A Permanent Arms Economy

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COMMON to most explanations of western capitalism's stability and growth since the war is the assumption that the system would collapse into over-production and unemployment were it not for some special offsetting factor. Some have seen it in planning; others in rapid technological change, or an expansion in world trade. This article shares the assumption. Where its thesis differs from others is in locating the mechanism which sets the loop of high employment, growth, stability and so on turning outside the loop itself.

The argument for seeing a permanent threat of over-production (not a threat of permanent over-production) as inseparable from capitalism rests on three empirical propositions: that an individual capital's competitive strength is more or less related to the size and scope of its operations; that the relations between different capitals are by and large competitive; and that decisions relating to the size and deployment of individual capitals are taken privately by individuals and groups that form a small segment of the society which has to live with the consequences. Were it not for the first two there would be no compulsion on each capital to grow as fast as it can through "accumulation" (that is, saving and investment) and "concentration" (that is, merger and takeover); were it not for the third, growth would never stumble far beyond society's offtake. Together they also provide the mechanism for attaining- and retaining-stability as one that augments offtake while moderating the rate of expansion that might result. Ideally, it should do this without altering too grossly the relations between individual capitals.

Such a mechanism is to be found in a permanent arms budget. In so far as capital is taxed to sustain expenditure on arms it is deprived of resources that might otherwise go on further investrnent; in so far as expenditure on arms is expenditure on a fast-wasting end-product it constitutes a net edition to the market for consumer or "end" goods. Since one obvious result of such expenditure is full employment, and one result of full employment, rates of growth amongst the highest ever, the dampening effect of such taxation is not readily apparent. But it is not absent. Were capital left alone to invest its entire pre- tax profit, the state creating demand as and when necessary, growth rates would be very much higher. Finally, since arms area "luxury" in a sense that they are used neither as instruments of production nor as means of subsistence, in the production of other commodities, their production has no effect on profit rates overall – as will be shown below.

The addition made by arms budgets to world spending is stupendous. In 1962, well before Vietnam jerked up American (and Russian) military outlays, a United Nations study concluded that something like $120 billion (£43,000 million) was being spent annually on military account. This was equivalent to between 8 and 9 per cent of the world's output of all goods and services, and to at least two-thirds, or even as much as-the entire national income of all backward countries. It was very near the value of the world's annual exports of all commodities. Even more breathtaking is the comparison with investments: arms expenditure corresponded to about one-half of gross capital formation throughout the world. [1]

Its significance varied enormously between countries: 85 per cent of the total expenditure was made in seven countries – Britain, Canada, China, West Germany, France, Russia and the United States. [2] In the countries of western capitalism military expenditure as a proportion of gross domestic product ranged from 9.8 per cent in the US (1957-59 average) to 2.8 per cent in Denmark (Britain – 6.5 per cent); and as a proportion of gross domestic fixed capital formation from nearly 60 per cent in the US to 12 per cent in Norway (Britain 42 per cent). [3] In none was it immaterial as a market or, and this is even more important, in comparison with the resources devoted to investment.

Some industries rely heavily on arms expenditure. In the United States (1958) more than nine-tenths of the final demand for aircraft and parts was on government account, most of it military; as was nearly three-fifths of the demand for non-ferrous metals; over half the demand for chemicals and electronic goods; over one-third the demand for communication equipment and scientific

instruments; and so on down the list of eighteen major industries one-tenth or more of whose final demand stemmed from governmental procurement. In France (1959), the list ranged from 72.4 per cent in aircraft and parts down to 11 per cent in optical and photographic equipment. [4] In Britain, a similar list would include the aircraft industry to the extent of 70 per cent of output (1961), industrial electronics and radio communication – 35 per cent each, shipbuilding -2 3 per cent, and a number of others. [5]

The impact of arms expenditure on growth and innovation is no less direct. It is not difficult to see how full employment puts a premium on technical innovation and *intensive* investment and so, at one remove, on research. It is here that military outlays are of overwhelming weight as a proportion of the total, accounting for 52 per cent of all expenditure on research and development (R&D) in the US (1962-63), 39 per cent in Britain (1961-62), 30 per cent in France (1962) and 15 per cent ("partial estimate") in Germany (1964). [6] No less than 300,000 qualified scientists are engaged on R&D for military and space purposes in the OECD area, mainly in six countries (those listed plus Canada and Belgium). [7] In Britain, 10,000 were so engaged in 1959, or one-fifth of the total, supported by another 30,000 or so unqualified research workers.

Military research has been crucial in developing civilian products like air navigation systems, transport aircraft, computers, drugs, diesel locomotives (from submarine diesels), reinforced glass and so on. Long production runs for military purposes have brought other products, such as solar cells and infra-red detectors, down to mass price-ranges. Then again, military use has perfected techniques of general use, such as gas turbines, hydraulic transmission, ultra-sonic welding and a host of others. More important than all, concludes the OECD report on Governmental and Technical Innovation, is the fact that

the results of military and space research have had, and will continue to have, a greater influence on civilian innovation by stimulating the general rate of technological advance. For example, the requirements of military and space research, especially for guidance and control, have led to fundamental and applied research in such fields as semi-conductors, micro- circuitry, micro-modules, energy-conversion and physical metallurgy, which are bound to have an impact in civilian technology ... In addition, techniques of planning, such as operational research, Progress Evaluation Review Technique (PERT), systems engineering and value engineering – developed initially for military and space purposes-will lead to a more rapid identification of opportunities for innovation. And finally, the high standard of perfection and reliability required of military and space systems has led to the development of techniques of measurement, testing and control which will serve to increase the quality and reliability of products and components. In the field of electronics, this is particularly important. [8]

As for arms and international trade, the United Nations study quoted already estimated the average annual military demand by industrial countries for some internationally traded materials in 1958 and 1959 as 8.6 per cent of total world output of crude oil, 3 per cent of crude rubber, 15.2 per cent of copper, 10.3 per cent of nickel, 9.6 per cent of tin, 9.4 per cent of lead and zinc, 7.5 per cent of molybdenum, 6.8 per cent of bauxite, 5.1 per cent of iron ore, 2.7 per cent of manganese and 2.3 per cent of chromite. [9] It is difficult to come to such well-founded conclusions on the impact of arms expenditure on the size of firms, but the EIU study on Britain shows that the eighteen largest companies (10,000 or more workers each) of those that replied to the questionnaire, with 71 per cent of total employment, had 75.2 per cent of total employment on arms production. [10] It is also known that the defence pork-barrel is very much a giant company concern in the United States. Despite official attempts to spread the gravy, the largest hundred firms received two-thirds by value of all defence contracts, and the top ten [received] one third, in the first half of the 1950s. [11]

Nor is it surprising. Only the biggest firms have the technical and technological resources to cope with the sophistication and sheer volume of arms production. But once they can cope, are members of the pork-barrel club, growth is guaranteed. The major arms contracts are so enormous that "even

the pretence of open tendering for orders could not be seriously kept in some of the most valuable and important government contact". [12] "It is estimated," a US Assistant Secretary of Defence told the Joint Economic Committee of Congress in 1963, "that to establish a new production source on the Polaris missile, for example, would require up to three years and an investment of $100 million in facilities and special tooling." [13] And although government auditing techniques are constantly perfected to cope with the new dependence on single supply sources, this time-and-materials or cost-plus basis for major contracts removes all traces of risk to income-and to growth. Sometimes, guarantees are so open-ended and performance so poorly-policed that contractors go berserk and create new risks for themselves, as did Ferranti with its Bloodhound [missile] contract, when the firm was made to disgorge no less that £4.5 million uncovenanted profit on a £13 million contact in 1964. Normally, however, capital is more restrained and the risks to growth suitably anaesthetised.

Finally – planning. Military spending has been crucial in the development of government planning and the perfection of planing techniques. There is official evidence that planning in the United States was in direct response to Russia's ballistic breakthrough. [1*] Close supervision over private industry is becoming part of any big arms contract. Modern methods of auditing and control stem straight from military needs. The same might be said of the increasingly essential tool of most large- scale planning exercises-the computer. Born out of the Second World War, its most sophisticated applications are still in military spheres, whether in solving design problems, playing "war games" or stock and production control. Big computers are still denied export permits from the United States on military grounds.

These direct effects of arms spending are interlinked, and together form a causal loop which seems to go on a perpetual round without the need for further stimuli. Yet although the facts seem conclusive enough, not all problems are tidied away. They might not be the only facts that could explain stability. Any academic economist should be able to construct a model in which savings and investment are exactly matched, and demand set at the point of full employment. The techniques present no difficulties.

Non-academics have been at pains, with Strachey, to point out more pragmatically, that "defence spending could be replaced by other forms of governmental spending ... homes, roads, schools, etc, etc," or the government could probably effect the same purpose by cutting down the tax on the small incomes." [14] And there is no reason in logic to doubt them. But capitalist reality is more intractable than planners' pens and paper. For one thing, too much *productive* expenditure by the state is ruled out. Seen from an individual capitalist's corner such expenditure would be a straight invasion of his preserve by an immensely more powerful and materially resourceful competitor; as such it needs to be fought totally. Seen from that of the system, it would lead to such a rapid build-up of the capital : labour (value) ratio, Marx's organic composition of capital, and such a low average rate of profit as a consequence that even the most marginal rise in real wages would precipitate bankruptcy and slump.

Only the last requires any explanation. Marx showed, to put it very roughly, that in the long-run and despite much offsetting, the growing intensity of capital would force down the rate of profit in a closed capitalist economy. [15] The argument is simple: since unpaid labour is the sole source of profit and the outlay on labour power a constantly declining part of all investment outlays, profit as proportion of total investment is bound to decline. He iffed and butted the "law" extensively and was at pains to explain that "this fall [in the rate of profit] does not manifest itself in an absolute form, but rather a tendency towards a progressive fall," but he clearly considered it the overriding trend. His argument rested on two assumptions, both realistic: [first, that] all output flows back into the system as productive inputs through either workers' or capitalists' productive consumption-ideally, there are no leakages in the system and no choice other than to allocate total output between what would now be called investment and working-class consumption; second, that in a closed system like this the allocation would swing progressively in favour of investment. The first [assumption] is the pivotal one. If dropped [2*], and the ratio of the returns to capital to labour within the system

become indeterminate, the second [assumption] falls and the law with it.

Marx himself pointed to existing leaks-capitalist personal consumption ("luxuries") and gold production, but realistically chose to ignore them. He was, after all, hewing a system from virgin rock, and they were neither here nor there in practice. Later theorists, forced to refine the model and also writing in a more affluent age, probed deeper into this non-productive Department III. Von Bortkiewicz proved, in a paper published in 1907 [16], that the organic composition of capital in luxury goods production (the personal consumption of capitalists) had no part in determining the rate of profit. Sraffa, in by far the most ambitious refinement of a "classical" system to date [17], showed more generally that

... "luxury" products which are not used, whether as instruments of production or as articles of subsistence, in the production of others ... have no part in the determination of the system. Their role is purely passive. If an invention were to reduce by half the quantity of each of the means of production which are required to produce a unit of "luxury" commodity of this type, the commodity itself would be halved in price, but there would be no further consequences; the price-relations of other products and the rate of profits would remain unaffected. But if such a change occurred in the production of a commodity of the opposite type, which *does* enter the means of production, all prices would be affected and the rate of profit would be changed. [18]

While Sraffa characteristically refrains from adducing examples, nothing conforms so closely to the concept of "luxuries" as arm – which cannot under any circumstances enter the production of other commodities – and certainly nothing can begin to compare in size and significance. Seen from the angle of the system, that is of pure theory, arms production is the key, and seemingly permanent, offset to the tendency of the rate of profit to fall.

But this is only one constraint on the state's freedom to adopt non-military production as a stabiliser – and the less convincing for being argued from first principles. Another, practical one is that arms production has a "domino effect": it starts in one country and then proliferates inexorably throughout the system, compelling the other major economies to enter a competitive arms race, and so pulls the major economies into the stabiliser's sphere of operations.

There is no other way. While the planlessness, or competitiveness, or, as Marx would have it, the "anarchy of production" within each national sphere has been tempered by government intervention, so that the spontaneous decisions of individual capitals are to some extent pre-ordained by decisions covering a wider sphere, internationally anarchy remains very nearly absolute. Except for relatively small economies, there are no coercive authorities more extensive than the nation state. Internationally, the system still performs in the classic manner through constant mutual adjustment by national capitals. This is why so homogeneous a set as the countries of mature western capitalism still need to regulate their relations by means of gold-the very essence of capitalist mysticism about social relations. It is why the even more homogeneous set of East European countries have been unable to do more than inch beyond bilateral trading as a characteristic expression of their mutual relations. The void between competitive reality and the illusion of collaboration even within closely-knit blocks is immense. Between them it is immeasurable.

Under the circumstances any country opting for full employment and stability through productive investments or even unproductive "hole-filling" public works is bound to suffer in world competition. Full employment might be achieved, but it might be achieved in isolation; and the result would almost certainly be a degree of inflation that would prise the single economy out of world markets. For it to endure, the ability of others to undermine it must be contained. In other words, full employment must be exported, and what better compulsion to "buy" it than an external military threat?

This is not to say that an arms budget was ever adopted anywhere as a means of securing an international environment conducive to stability. One can admit that governments usually step up

their arms bills under protest; that the major steps have not necessarily coincided with economic downturns; that, in short, the *situation* has often been seen as unfortunate, restrictive, imposed from outside or whatever; one can admit that the initial plunge into a permanent arms economy was random – without affecting the issue. The important point is that the very existence of national military machines of the current size, however happened upon, both increases the chance of economic stability and compels other- nation states to adapt a definite type of response and behaviour, *which requires no policing* by some overall authority. The sum of these responses constitutes a system whose elements are both interdependent and independent of each other, held together by mutual compulsion – in short, a traditional capitalist system.

Once a part of reality, an arms economy becomes permanent almost of necessity. It is not merely that a system of mutual compulsion through military threat is more imperative than any other but that it becomes difficult to unscramble military and economic competition. As appears to be happening now, with Russia and the United States becoming resigned to adopting frighteningly expensive anti-ballistic missile systems (ABMs), the arms race might have speeded up not for any real increase in military effectiveness, but in order to increase the cost of preparedness for the competitor. As The Times defence correspondent put it, the decision to introduce the systems now available to both sides

... makes sense only if they mean to declare all-out *economic war* against each other, both confident that the basic advantages of their respective economic systems would win in the end; both confident that the pressure of this crippling new weapons burden would cause the other side's economy to break first. [19]

That is between "enemies" as it were. As for relations between "friends", members of the [western] coalition have learned that common defence can be made to stretch beyond common interest and used as a cover- for the particular interests of particular industries in particular countries. A case in point: under the two-year agreement ending 30 June 1967, Germany promised to buy 5,400 million Marks worth of arms and equipment from the United States to offset American expenditure in Germany. With only ten months of the period still to run, orders were still lacking to cover 2,400 million Marks, and "at present no more are in sight." As The Economist points out, Germany's "obligation to buy so much military equipment from America ... constitutes a grave disadvantage to German industry, particularly the aircraft industry." [20]

It also constitutes a grave disadvantage to British industry, forlornly looking for a niche in the German arms market.

There is no need to strain for proof of the permanence of arms as an integral feature of our economies. What finer than the intense competition between and within the blocs in arms sales. The United States have their arms salesman. Our own Labour government has found it possible to appoint a Minister for Disarmament *and* a Head of Defence Sales, the latter – on loan from his own mushrooming arms firm, Racal Electronics – with powers to set up special export lines, to influence design "at the formative stage" [21], to control delivery dates, utilise the diplomatic service and so on. For, explained the Foreign Secretary, "until we can get a widespread measure of disarmament by international agreement, it is reasonable that this country should have a reasonable share of the arms market." [22]

The absorption of arms production as part of the total economy, as essential to its competitiveness, has far-reaching consequences. The arms budget's flexibility as a stabiliser *within* each national economy is set at risk by its mediation *between* national economies. To expand armaments for good national economic reasons invites retaliatory escalation from its peers for equally good *international* reasons. There is no reason for escalation to stop at the point required for stability. Even if the unlikely occurs and it does stop there for one country, it is inconceivable that it would be a point of stability for others, if only because of the different sizes, structures, stages of development, sets of alliances and such like, of the national economies grouped around a common shared military

technology. So that at any one time, some would be favouring a reduction in armaments to safeguard their civilian competitive position, others standing pat and others, perhaps, pushing for further expenditure. The current disarray of NATO, with France withdrawing, the US, Britain and Germany squabbling over support costs and nuclear sharing, the US straining to jack up European arms expenditure and Europe resisting, scarcely requires a different explanation. For that matter, neither does the confusion within the Warsaw Pact, where Rumania is successfully Gaulling Russia.

The existence of an economic limit on arms outlay is crucial to the permanent arms economy. In a *war* economy the limits are set by physical resources and the willingness of the population to endure slaughter and deprivation. In an *arms* economy, the capacity of the economy to compete overall, in destructive potential as well as in more traditional forms, adds a further constraint.

One of the results, paradoxically, is to reduce the compelling force of defence. As it is, it has taken a hard knock from the suicidal nature of much "defence" equipment. But the fact that *limited* preparedness – the sort implicit in a permanent arms economy – does not necessarily draw fire, has not yet done so, makes the setting of these limits the subject of endless debate, particularly for the lesser members of the western coalition who are least able to stand the economic pace. The stage is set for a slow erosion of arms expenditure at the periphery and its increasing concentration at the centre, in our case the United States. The facts are eloquent. Neither Cuba, nor Vietnam, not even "confrontation" has reversed the declining trend in British arms expenditure in real terms since the early 1950s. De Gaulle's *force de frappe* notwithstanding, and despite German rearmament, the United States was steadily increasing its share of NATO countries' total military expenditure even before the vast additions for Vietnam. This is scarcely a stable situation.

The existence of a ceiling on outlay is important for another reason. It provides a massive incentive to increases in productivity (measured in potential megadeaths per dollar) and so leads to the arms industries becoming increasingly specialist and divorced from general engineering practice. As one of the OECD reports already quoted states,

the direct transfer to the civilian sector of products and techniques developed for military and space purposes is very small compared with the total magnitude of military and space Research and Development. Furthermore, the technological requirements of defence and space are diverging from those of civilian industry, which means that the possibilities of such direct transfer would tend to diminish. [23]

Coupled with this specialisation and partly as a consequence, goes a rising capital-and technological intensity in the arms industries. On both counts they become increasingly less able to underpin full employment unless permitted to pierce beyond the limits acceptable to an arms economy.

Closely related is the intractable form unemployment takes in a permanent arms economy. Rapid unplanned – and unplannable – technological change in the arms industries within a ceiling on expenditure creates regional-industrial husks of unemployment that remain grossly insensitive to general fiscal and monetary cures, and unskilled strata unemployable by the high-flying, quick changing technologies in use. Again, high boom in the west is obscuring the point, but the plight of the shipbuilding areas here and in the United States, the problems of the aircraft manufacturing areas in the US, even the problems of the American blacks owe at least something of their intensity to the changing tides of military expenditure and the increasing complexity of production for military use.

Of itself instability is no killer of systems. It can help, by drawing attention to the system as a whole, and so to the possibility of an alternative; or by linking particular oppositions together. In our terms, it can fuse the sense of *personal* alienation and failure, which this society inculcates so liberally, into *class* consciousness and political purpose. Whether it does so depends on the receptivity of workers to ideas of fundamental change. And it is here, in this enhanced receptivity, that the permanent arms economy finds its true limits.

The argument has been set out elsewhere [24] and needs only be summarised here. The permanent arms economy tends to make labour scarce and skills expensive for an individual capital, while simultaneously enlarging the size of the typical capital and concentrating power in a few mighty, predominantly industrial complexes. These firms are forced to consider likely reforms – material concessions to workers – well before they make them, when considering their own long-term plans. At the same time, the state is forced into active management of the economy and into large-scale *productive* employment. Its apparent *political* neutrality wears increasingly thin, its policies become increasingly manifest as capitalist policies, whether as a direct employer, as a member – through the public corporations – of employers' organisations, or as an economic manager of the whole economy. Its uniqueness as an agent of reforms in the above sense is increasingly tarnished by the private sectors activities in that sphere. After all, fringe benefits in industry (that is, private reforms) at 13-14 per cent of wages on average in 1960 [25], compare very favourably with welfare "benefits expenditure" (that is, public reforms) which accounted for 12.6 per cent of consumption expenditure in that year. [26]

The workers' response has been profoundly affected. Realism demands that the battle for reforms be conducted locally, industrially, directly, rather than nationally, political and through the medium of middle-class parliamentary representatives. It is true that realism often substitutes unit solidarity for class solidarity, job-consciousness for class consciousness, a business ethic for the rudiments of a socialist ethic. It is also true that such realism threatens to demolish the upper floors, the traditional class organisations, without waiting for the basement to be enlarged and strengthened. Nonetheless it is a realism that shifts the locus of activity from "over there" to "here", from "them" to "us"; which gnaws at the artificial barriers between class and class organs and at the frequently conflicting loyalties to them.

The potential revolutionary of tomorrow and the active reformist of today are increasingly indistinguishable, while the instabilities of the permanent arms economy ensure that revolution becomes simply a phase in the activities of all sincere reformists.

Notes

1. United Nations, Economic and Social Consequences of Disarmament (New York 1962).

2. United Nations, p.4.

3. United Nations, Table 2-1, pp.55-7. In the UN study, the figures given for Britain are generally lower than in the more detailed report made by the Economist Intelligence Unit a year later, The Economic Effect of Disarmament (London: EIU, 1963). Since the discrepancy is not material to the argument, no attempt is made to adjust the figures here.

4. OECD, Government and Technical Innovation, p.27.

5. EIU, pp.49, 69, 82, and elsewhere in passing.

6. OECD, table, p.30. The EIU gives a figure of 49 per cent for Britain 1958-9 (59.2 per cent in 1955-6) (EIU, p.27)

7. OECD, p.30.

8. OECD, pp.31-2.

9. OECD, Table 3-3, p.65.

10. EIU, pp.22-3.

11. Quoted by J.K. Galbraith, *The Modern Corporation*, 1966 BBC Reith Lectures, n.2, in The Listener, 24 November 1966, p.756.

12. Andrew Shonfield, Modern Capitalism (London: OUP/RIIA, 1966) p.344.

13. Quoted by Shonfield, .344 note.

14. Contemporary Capitalism (London: Gollancz, 1956) pp.239- 46.

15. Karl Marx, Capital, volume 3, chapters 12 and 14.

16. Ladislaus von Bortkiewicz, *On the correction of Marx's Fundamental Theoretical Construction in the Third Volume of Capital*, in Jahrbücher für Nationalökonomie und Statistik, July 1907, translated as an appendix in P.M. Sweezy (ed.), Eugen von Böhm-Bawerk, Karl Marx and the Close of his System and Rudolph Hilferding, Böhm-Bawerk's Criticism of Marx, (New York: Kelly, 1949); and summarised in P.M. Sweezy, The Theory of Capitalist Development (London: Dennis Dobson, 1949) pp.115-25.

17. Sraffa, The Production of Commodities by Means of Commodities (Cambridge 1960).

18. Sraffa, pp.7-8.

19. The Times, 10 May 1966.

20. The Economist, 21 May 1966, pages 809-10.

21. The Times, 12 May 1966.

22. House of Commons report, The Times, 24 May 1966.

23. OECD, p.31.

24. Tony Cliff, *The Economic Roots of Reformism*, in Socialist Review, July 1957, reprinted in Tony Cliff, Neither Washington Nor Moscow (London: Bookmarks 1982); Michael Kidron, Reform and Revolution, in International Socialism, first series, no.7, Winter 1961-62; Tony Cliff and Colin Barker, Incomes policy, Legislation and Shop Stewards (London 1966) chapters 7 and 9; and Colin Barker, *The British Labour Movement*, in International Socialism, first series, no.28, Spring 1967.

25. G.L. Reid and D.J. Robinson, *The Cost of Fringe Benefits in British Industry*, in Reid and Robinson (eds.), Fringe Benefits, Labour Costs and Social Security (London 1965).

26. ILO, The Cost of Social Security 1958-60 (Geneva 1964) Part 2, Table 4, p.249.