

nature

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Sixty years of Soviet science

NEXT WEEK, on 7 November, the Soviet Union celebrates the sixtieth anniversary of the October Revolution. The discrepancy in dates, reflecting the change-over from Julian to Gregorian reckoning, neatly symbolises one of the major results of the Revolution—a commitment to implementing the results of modern scientific progress in the building of socialism.

For forty years, this policy was viewed from abroad as no more than an attempt to catch up with the burgeoning Western industrial economies. Soviet leaders' remarks about 'outstripping' the West were dismissed as mere propaganda—until the bleeps of *Sputnik 1* sent Western scientists running to their Russian primers and added to the information explosion an ever-increasing flood of cover-to-cover translations of Soviet journals.

One well-worn theme of Soviet writers on *naukovedenie* (the science of science) is that Soviet science must inevitably overtake the bourgeois variety, owing to its superior ideological basis. While we cannot support the idea that science, properly speaking, can belong to this or that political system, there does seem to be a distinct sociological phenomenon which may be termed 'Soviet science'—science carried out within and in the service of the Soviet State planning structure. Within this system science, like every other branch of production, is organised into neat five-year planning blocks. Research is envisaged officially as a search for 'solutions' to particular problems of the national economy, with the All-Union Academy of Sciences as 'coordinator for the whole scientific work of the country', and increasingly centralised control and 'unification' of academic institutions.

Unfortunately, it is precisely this centralised control which has led to major set backs for science in the Soviet Union, when high-level intervention by planners or ideologues overrode the scientists' desired research programmes. Lysenkoism, Stalin's attempt to ban quantum mechanics, the slow start in cybernetics (it appeared contrary to certain dicta of Marx and Lenin) are hardly a convincing argument for leaving decision-making in the hands of the State Planning Commission. Nor has this trend ceased. In recent years, the psycho-

logical theories of Snezhnevskii, who would attribute all mental disturbance and social nonconformity to schizophrenia, even when no schizophrenic symptoms are discernible, have begun to acquire the status of official dogma, and seem well on their way to repeating, in psychology, the disastrous course into which Lysenkoism led Soviet biology.

While the days are long past when a student might be asked to comment on the 'class significance' of a differential equation, ideological soundness remains a matter of utmost concern to the Soviet authorities. According to the latest (1976) regulations, a postulant for a higher degree must "combine a profound professional knowledge with a mastery of Marxist-Leninist theory and with the convictions of an active builder of Communist society". Official biographies and obituaries describe a scientist's minor Party offices as meticulously as his academic laurels. Organisers of international conferences know all too well that a Russian scientist of world repute will frequently fail to appear, being replaced by a junior colleague of mediocre scientific ability but greater Party commitment.

No one can deny the considerable achievement in Soviet science and technology over the last six decades, nor the fact that certain achievements, notably major irrigation projects, the space programme or the development of the resources of Siberia, would hardly have been possible without a centralised planning system. In the eyes of the comrade-in-the-street, science and scientists have acquired considerable charisma. Orders and decorations are regularly bestowed on deserving scientists by a grateful government.

Yet, by a typically Russian paradox, the constitutional position of scientists was until now anomalous in a State based officially on the union of workers and peasants. Only in the past month, with the publication of the revised constitution, has this been extended to read "workers, peasants, and intelligentsia". Recognised at last as part of the basis of the State, it is to be hoped that Soviet scientists will receive as an anniversary present a greater measure of freedom of movement and immunity from bureaucratic interference without which no science can effectively flourish. □