on reexamining fundamental generalizations and less on superrefining existing ones to the point of obscuring or contradicting the facts on which they are based. The latter course is what led to Einstein's unfortunate theory in the first place; and it is undue emphasis on sophistication for its own sake which prevents us from seeing its shortcomings. Sophistication can be of value only when applied to correct principles.

March 2, 1968

JOHN CHAPPELL  
*University of Kansas, Lawrence*