

government which put scientists in power leaving the rest of us as petitioners, would there be any provision for changing our scientists in elections, or would they just listen politely and then deliver their binding judgments?

Fortunately, though Bronowski may speak for a few scientists, he certainly does not speak for the majority, who are much more modest in their claims about their own wisdom. They do not want to by-pass the really difficult problem of persuading a society to change its course, voluntarily, instead of offering them a Utopia to be won by surrendering their liberties to a new ruling class.

Science has not just created a new intellectual élite. It has also educated everybody, and made us all so interdependent that we cannot advance save by establishing a new consensus. This is the central political problem. It isn't just scientists who are swept along by the juggernaut of modern society. We are all locked in it, and have got to find a way of getting it under control. It is very sad for admirers of Dr Bronowski, a humane and liberal philosopher of science who did so much to alert laymen to its importance, to find him emerging as a new authoritarian élitist.

THE DANGERS HE WARNS US AGAINST are real. But there are no short cuts. Unless we share power, we can never control it. Unless we can mobilise the ability and common sense of ordinary people there cannot be any effective check on ambitious politicians—or even brilliant scientists with political ambitions, and a distaste for democracy.

*Anthony Wedgwood Benn*

## “Copping Out”

IDENTIFICATION OF MEN with separate, competing, and often warring groups (which we now call “nations”) is not the result of evil desires and foolish policies of certain individuals or classes—of power-hungry kings, blood-thirsty militarists, selfish capitalists, or fanatical followers of extremist creeds. It has been, rather, the result of evolutionary selection—which proved advantageous for the

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human animals to hunt in packs, and to collect food in organised groups. Evolution thus selected, for preferential survival and propagation, societies able to secure the most effective cooperation of its members in this type of collective activities—including willingness to die (and readiness to kill) on their behalf.

The reason why this type of behaviour proved most successful was that humans, like many other animals, lived in a habitat of scarcity, where survival of a family or group depended on its securing adequate resources and protecting them from competition. Well organised militant societies proved better able to do this than lone individuals, or looser groups.

This is the evolutionary origin of patriotism, nationalism, imperialism—of all forms of exclusive identification of individuals with a closed group or society. Dedication to such a society had been the basis on which all past civilisations have developed, and on which their achievements—arts, technologies, religions, and sciences—had grown.

To survive, mankind now must outgrow this historical pattern of separate national existences, and make a fresh beginning. This we must recognise. But it would be useless to pretend that militant identification of individual citizens with their societies had always been only an aberration, an evil, a deviation from the straight path of human progress! It has been nothing of the kind. It has been an essential part of the mechanism mankind evolved in its economic and cultural advancement. It is only recently that this motor has begun to sputter, and to threaten an explosion which may blow up all of us. It must be now replaced by a mechanism more likely to function successfully in the present state of mankind. It is not that scientists should dissociate themselves from the evil ways their nations still follow under the influence of evil individuals, or selfish classes! This would be useless even if it were possible—which it is not. Mankind as a whole must choose a new path, and all that scientists can do is to play an active role in defining it. Evolution has selected, throughout history, militant, nation-centred behaviour as key to success. All of us are the inheritors of this evolutionary burden, and none of us can simply disclaim it!

“Disestablishment” of science, as advocated by Dr Bronowski, is as impossible as has been, in the past, the disestablishment of religion. When the “*Enola Gay*” carried the first atom bomb to Hiroshima, its flight was preceded by a religious service, invoking God’s blessing on the enterprise (which brought death to 100,000

innocent men, women, and children). Science and religion—the former not yet “established”, and the latter supposedly long ago “disestablished” in America—joined hands in this apotheosis of militant nationalism. Science cannot reclaim the luxury of an extra-national existence, which it had enjoyed for a while when it was unimportant. Scientists cannot quit the world of international competition and power contests, and say: “We don’t want to play in this game any more.” It is not so simple and easy. The existential basis of the whole of mankind must be changed, not that of science alone.

The radical change, which the human condition has undergone in our time, is twofold. In the first place, the destructive capacities which modern science has placed in the hands of nations are too great to be used in the pursuit of any national aims. In the second place, sources of national wealth have ceased to be limited (as fertile fields, hunting and fishing grounds, or fuel and ore deposits, had been throughout history). Science and technology are showing us ways to create wealth from widely available raw materials—common minerals, air, sea water—with the aid of potentially unlimited sources of energy (fusion power, solar energy). Thus we enter an era in which fighting between closed societies for limited resources of energy and materials will be not only prohibitively destructive, but also fundamentally unnecessary.

Bronowski suggests that scientific communities should opt out of their national societies, while leaving the latter to pursue their traditional power politics. This seems too superficial and self-centred for me. Or is it meant to be a clever strategy, like Szilard’s international conspiracy of scientists hiding behind a tankful of dolphins as pretended source of superhuman wisdom? Bronowski seems to me a follower of the King of Saxony, who resigned his throne in 1918 with the words “*Macht euch euren Dreck alleene* (Wallow in your muck by yourself)”, rather than a follower of Szilard.

THE ANSWER to the human predicament of the nuclear age lies not in intellectual communities “copping out” of the traditional framework of national existence, but in all who are aware of the source of this predicament joining hands in a political and educational effort. Mankind must make a new departure, based on subordination of national interests to universal interests of mankind. It must do so not out of “unrealistic” idealism, but out of realistic understanding that in the age of space travel and thermonuclear weapons, the old adage “united we stand, divided we fall” applies to the whole of mankind, and not to any of its separate parts. There is no salvation in isolation—neither for any nation, nor for any group within a nation.

*Eugene Rabinowitch*

### Just So

A dull man all his life  
 he leapt to fame at Chalk Farm  
 on an ordinary March morning  
 in a clerk-grey suit. Impulsive,  
 sick of the scrapings, of his  
 two drab semis (wife and home),  
 he threw himself, just so, without ado  
 beneath the eight thirty-two.

*Your Attention Please, Attention Please*  
 official voices brayed, proclaiming  
 the news to the waiting queues  
 at Colindale and Brent. And for thirty  
 time-is-money minutes, while passengers  
 cursed, were “subject to some delay”,  
 while long trains stirred, he  
 was as good as there, in lights,  
 with Bank, with Waterloo,  
 a neon hero for a moment or two.

*Jeremy Robson*