Up among The Great and The Good

William Cooper

Monkeys, Men and Missiles: An Autobiography 1946–88. By Solly Zuckerman. *Collins: 1988. Pp.498. £19.50. To be published in the United States by W.W. Norton.*

LORD Zuckerman's autobiography is divided into two volumes of 400–500 pages apiece. The first, *From Apes to Warlords*, was published in 1978; *Monkeys, Men and Missiles* is the second, covering the years 1946–1988.

In the account of an unending series of important jobs Zuckerman has done between those dates, at the core of British affairs, 470 pages of text are scarcely one too many for the inside detail he is in a position to disclose. Every page is strewn with names of notable personages in Britain and in the United States, introduced formally by their full names and (excepting certain Prime Ministers and Presidents) subsequently referred to by their first names — Bob and Jerry, Patrick, Dickie, Ted and Dennis. . . . Zuckerman has known them all, and most of them, President Kennedy included, have called him 'Solly'. Among the jobs we have Professor of Anatomy at Birmingham University, Secretary of the Royal Zoological Society; military adviser with the techniques of operational research at his command, and authority, by experiment and observation, on the effects of nuclear blast (obliterating); Whitehall pundit for all seasons, wrestling with the organization of Britain's technical manpower and research and development; Chief Scientific Adviser to the Ministry of Defence; and finally Chief Scientific Adviser to the Government — maintaining even after retirement a 'perch' in the Cabinet Office. A fascinating story.

It makes for more fascinating reading, though, if the author of an autobiography has some of the gifts of a novelist — can make 'Patrick' spring to life as a man; can raise a dramatic spark in the absurd rebellion of the Old Guard on the Council of the Zoo; and, most importantly of all, reveals his own nature and personality. Without great evidence of this gift, the earlier part of the volume is pretty flat; one gets an impression of the author's personality chiefly by inference, insight into his nature practically none. However the latter part becomes a history, often day-by-day and sometimes hour-by-hour, of events whose central subject is nuclear missiles, a history so riveting that the absence of a novelist's gifts is irrelevant. One still wonders, all the same, how the unending series of jobs came about.

Here I'll air a theory of my own. It is that the Establishment, looking around for persons to fill important jobs, is incapable of holding more than one name in its corporate head at a time. For every job that comes up over a period, that one name comes up for it. Over the period in question it looks as if the one name that came up was Solly Zuckerman. Married in 1939 to the daughter of a former Viceroy of India; elected in 1943 to a Fellowship of The Royal Society; his name was obviously eligible for the list of The Great and The Good, and had the fortuitous advantage of being very individual and endearingly tinged with the comical. Furthermore the way he went about his various jobs — a seemingly artless zest for his own manoeuvres and innocent delight in their success — had its appeal. For example:

The Council [of the Zoo] had agreed that I could ask the late Sir William Walton to compose a fanfare for the occasion. I had always envied the Royal Academy the Arthur Bliss fanfare at its annual dinners, and William was at least as famous a composer of fanfares. He obliged, and it was performed by the trumpeters of The Royal Military School of Music on the arrival of the Queen and Prince Philip. William entitled it 'The Roar of Lions' and dedicated it to me, calling me 'the lion of lions'.... The occasion went off splendidly, and I believe the Queen was almost as pleased as Charles Clore. [He was trying to raise money for the Zoo from Clore.]

Anyone who finds this passage a trifle bumptious should remark that in his first volume of autobiography there is merely an oblique reference to his having been elected to the Royal Society; and in the second there is no mention of his receiving in 1965 the highest honour of all, the Order of Merit. And so far as his being on first-name terms with so many other people in the business was concerned, it was presumably to everyone's advantage that at any juncture, any crisis in affairs, he could suggest which buttons to press in the old boy network.

Coming to Zuckerman's main contribution to policy in his later years, one might argue that in posts such as Chief Scientific Adviser the incumbent is not called upon for the highest flights of scientific creativeness, but rather for a combination of commonsense and logic — which is indeed the identifying characteristic of Zuckerman's contributions. Commonsense has long seemed to me a sort of 'Layman's Science'. It enables one to explain and predict, over a range of human experiences in the real world, what happens and what is likely to happen, on the basis of accumulated observation of what has already happened and why. (This is not to say that commonsense doesn't have its lapses any more or less than science does; nor that all scientists are gifted with commonsense. Far from it! A case in point, the rock on which Zuckerman's friendship with the remarkably gifted scientist, J. D. Bernal, foundered, was the latter's lapses from, if not complete lack of, commonsense.)

Zuckerman's particular combination of commonsense and logic is nicely exemplified in what he calls "the inexorable law of R&D" *à propos* the arms race between East and West:

There is no finishing post to the race, of course, unless it were stopped by the ultimate disaster of an East–West war. The cost of rearmament or 'modernization' — as some now term the process to make it sound more palatable politically — cannot but go on rising at a rate greater than the rate of increase in the fund of resources that can be devoted to all public expenditure. This conclusion applies as much to the USA, and presumably to the USSR, as it does to Britain. The economic burden can on occasion be reduced in the short term by sales or by the application to civil industry of some useful technological development made in the course of a piece of defence R&D. That, however, occurs far more rarely than is thought.

It scarcely needs to be said that views based in commonsense plus logic are liable to be dubbed heterodox; they are not universally popular among politicians, are even less popular among War Lords and are frankly unpopular among 'weaponeers'. Zuckerman makes no pre-

tence of always being in the right. "I couldn't have been more wrong", he says at one point. Nor of always claiming success. U Thant once sent him inscribed copies of reports he, Zuckerman, had written on arms control for the UN, about which he writes: "Despite their wide circulation I never did learn if any one of them had much effect on world opinion. The way the arms race has proceeded over the past decades I would think not".

However it is when he comes to nuclear weapons that most readers may well find his story at its most gripping. In a crucial passage he states another of his propositions:

> The state of mutual strategic deterrence, upheld by the threat of retaliation with nuclear weapons, will remain valid until (1) a meaningful defence is achieved against both ballistic missiles and low-flying aircraft... or (2) a weapons delivery system is perfected which, for all practical purposes, could successfully carry out a surprise attack which destroyed so large a proportion of the other side's delivery system before they could be launched, as to make it impossible to make a retaliatory strike. [It was]... just technically possible, but immensely expensive in resources to devise an anti-ballistic missile capable of intercepting the simplest kind of incoming warhead.... But the balance is inevitably in favour of the attacker, and no Western scientist or technologist knows a way of providing an anti-ballistic missile defence of the major targets in his country. If the Russians know of one, we had no idea what it is.
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> Twenty five years later that remains my view, SDI or no SDI. The state of mutual deterrence is likely to remain valid indefinitely.

It is clear that Zuckerman is entirely convinced of the use of nuclear weapons in their role of deterrent: equally clear is that his confidence in their use in the cause of military strategy is nil. In this latter view he came of course into conflict with those weaponeers who, having 'perfected' their nuclear weapons, felt — and no doubt still feel, human nature being, alas, what it is — an irresistible urge to fire them off. He describes an encounter with Edward Teller, whom many people regard as the Evil Genius of The Bomb — in part responsible for its totally unnecessary use on Nagasaki, then fighting any moves whatsoever to ban test explosions, then shifting ground to propose the use of just little nuclear bombs on the battlefield, and finally as a last resort developing a case for exploiting nuclear bombs to make big holes in the ground. Zuckerman records the stormy meeting at which first he, and then Lord Mountbatten, denounced Teller's proclamations (about battlefield weapons) as dangerous military nonsense:

> During a break in the proceedings, I was sitting chatting in the sunshine with some uniformed friends, when Teller came up to me, and, in his strange accent, said, 'I will not forgive you for that,' to which I replied that it would make not the slightest difference to me if he didn't. I knew that nothing could stop him. To this day he continues to expound what to me is dangerous military and political nonsense.

It should not go without remark that Zuckerman in those days received a great deal of support and wise advice from Harold Macmillan, who was then Prime Minister. But in 1964 it was decided to 'reform' the loose components of the Ministry of Defence into a huge new 'super-department'. Thus:

> ... I nonetheless feared that the bureaucratic procedure he was suggesting could slow down action, particularly when minutes from my side of the Ministry were pored over by people who could not understand their scientific and technological significance.... Nor was I ready to surrender my right to say what I wanted, regardless of the views of the rest of the Ministry, and even those of my staff. This manifesto in favour of free speech was in the end to bring about my departure from the department.

Shortly afterwards Harold Wilson came to power, and wanted Zuckerman to go to the Foreign Office (with a peerage) as Minister of State for Disarmament. He turned it down, wanting to remain a scientist rather than to become a politician. (Yet, some years later, he wondered if he could have achieved more for disarmament by accepting.) Instead he became Chief Scientific Adviser to the Government, lodged in the Cabinet Office. In this new role he held a succession of jobs over a wide range of scientific interest, environmental and so on. Yet a preoccupation with nuclear affairs has remained nearest to his heart. When the time came for retirement he accepted a peerage from the then Prime Minister, Edward Heath. And in 1982, still on his lasting theme, he wrote a book called *Nuclear Illusion and Reality* — which, one imagines, does not find entire favour with the now Prime Minister. □

William Cooper, Savile Club, 69 Brook Street, London W1Y 2ER, UK, is the pseudonym of the novelist Harry Hoff. From 1958 to 1972 he was personnel consultant to the United Kingdom Atomic Energy Authority.

Soviet star-turns

Desmond King-Hele

Race into Space: The Soviet Space Programme. By Brian Harvey. *Ellis Horwood: 1988. Pp. 381. £16.95, $39.95.*

FUTURE historians may well rate the Soviet effort in space exploration as one of the greatest technological achievements of the twentieth century. The launching of Sputnik 1 in 1957 came as a great surprise to Western nations basking in the self-esteem engendered by their more advanced technology. That surprise has ripened into embarrassment as the sustained momentum of the Soviet programme has become evident.

If the journalistic cliché of a 'space race' is accepted, as in the title of Brian Harvey's book, it is a race in which one runner has already lapped all the rest: in the ten years from 1978 to 1987 there were 933 space launches by the Soviet Union (excluding Intercosmos), 146 by the United States (excluding international launches such as Intelsat), 24 by Japan and lesser numbers by others. Awkward statistics like these are conveniently ignored on the rare occasions when Soviet launches are reported in the West: we are usually told that the Soviets are beginning to catch up the Americans, and most people accept this perversion of reality, so awesome is the power of persistent propaganda.

Although there have been failures in the Soviet programme, the fact is that the Mir space-station with six docking points has been in operation since 1986: crews have been interchanged from time to time; there have been numerous visits by short-stay cosmonauts; unmanned 'Progress' craft have called regularly to deliver supplies and remove rubbish; scientific experiments have been pursued aboard Mir and through modules like Qvant, attached at spare docking ports. Already there is an orbital community, with people and supplies brought in and out not by car and truck but by advanced vehicles appropriate to the environment. At present, living in space is neither spacious nor gracious: the living quarters are cramped, and most crews are all-male. But both of these limitations will gradually be relaxed if Mir succeeds in avoiding the ever-present threat of disaster (for example, from being struck by debris). We should then see larger space habitats with better-balanced populations. The Mir programme is also an impressive act of faith in the future good behaviour of humankind. 'Mir' means 'peace', and Mir needs peace, because this most expensive project can be ruined by any hostile power that chooses to detonate debris-creating weapons in orbit at the appropriate height.

Why has the Soviet Union devoted so much effort to space exploration, by comparison with the United States, which took the lead with the manned Moon landings in 1969–1972 and then seemed to lose interest? The easy answer is that the Soviet Union has had consistent government and long-term planning, while the United States suffers from the hot and cold turns of its electorate, and was lured into building a space shuttle for travelling between Earth and a space station that had already been cancelled. (Another is now being proposed, to give the shuttle a role.)

This answer has some validity, but does not tell us why the Soviets have been and