

Nuclear study reveals 'vulnerability' of Polaris

THE prospect of a Royal Navy Polaris submarine drifting round the North Atlantic vainly trying to establish radio contact with a government whose vital communications had been disconnected by a Soviet nuclear strike is conjured up by a new study of Britain's strategic command and control.

In some circumstances, it argues, the British submarine could end up being hunted by the Soviet and the US navies while its captain tried to find out what had gone wrong.

The study, prepared by Mr Shaun Gregory for Bradford University's School of Peace Studies, deploys technical analysis rather than political judgments to challenge the assumption that Polaris provides Britain with an assured, controllable means of

David Fairhall explains why a British submarine could be hunted and

retaliation against nuclear attack — and hence an effective deterrent.

His report argues that the communications system on which civilian governmental control of the nuclear deterrent forces depends could be destroyed by no more than 20 nuclear warheads. This would leave military commanders with the responsibility of deciding whether to retaliate, but without necessarily knowing the strategic situation, or what had happened back home.

The physical difficulty of communicating with a submerged submarine which dares not give away its position by radio transmission is one of the reasons why the United States has never been

prepared to put all its deterrent eggs in that basket.

In Britain, as the Bradford report points out, the same problem has encouraged the adoption of a purely procedural system of political control over nuclear weapons, rather than the American system of physical "locks" known as PALs (Permissive Action Links).

Whereas some, at least, of the American weapons have to be unlocked by a coded key before they can be armed, the British practice, according to the report, is to use codes simply to authenticate the orders to fire.

"This means that those who have physical possession of nuclear weapons (for example, a submarine commander and his officers)

have the de facto ability to use those weapons even if they do not have the authority to do so," says the report.

The safeguard in the British system is the "two-man principle," which dictates that at every level of command two people must jointly take the decision.

At the other end of the Polaris chain the submarine commander left without orders could physically fire his missiles, subject to the two-man rule, but is only authorised to do so on his own initiative if he believes "that Britain has been destroyed by a nuclear attack and no responsible person is in a position to transmit orders."

Mr Gregory's contention is

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destroyed by both the US and Soviet navies

that even if the Prime Minister and her senior commanders were still alive in a Whitehall bunker or elsewhere they might be in no position to transmit such orders. Fewer than 20 Soviet warheads, he calculates, could destroy key links in the chain, such as the three fixed VLF transmitters designed to get simple messages through to a submarine moving slowly just beneath the surface.

Specific warning of such selective attacks might have been precluded by previous destruction of our limited early warning system, either directly or through the effects of an electro-magnetic pulse from a bomb bursting high above Britain.

Mr Gregory is not suggest-

ing that the Polaris captain would immediately fire his missiles just because he had lost contact with headquarters. On the contrary, he quotes one commander to the effect that "you don't unleash Armageddon on the basis of radio silence." But he does go on to speculate as to how effective the threat of retaliation can be if the response is so uncertain.

One extreme possibility, he suggests is that the United States might at that point be desperately concerned to stop the escalation of the nuclear conflict and feel it necessary to join the Soviet navy in hunting down and destroying the isolated British submarine before its commander decided to fire.

The Bradford study concludes that: "The UK is not in a position, economically or technically, to design and deploy a survivable warning system which can provide guaranteed early warning of, and sufficient time to react to, a nuclear attack. "It is also the case that as long as the nuclear deterrent remains submarine-based, communications with it will require long wave transmissions which, in turn, will require large and vulnerable transmitters. This vulnerability, inherent in the system, means that post-attack communications with the submarines cannot be guaranteed, at least while the submarines remain submerged."

The Command and Control of British Nuclear Weapons — Bradford University School of Peace Studies, £6.