nature

What can the Party do for science?

Next week's special conference of the Soviet Communist Party will probably have the wit to confirm Mr Mikhail Gorbachev as its leader. Will it have the courage to set Soviet science free?

NEXT Tuesday, 28 June, is a red-letter day, for that is when the special conference of the Soviet Communist Party arranged last year will be convened in Moscow. Although there have been occasions since last November when it seemed as if the conference would critically determine whether Mr Mikhail Gorbachev, the party's general-secretary, would be allowed to push ahead with his advertised reforms, the past few weeks have been encouraging. During this run-up to the conference, *glasnost* has been carried so much further than seemed possible even a year ago as to suggest great confidence among the party's reformers. And while many of the plans for social and economic change recently made public await the endorsement of the conference, the fact that they have been made public in any shape or form is almost a proof that change will come about. It may also, of course, have helped Mr Gorbachev to win the endorsement (as they say in US politics) of President Ronald Reagan.

So far, there is little sign of how the pattern of Soviet science will be changed by the conference and by its decisions. Central though science and technology are held to be in the Marxist state, and influential though the scientific establishment is throughout the Soviet Union, there is little that a party conference can say, let alone do, to rid Soviet science of the encumbrances with which it is saddled. It is a problem in hysteresis. When the going has been rough, Soviet governments have dealt generously with the scientific establishment, repeatedly augmenting its stock of power and influence, in return for promissary notes to make that vast country fertile, or prosperous, or militarily strong (on which the scientific community seems to have delivered) At other times, the establishment has kept its power, but not much has been asked of it.

For generous governments have frequently acknowledged that some promises cannot reasonably be kept. Nobody, for example, could be held to account for failing to keep a promise to make the Soviet Union prosperous when the inefficiencies of the economic system are as flagrant as the world (and even the Soviet government) knows them to be. So the Soviet research establishment has been forced into an invidious position: it has more power than it can usefully exercise, but, given the superabundance of its power, it exercises it vicariously. It has also, by being seen to promise what it could not do, acquired a reputation for being ineffectual, which is not the best recipe for commanding the respect of ordinary mortals, its own underlings (working scientists) in particular. Neither the establishment nor successive Soviet governments seems to have calculated that what the research community in the Soviet Union most needs is a greater modicum of freedom than at present to tackle problems that seem interesting, and some (not necessarily all) of the resources that would be necessary for success.

The resignation, earlier this month, of no fewer than fifteen members of the Praesidium of the Soviet Academy is in this connection probably symbolic (see page 692). Old men must indeed make way for younger men (or even women, Soviet readers might usefully note), but it will have helped the academy to have demonstrated this truth on the eve of probably the most important occasion in the political life of the Soviet Union in fifty years. But the crying need, for the past half century and now, is for a means by which ordinary scientists at the bench can be more productive. With *glasnost*, the sense of being free may be arranged with relative ease. It will be more difficult to arrange that people have the tools of the trade to enable them to be productive. But, even more important, they need to know that the hardships they share with their fellows in the Soviet Union are not exclusively their responsibility. If there is a shortage of water-melons, or of toothpaste, and if it is true that science might be organized so as in due course to remove it, might it nevertheless not be more productive that the water-melons and toothpaste should be left for others to worry about, and that the creative parts of the Soviet scientific enterprise should tackle interesting problems? □

Blinkered UK students

The British school examinations system is about to be modified, but not reformed.

NOT before time, the British educational system, under external pressure on all fronts, has finally begun to worry about a substantial, but internal, issue to which it should have paid much more attention in years past: the question of how young people in Britain are prepared for entry into higher education (or, for that matter, into adulthood). Until this decade, the most glaring defect of the British educational system has also been the proudest boast of many who teach in schools as well as the crutch with the help of which teachers in higher education have reckoned that three years are usually sufficient to turn undergraduates into graduates.

The scandal is, of course, the system by which young people are virtually compelled to follow specialized curricula while still at secondary school, commonly from the age of thirteen (but some don intellectual blinkers even earlier). The point has now been reached at which it is agreed that this iniquitous system should be reformed, but unsurprisingly there are disagreements about the manner in which change should be brought about — and none of the reforms being canvassed is sufficiently radical to endure for long.

The issue is arcane, and peculiar to Britain. Half a century ago, when the British participation rate in higher education was between 3 and 5 per cent and when much of higher education was carried out in vocational colleges of various kinds (preparation for teaching in schools, or for a career as a technician), it became convenient to supplement a public examination at sixteen with a school-leaving examination enabling students to demonstrate aptitudes in particular fields, usually at eighteen. Until the 1930s, individual universities would decide between prospective students on the basis of the first of these examinations and, usually, an examination organized by themselves (with which Oxbridge persists). But then tidiness suggested that the second examination, originally (and, in Scotland still) the "higher" certificate, now renamed the "advanced" or "A-level" certificate, should become the basis for telling who should go to university. The consequence has been that academically ambitious students have been forced into a mould in which their