

What would Walter say?

Dual technology

Dr. Christien Enzing, Technopolis Group, Netherlands

SDI – the US Strategic Defense Initiative

- Announced in January 1984 by President Reagan
- Defined to explore key technologies which might enable the development of a missile defensive system intended to protect the United States from attacks by ballistic strategic nuclear weapons
- Its first stage ran for four years. Start in 1986, succeeded by other programs, renamed
- In the late 90's the program was transformed and changed its scope from global to more regional coverage
- It was never truly developed or deployed.
- Certain aspects of SDI research and technologies paved the way for some of the anti-ballistic missile systems of today.

Walter Zegveld
Group Policy Research & Information
TNO Postbus 215
2600 AE Delft
Netherlands

Dear Walter

You will be pleased to hear that we have just sold the Russian rights to the SDI book to Progress Publishers in Moscow.

I wonder if you could give me a progress report on what you are doing with Roy Rothwell and I do not want to be a nuisance. Could you not send me a progress report on this?

Yours sincerely

Frances Pinter

enc

WALTER ZEGVELD ♦ CHRISTIEN ENZING

SDI AND INDUSTRIAL TECHNOLOGY POLICY

THREAT OR OPPORTUNITY



INTERNATIONAL RELATIONS 1987

SDI and Industrial Technology Policy

WALTER ZEGVELD and CHRISTIEN ENZING
TNO, The Netherlands

Although the Strategic Defence Initiative is generally portrayed as a military system, to be developed within the context of national defence, it is of strategic importance with respect to foreign policy and has far-reaching implications for industrial technology policy. The authors examine the role of government in the development of science and technology within the context of the processes of technological innovation. The economic consequences of stimulating scientific and technological development via the military route are also carefully scrutinized.

Contents: Part I: The Programme - Introduction - SDI: objectives and extent - SDI: foreign participation and the development of industrial technology - SDI: defence technology or dual-use? - Part II: Economics of military R&D - SDI and innovation processes - Economic benefits of SDI: spin-off's and crowding out - Summary and conclusions
186 pages 0 86187 694 6 £18.00

Global Problems and World Order

ROBERT MCKINLAY and RICHARD LITTLE
University of Lancaster

This book presents three competing paradigms of world order: a power political paradigm, a liberal paradigm and a structural paradigm. The authors argue that the definition of global problems associated with environment, economics and the environment, the assessment of these problems and putative solutions to these problems are all dictated by an initial conception of world order.

Contents: Introduction: world order paradigms - The power political paradigm - Security problems - The liberal paradigm - Environmental problems - The structural paradigm - Environmental problems - The structural paradigm - Security problems - Economic problems - Environmental problems - Conclusion concerning solutions to world order problems - Index

The book succeeds in its grand purpose of making the reader see the whole field through the normative lenses of contending ideologies... It deserves widespread use.

International Affairs
292 pages 0 903804 46 8 hb £22.50
0 86187 921 X pbk £ 9.95

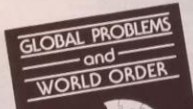
American International Oil Policy

Causal Factors and Input
HANS JACOB BULL-BERG
Fridtjof Nansen Institute, Oslo

The author provides a review of the actual policies adopted by the U.S. and the way they evolved, in an effort to account for them. There is a full investigation of political and economic aspects of the world oil market, looking particularly at the way in which American policy was designed to regulate the relationship between oil producers and consumers.

Contents: Part I: Explaining U.S. foreign oil policy: a framework for understanding American oil policy - A framework for explaining U.S. internal oil policies - Domestic policies: merits and actions - Foreign oil policies: conflict and co-operation - security policy: the American dilemma - Domestic American oil foreign policy dilemmas - Part II: The system - American policy: the shaping of a regime: 1918-1974 - The American pursuit of a liberalist order: 1973-1985
210 pages 0 86187 696 2 £2

25 FLORAL
TEL 01-240 9233
DIRET LOB: FRANCES PINTER, PARIS
REGISTERED OFFICE



Our hypothesis:

Given the dominance of the free-market philosophy in the US that does not allow for direct government interventions in the market through industrial technology policies:

- *Can a defense technology programs such as SDI be considered as a hidden trajectory to fund industry relevant research?*
- *Is the military route a more appreciated an appropriate way for such involvement, in the US?*

The defense-economy debate in the US

- War production was responsible for pulling the nation out of the Great Depression of the 1930s.
- A sort of Keynesianism rescued the economy; the large demand-creating government intervention in economy was military in origin
- Galbraith large complex organisations – including the military complex - were the defining characteristics of the US' economy
- Melnam warned against the Pentagon's dominance over civilian economy controlling R&D, capital, production means and technical personnel
- Tirman: the 'spin-off' argument is key to understanding the defense-economy debate

What will be SDI's spin-off?

We concluded:

- although SDI's R&D is mainly generic by nature, and might generate civil applications,
- the exotic nature and the military context of the program and the extensive restrictions on technology transfer
with demanding constraints for publication and participation of SDI-funded scientists in open scientific meetings
will reduce the possibility of commercial spin-off

What would Walter say on EC's plan to increase the European defense research budget?

- President Juncker expressed the need for a Europe that protects, empowers and defends
- Europe's defense research budget should grow
- In the period 2021-2027, an annual budget of 500 million Euro.
- Research should focus on for instance the development of a European Drone that can eliminate ground-based targets from high altitudes.
- National budgets should be made available to buy these weapon systems European companies (ca 5 billion Euro, annually)
- Trump's election - Europe should strengthen its contribution to NATO
- This provided more fundament under Juncker's argument that Europe should work more closely together in defense R&D and procurement



Walter would say:

- Juncker's defense research program is – as we use the terminology of today – focused at higher TRL levels than SDI was.
- So, the research is application oriented
- For now, it seems to be a program that aims to strengthen the competitiveness of the European defense market, that suffers from fragmentation and insufficient industrial collaboration
- However, with the shrinking national defense budgets it remains to be seen how large the European market will be for these new weapons systems
- Although technology transfer instruments have improved, spin-off can not be expected due to low basic research level

