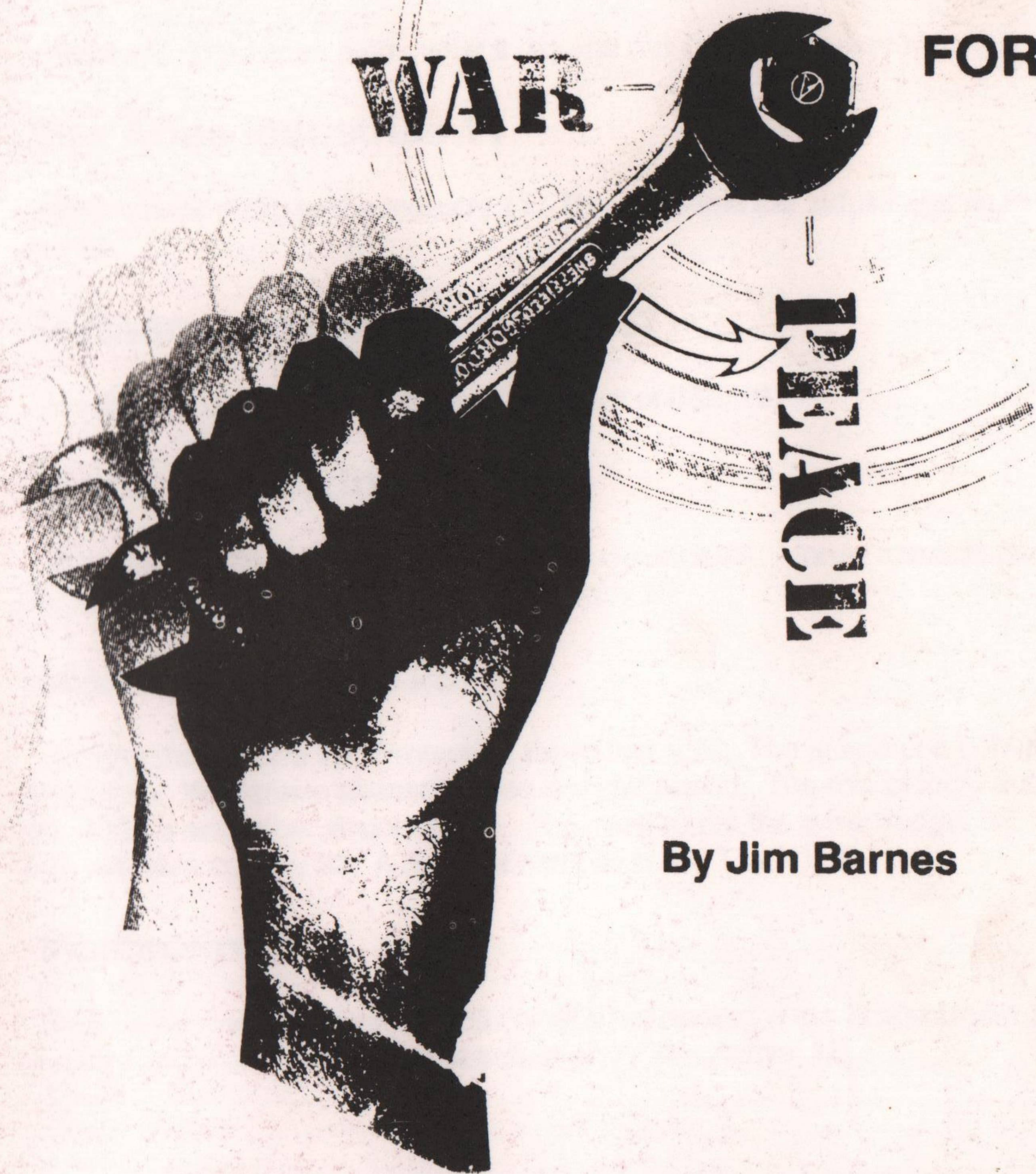


ARMS CONVERSION

FORWARD PLANNING

FOR JOBS



By Jim Barnes

50P

PRODUCED BY TUCND, 162 HOLLOWAY RD, LONDON N7 8DQ



Contents

Introduction 1

Why bother 2, The link between conversion and cutting the arms budget 3

History 6

History 6, The Lucas plan - what it did and didn't do 7, Recent history 9

The Arms industries 11

What's happening to the industry 11, The problems the industry faces in conversion 17

Research and development 22

No spin off on R&D 22, A general problem of R&D 23

Traps we can drop into 25

Regional Aid 25, Limited and alternative defence 25, Money towards good things 26, No pot of gold from reducing inefficiency 26

Making it happen 28

Setting the agenda 28, Protecting the industry 28, The shape of a conversion project 28, Workplace alternative use committees 30, The role of local authorities 30, JSSC's and other structures 31, The need to cut the arms budget 32, R&D 32, A conversion agency 33, A national campaign 33, The NTUDCC 34

Postscript 34

What's happening in the USA 35, What's happening in the Soviet Union 36, Morality and working in the arms industry 37, The Author 38

ARMS CONVERSION

FORWARD PLANNING FOR JOBS

INTRODUCTION

There is no such thing as an expert in Arms Conversion. There can't be, the last time there was any major shift away from arms production to producing non military products was so long ago that those involved with the planning of it are more than likely dead by now. What follows, therefore, is an argument for a particular approach to the arms industry in relation to the rest of our economy based on what is happening now - and here in Britain. That isn't to say, however, the argument has been conjured up from nothing, far from it. The argument is based on experience within the trade union movement and on the campaign to encourage arms conversion over a number of years.

There are a couple of things worth bearing in mind when looking at arms conversion now and in Britain. One is that the scale of Britain's defence industries is such that arms conversion for Britain is a different issue than it is for most other European countries. The measures we, as trade unionists, should be advocating are, therefore, coloured by that difference. The reasons why this is the case should become apparent in what follows. The other is that the withering away of the cold war has left us with a somewhat different set of circumstances than the end of the first world war, the second world war and the Vietnam war. Conversion was seen then by trade unionists as a way of resolving some of the problems facing society and industry.

Most peace movement campaigners have heard of the Shop Stewards alternative plan for Lucas Aerospace and most think that it must be a good idea but that only a few have a fuller appreciation of Arms Conversion than this. Similarly many people working in the arms industries consider Conversion to be a nice idea but impractical and promoted by well meaning people who have little appreciation of the dynamics of industry. In both of these cases this is only part of the picture. It is to the shortcomings in both groups ideas of Arms Conversion that this pamphlet is addressed

WHY BOTHER

The arms industry in Britain represents a huge proportion of our manufacturing output. One in ten people working in manufacturing work on military production. It accounts for 13% of our manufacturing output. These industries are now seriously threatened because of a range of factors, some of which are referred to below. One of TUCND News' readers recently wrote, in response to an article on Britain's tank industry, saying we should let the industry die as it serves no rational purpose within our economy. This view, although not often expressed, is far more prevalent than one would expect. Some people who hold that view see Arms Conversion as a way of placating the people working in the industry. Traditionally, people working in the arms industries have supported the arms race politically in order that it should continue to provide work in their communities. Arguing for Arms Conversion has been seen as a way of undermining that political support for the arms race. But if this really is all it means then it is unlikely that the policy of arms conversion will ever have any impact.

A sudden collapse of a section as large as the arms industries would very seriously damage the whole of our economy. Added to this, arms production has tended to concentrate upon certain sectors of manufacturing industry. The non military production in some industries has been reduced to the point where arms production dominates. In some cases arms production is all that remains of what used to be a large scale and diverse industry. But the resources that such an industry consists of, the people, the machines, the skill base and the production facilities could be used for other things, complementing other areas of industry.

The electronics sector, for instance, is heavily dependent on military production and so other non electronics companies have suffered as a result. Britain used to have a thriving machine tool industry which provided a market for steel, a source of skilled labour, a source of expertise for other areas of mass production in both materials and in production processes. With the advent of 'Numerical Control' machines (NC machines), which are computer controlled and often multi functional machine tools, Britain's machine tool industry withered and died. There were a number of factors in this process but a particularly important one was the absence of the ability to develop the control mechanisms for this new generation of machine tools. The companies involved in developing computer control in Britain were either involved in military production or simply didn't have the level of sophistication required to be able to provide equipment competitive with that produced in Japan or the United States.

In Japan there are incentives given by government to companies to research this type of technology. For instance one of the incentives is tax relief on money spent on civilian research and development. This doesn't happen here. So when this technology became important for machine tools it simply wasn't readily available. Britain

spends a huge proportion of its government funded research on weapons whereas our competitors devote much of theirs to civilian applications. Given we have limited research resources and given we devote the lion's share to the military, clearly civilian research will suffer. This is one example of a process whereby the rest of industry has suffered because of the role of arms production in our economy. The moral of this story is that we need what the arms industry represents if we are to develop as an industrial manufacturing economy.

Arms Conversion is not act of charity. India spends more on civilian space research than does Britain and they consider this money well spent because of the information about the weather, crop development, pest distribution, the distribution of mineral resources, the level of deforestation, soil erosion etc. gained from satellite information.

None of us, in or out of the arms industries, can afford to have these industries simply dumped, which is what will happen unless Arms Conversion is seen as a credible alternative to working for the arms race. We can't afford to lose those industries.

THE LINK BETWEEN ARMS CONVERSION AND REDUCING THE DEFENCE BUDGET

Britain's economy is grossly distorted. We have spent considerably more of our GDP on arms for the past 30 years or so than our industrial competitors, with the exception of the US. This is in a world where our primary industrial competitors have invested money systematically in other areas of their economy and have achieved a level of industrial performance which Britain can no longer compete with. Our level of investment in arms contrasts sharply with Japan who have had a defence budget of around 1% of their GDP for the same time and have invested systematically in basic industrial support. Japan's GDP is now very considerably larger than Britain's.

One of the few groups of ordinary working people that the Conservative Party have been able to gain support from for their policy of promoting the arms race from in this period have been people working in or associated with the arms industry. Prior to the 1986 general election the Labour Party did an extensive report on the way they felt that the dependency on defence of a number of key constituencies had effected their chances of being elected. The Labour Party central office appeared to calculate that since a huge proportion of military equipment that the government buys is from companies in the South East and that the South East was the area in which they had the greatest difficulty in winning seats, the Labour Party had to be seen to be supportive of the defence industries.

So because arms workers are worried about their jobs they are reluctant to support disarmament measures. But unless they begin to do so a considerable obstacle will

remain to disarmament in Britain. Arms Conversion is a feasible proposition in that there is no real shortage of products that the arms industry could be engaged in producing. What there is, however, is a lack of support for the areas that the arms industry could produce for. For instance much of the arms industry is involved in heavy engineering. That industry's production relates to our industrial infrastructure and not so much to consumer production. For people working in the tank industry to be convinced that they can have a secure future making tractors there has to be some government investment in the areas that use tractors. The fact that a plant building earth moving caterpillar tractors, the type of thing that tank factories have built in the past, has just been shut down because of a lack of orders, is not lost on them.

The phrase 'tanks into tractors' came about because, apart from the fact it rhymes, some tank builders did precisely that with surplus tanks. Also, in the 1960's Vickers on Tyneside began building heavy earthmoving, caterpillar tracked, tractors in their tank factory using many of the tank parts in the tractors. They were not a success. If you ever get to talk to any of the engineers involved in that project they tend to twitch and explain in detail what went wrong with the project and how it wasn't their fault. It is however a very pertinent phrase. That tractor was used quite considerably in the third world building roads etc so the concept was clearly a workable one. Apparently it had a large heavy casting around the radiator and so apparently you could knock trees down simply by bumping into them - or so the story goes.

In 1988 Britain agreed to loan Malaysia a billion pounds with which to buy military equipment from Britain, much of it heavy machinery such as artillery. There is no logical reason why we couldn't have loaned them a billion pounds to buy the where-with-all to build a road and rail infrastructure. In those circumstances it would be very sensible for Vickers to again begin building the type of heavy tractors needed for such work instead of the Howitzers Malaysia will be using on Malaysians.

The argument that we need to invest in the industrial infrastructure has to be promoted if the support of people associated with the arms industry is to be gained and if attempts to use them as political support for continuing the arms race is to be undermined. Unless we make the case for reducing the arms budget forcefully then investment in other areas of the economy will not be feasible. Unless people associated with the arms industry are convinced Arms Conversion is feasible then reducing the burden of defence on the economy will be difficult in the face of their continued support for the arms race. Thus making it politically possible to reduce the arms bill depends at least in part on the political support of the people in the arms industry.

The two things, arms conversion and reducing the burden of the defence budget, are not inseparable. The arms bill could be reduced without retaining or protecting the industries concerned although it would prove very difficult to shift production

without systematic government support. There are other areas of the economy which desperately need government investment, such as housing and the NHS, which would have relatively little to offer in terms of jobs for those currently employed in the arms industry. But again investment in those areas will not happen unless the problem of the political support for the arms race by the large numbers of trade unionists who work in the arms industry is addressed. The survey of marginal seats the Labour Party conducted before the 1986 election indicated to them that a large number of those marginal, winnable seats had a heavy dependency on manufacturing arms.

To get the Labour Party's paranoia on defence into perspective you have to bear in mind that 47% of all the equipment bought by the MOD is made by firms in the South East and that's where the strongest support for the Tory Party comes from.

HISTORY

HISTORY OF THE ISSUE

Contemporary conversion issues differ from when it has been raised in the past; military technology is now more sharply diverged from civilian technology than before and there have been enormous changes both in the national economic framework and in what is expected of the government. Nevertheless we can learn from previous experiences of conversion. Firstly, conversion need not mean job losses, secondly, armaments workers have been known to support conversion, thirdly, conversion is determined by political strategy and is not technologically driven, and fourthly, it is important to keep the issues on the agenda, to be prepared for whenever opportunities for arms conversion arise.

From the beginning of the British state arms industry in Tudor times up until about a century ago there was a degree of stability about working for the munitions industry. Numbers rose during wartime but there was always a core of skilled munition workers in war and peace. When an increasing percentage of arms orders went to the private sector, from the 1880s onwards, the old system of assured work began to disintegrate and the rivalry between the state and the private sector commenced in earnest.

The private sector could convert fairly easily from non-munitions work to munitions production, but the profits were in weapons making. During the Boer War (1900-02) arms production soared, only to dive when peace was declared. Workers in the private sector were worried about their work, but workers in the state sectors, which were barred from alternative production in case it was more competitive than the private sector were even worse off. Many were forced to emigrate. State munitions workers in Woolwich Arsenal campaigned to be allowed to make alternative products. A government committee looked into the matter and workers explained in detail the feasibility of conversion. However the government, under pressure from the private sector, preferred the skilled workforce to be dispersed and the machinery to go idle rather than allow the Arsenal to make anything except munitions.

During the First World War (1914-18) once again arms production rose. The private sector firms were so inefficient that there was a serious shell shortage and the state took over the running of the arms industry. In the interests of efficiency many other economic activities were run by the government, such as the railways and shipping, while food and labour were controlled. After the war many of the workers wanted to continue to work for the state but the Treasury and the City had other plans. They

forced the government to sell or to return to private hands many of the 'national factories'. Workers at the Enfield Royal Small Arms Factory and at Waddon argued for alternative work. The Woolwich Arsenal shop stewards, determined not to suffer as they had after the Boer War, produced an alternative plan setting out how the workshops could be utilised in peacetime. The workforce built on their previous experience, gained the support of the local council and Woolwich Chamber of Commerce, lobbied the Prime Minister and were rewarded with thousands of pounds worth of orders for items needed for reconstruction. Private firms and Tory MPs were worried by the idea of efficient production in the public sector. More workers lost their jobs, governmental fears of a popular uprising subsided and by the mid twenties all the alternative work had ceased. It appeared that Arms Conversion prevented further job losses, was practical, popular and technically feasible but was politically unacceptable.

Planning for reconstruction commenced during the course of the 1939-45 war and the 1945 government did not drop all its controls over labour and over some industries as abruptly as the 1919 government had done. Seven million people were demobilised in 16 months and in a single year employment in the war industries dropped from 12 million to one million. Unlike after the 1914-18 war unemployment did not rise above 4%. The relatively smooth economic adjustment owed a great deal to state planning. A similar story can be told about the other allies, the USSR and the USA.

Since the 2nd World War Britain has not experienced a sharp dislocation, unlike the US where there were cuts of 35% in constant price terms between 1968 and 1976 and the number of jobs in the arms industries halved from 3.2 million to 1.4 million. Once again planning (Project Transition) meant that unemployment did not increase. More recently there has been an attempt to get American firms to diversify and even to write this into government arms contracts. The strength of the military industrial complex is such that such plans have so far met with little success, but they have kept the issue on the agenda. In the wake of events in eastern Europe conversion is again being reconsidered and there is a lobby pressing for conversion which may now gain considerably more support.

THE LUCAS PLAN - WHAT IT DID AND DIDN'T DO

The Labour Party won the general election in 1974 on a platform of cuts in defence expenditure - with a bit of help from the miners. A meeting was held which included some shop stewards from Lucas Aerospace, based on the question 'what was the government's attitude to the jobs of the people who got them into power' ie people working in the arms industries. At the meeting the then industry minister Tony Benn said that the workers should not wait for the defence cuts to come but should begin immediately to look for alternatives to arms production. It was assumed that the

Labour Party would honour their election commitment to cut the arms budget and that those cuts were imminent.

The Joint Shop Stewards Committees (JSSCs) national combine for Lucas decided to look at their industry systematically. It should be remembered that this was not initially a conversion project; they were interested in preserving jobs in their workplace and arms conversion developed as a part of that strategy. They asked the workforce to look at the machines they had available and consider what could be built using their skills and the company's equipment. They had a huge number of responses, some less practical than others. They sifted them carefully and narrowed the list down to a hundred or so projects that they thought would be practical, commercial propositions. All of those included in the set of proposals, to be raised later with their management, were technically feasible.

Two which most people have heard of are the Kidney Dialysis machine and the road rail bus. The idea for the kidney machine came from one of the workers who had a relative on a dialysis machine and thought it would be possible to build a machine which would be considerably cheaper, therefore making dialysis available to more people with damaged kidneys. The one they developed was, in fact, considerably cheaper. The idea behind the road rail bus was principally to develop a cheap form of light train which could be used off the rails as well as on. The concept of light rolling stock built in the same way as road transport for the railway has since been taken up by the rail network in Britain and many different forms are now in service. Mercedes Benz now build a version of the road rail bus and a company called Brough build a similar vehicle in Britain for track maintenance use.

There were lots of other very good and practical ideas some, of which were developed into working prototypes. The plan overall broke down into a number of areas including medical equipment, oceanics, robotics, braking systems, transport systems and alternative energy sources.

The company, however, were not prepared even to consider any of the proposals. At the time the magazine Industrial Management said of the alternative plan that all of the proposals were technically feasible. It also said that if the Lucas management didn't have the common sense to at least study the alternatives the workforce had demonstrated it was capable of running the company without them.

For the workforce the major achievement of the plan was that it gave the JSSC combine a very powerful argument when they were in negotiations with the management over redundancies. Each time redundancies were raised the JSSC combine reached for a copy of the alternative plan.

The relationship between the JSSC combine and some of their respective unions has been described as 'uneasy'. Thus the concept, that the resources of the arms in-

dustry should be used to produce for the good of humanity and that this was a solution to the problem of contraction in the industry facing the workers, was not developed into a national campaign. A point worth noting here is that although all the stewards held credentials within their own union, neither the shop stewards committees in each of the plants or the JSSC hold any official status within the trade union movement. Their activities, as the JSSC, were funded largely from the stewards own efforts. It would make sense in a world where multinational companies are the norm, that such national combines were encouraged and given the resources and support to function effectively.

It should be remembered when looking at the role the Lucas Plan played in the development of the issue that it happened while Tony Benn was the responsible minister and against a background of a much lower unemployment rate than we have experienced in Britain for the past seven years. It should also be remembered that it was set up as a way of defending jobs and that because of the way it was used in negotiations with the management of Lucas it was very effective in doing that. Having said that, important lessons for the trade union movement could be learned from the experiences of the JSSC at the time.

RECENT HISTORY

One result of the Lucas JSSC Alternative Plan was that, as it has slowly become apparent that the arms industry is unstable and that the number of jobs in it is steadily declining, arms conversion could represent an important political movement.

One thing people working in factories facing redundancies often have difficulty in finding is the sort of expertise necessary to carefully examine the plant as a productive resource so that they can then look at how that resources could be re-orientated to fill a need within the civil economy. A number of organisations were set up in the early 80's to try and do precisely that for workers in this situation. The GLC funded a worker to run the Greater London Conversion Council (GLCC). Strathclyde council funded the Alternative Employment Study Group (AESG) based in Dumbarton to look at the Clyde. The Scottish TUC also put money into the AESG. Some local authority money was put into CARE in Coventry and CND, together with the Rowntree Trust, funded research into alternative work at Barrow.

All of these groups were funded through voluntary organisations or through local councils. The tenuous nature of that funding meant that all related their work closely to their funding agencies. Thus, regardless of how committed the people working in these groups were to the idea of Arms Conversion being a national and political campaign issue, it did not develop as such from their work. Activity around arms conversion therefore remained within the confines of the particular projects and their funding agencies.

What these organisations did do, however, was to provide a very much needed service to people working in the industry who wanted to see how their factory, or shipyard could be used for other things. How good they were can be seen in a comparison with studies carried out by industrial consultants for companies and in one case for a group of workers. For instance a study, paid for jointly by BAe and Gateshead council, was carried out by one company at Royal Ordnance, Birtly (it cost £36,000). Of the several suggestions this report drew up many were not felt by either the management or the workforce to have any real practical application. For example, one suggestion was to use the parking facilities at the ROF as a secure overnight lock up for long distance lorries. The factory is guarded by armed MOD police because of the ordinance material present on site. A number of people pointed out a number of problems with this.

One good idea that came from that report was to produce gas bottles using very similar technology to that used to produce shell casings. This was certainly a practical proposition. The problem the factory faced, however, was not in producing such things but in marketing them and in managing their marketing. This problem, of marketing a new product outside of the area the company normally functions in is a serious one for industries moving from the military to the civilian market place.

Organisations like the GLCC on the other hand were able to produce well organised reports on particular plants somewhat cheaper than firms of industrial consultants, and were sufficiently well versed in the area to take into account the need to have a product that was marketable with the skills available in the company concerned. In other words they did it better and cheaper.

This type of facility is not now available because most of these organisations have lost their funding.

THE ARMS INDUSTRIES

WHAT'S HAPPENING TO THE INDUSTRIES

A number of prominent trade unionists in almost all of the unions with members dependent on defence production have for some time been forecasting serious problems developing for Britain's arms industries. This is why they have also consistently argued for Arms Conversion. The problems facing the industry have little to do with the effects of the events in Eastern Europe. What has happened to the Warsaw Pact has brought these problems sharply into the public view and has accelerated their pace, but they were there already.

There is a process in the arms race which leads it toward ever more sophisticated equipment which means that arms cost more and employ fewer people to make them. The costs involved have led the government to put pressure on the manufacturer to rationalise, which exacerbates the situation further. Between 1963 and 1978 the arms industry lost 250,000 jobs while between 1963 and 1984 the figure is 600,000 so clearly the loss is accelerating. Below are some of the reasons why jobs are being lost in the arms industries.

1) Privatisation:-

The government have insisted upon the privatisation of the publicly owned section of the arms industry, the Royal Ordnance factories (ROF's) and the Royal Dockyards. This has meant considerable numbers of jobs going and a number of plants being shut down altogether. British Aerospace, for instance, bought the Royal Ordnance Factories (ROF's) for about £190 million. The ROF's made about £30 million in the year before the sale. The land on which the Enfield small arms factory was based was later valued at £150 million. British Aerospace rapidly moved to close the factory and to prepare to sell the land. The current plan for the land is to redevelop the site leaving it with a selling price rumoured to be as high as £600 million. The government National Audit Office have estimated the value of the Enfield site at something in excess of £400 million. Although rumours abound and the figures vary depending on who you talk to, what is clear is that BAe have a considerable incentive to close the south of England sites, some of which have considerable amounts of land with them in the form of runways etc.

Having privatised the ROF's the government imposed stringent cost cutting measures on the armaments contracts they gave out. For instance, they cut the price they were prepared to pay for some small arms ammunition substantially. In effect they passed the buck for responsibility for the redundancies, closures, increase

in work-rate etc on to British Aerospace management. Accusing them of asset stripping in these circumstances is unlikely to offend BAe management. Whether or not BAe are ruthless capitalists is not relevant here because asset stripping is exactly what you expect a commercial company to do in the circumstances the government created.

2) Developing Technology:-

In one machine shop in the north east which used to employ 40 men, three of whom were labourers. Today there are 5 people (two are labourers) working two Machining Centres, and a computer controlled Lathe. A Machining Centre is a very versatile and expensive computer controlled machine. These are referred to as Numerical Controlled (NC) machines. All three machines were built in Japan. This has happened in the space of about 10 years. That machine shop is not untypical as an example of what is happening to the engineering industry. A fair calculation is that for each NC machine tool introduced into a machine shop you lose 7 jobs if the work rate remains the same.

The same technological advance is happening in most of the defence related industries not only in the production process but also in the design of weapons themselves. Weapons cost more to make and employ less people to make them.

It costs the same to design a helicopter if the production run is 250, which is what Westland regarded the MOD market, as for 3,000 which is what the United States military machine used. That means that the Research and Development cost can be spread over a much greater production run in the United States. That means they can make things cheaper, or at least make more profit from the same price.

This has led to a process of consolidation amongst producers. Since the late 70's there have been considerable numbers of mergers and take overs and workers have been shed fairly systematically. In the US for instance only the Newport News shipyard builds aircraft carriers, only a couple of companies make military aircraft engines, only one company is left capable of casting the cupola for tank turrets, and there is only one company capable of building Trident submarines (The General Dynamics - Electric Boat Company). General Dynamics is also now the only company in the US that makes heavy tanks. What has recently happened to Ferranti is not untypical of the process; it has left only one company in Britain building Radar.

But this process of consolidation, and the pressure for it, is international: when companies try for export orders they have to compete with other firms in other countries for those orders. Britain competes with France and China as to be the third largest exporter of arms, after the US and the Soviet Union. We depend on exports to keep up the production numbers to make our own arms competitive. If we can't export, we can't make them. This, however, still doesn't get us over the fact that we have an inherent disadvantage in the competition with United States producers. They

still have a huge home market compared with the one Britain's arms industry service. It is only a question of time, therefore, before serious inroads are made into our share of the export market.

One of the problems with basing weapons on advanced developing technology is that they are always open to being countered by considerably cheaper methods. A relatively cheap anti-tank missile, for instance, can destroy an extremely expensive tank. Phenomenally expensive aircraft can be brought down by a hand held missile that could cost as little at £5,000 or £10,000. (Britain is one of the foremost countries in developing these missiles and supplied many used by the Muslim fundamentalists Afghanistan). A brilliant example of the vulnerability of obsolescence for large defence systems is Trident. Britain hasn't built any yet although we have spent a fortune on it. However, according to the New Scientist in April 1989, the next generation of submarines will be much smaller than a nuclear submarine and powered by a closed circuit diesel engine, of the type now being tested by the Italian Navy. They will be considerably cheaper to build, maintain and to use. Thus Trident's glittering finery in military terms may well be a testament to our own lack of military foresight.

3) Changes in government tendering:-

Once upon a time the government would buy weapons systems from their developers on a cost plus basis. The production cost of a particular type of equipment was assessed and the manufacturer given a percentage on top of that for producing it. Now, for most equipment, the MOD requires a company to tender a price for a job and to re-tender for orders for the same equipment, together with other companies, every two years. The result is that companies judge their returns on a two year period and structure themselves to cope with a two year cycle. The process encourages a lack of stability and a transitory attitude to design and production. It also makes the manufacturer struggle to keep costs to the minimum. Traditionally this type of cost cutting exercise has taken place at the expense of jobs, pay and conditions.

4) Consolidation of the transatlantic market:-

For the past 10 years there has been a steady process of developing a unified arms market and a unified arms production capacity between the United States and Britain. What happened to Nimrod and to Westlands was a part of that process. The US ambassador to NATO, Mr Taft, recently said that it would be wonderful if we could involve East Asia in the process too. Now one of the reasons why some other-wise progressive trade unionists were keen to see the European Fighter Aircraft (EFA) developed was because they felt that this would be a way of preventing the United States systematically dominating the whole range of aircraft design and production technologies. Many in the US on the other hand are privately not so keen to see a unified market developed for the same reasons as there has been a great deal of resistance by the US to Japan developing a fighter aircraft independently of

the US. The arms market is a shrinking, ever more aggressive world where the people with access to a large market have the advantage. This is regardless of how sleek or fit the company may be. Unifying, consolidating or 'joining forces on design purchasing and manufacturing', as Mr Taft put it, sounds rather like having a bath with a 7 ft piranha, all right as long as your the piranha.

5) The third world arms market:-

Perhaps the saddest and most reprehensible aspect of the arms industry is the export market for arms. The export market, some of which is to the third world, is also perhaps the area of greatest and systematic government support. A substantial part of the Royal Navy's role is as salesperson for weapons to all manner of governments. Britain, for instance, signed a deal with the Malaysian government in 1988 to sell 12 Tornado's together with howitzers, missiles, ground support systems etc. Britain loaned the Malaysian government £1 billion to do this. Malaysia, however, has a disturbing record of torturing it's own citizens and is not well known for promoting democracy. Britain has almost made a tradition of supporting such regimes. For instance, David Owen, while he was foreign secretary was, quite supportive of the idea of selling tanks to the Shah of Iran, who was also not noted for his record of defending human rights. Mr Owen was dismissive of the argument that we shouldn't supply the tanks because of that record. This has been a consistent trait in successive British governments, regardless of the party.

The Shah's fall badly affected the North East, where Vickers had an order for 500 tanks from the Shah. The new regime were not inclined to honour the order. The recent abandonment of the contract to buy Tornado's by Malaysia rather underlines the point. The Third world market has instability built into it. It depends on there being conflict and tension in third world countries. Just how unstable the market is can be seen by the fact that in 1986, a record year for our overseas sales, 50% of our sales were to just one country, Saudi Arabia. This means that a huge amount of production was destined for a government at odds with it's own population and thus inherently unstable. In 1986 Britain for a little while became the second largest exporter of arms largely because of the Saudi Arabian deal.

This government has developed and expanded a process, started by the last Labour Government, of encouraging the sale of arms abroad. Arms sales is now a large section in the MOD. A third of the export market for arms is with developing nations. Three quarters of Britain's arms exports go to the Third World. Some arms firms are now lobbying for more support from government for their efforts to sell arms abroad because of the shrinking arms market.

This market has remained static at around £40 billion since it peaked at £50 Billion in 1982. In other words we are competing in a market which has more or less reached its capacity and where instability is the norm. Were those regimes not unstable they would not feel the need for such substantial outlay on arms.

There are a number of factors to take into account that will affect this market:

* The decreasing arms budget in other western countries - West Germany and a number of other arms importing countries are cutting back their defence budgets. The United States may well be forced by popular pressure to cut theirs. All this will make the market a much more aggressive place for exporters with big producers looking for orders from countries they may not have bothered with before. General Dynamics are searching for export orders for their tanks because of the cut in the US. Britain has an inherent disadvantage of size compared to some of our US competitors and all this means that our sales abroad are under threat.

* Many of our third world customers are developing their own production facilities. This is especially so in the labour intensive areas where more jobs are created relative to the expenditure, for instance in small arms and small arms ammunition. These include Brazil, India, Pakistan, Iraq etc, all of which feel the need to produce more at home.

* A number of developed countries may well sell off surplus equipment to developing nations. The United States for instance has agreed to supply Egypt with 700 surplus tanks - free. Egypt may have been looking to buy new tanks had they not been supplied these second hand ones from the US. The US companies will also be in line for substantial orders for parts and ammunition for these tanks, which would have been part of the deal had Egypt bought new tanks from other countries.

At this stage it is worth remembering that the state of our home market depends on these exports. Larger production runs for weapons systems such as the Tornado means the development costs are spread further. We can afford Tornados because there are lots being produced. If the market abroad for them goes, the price to us jumps. So we lose the export market and get stuck with rapidly spiralling costs. The United States have cut the number of Abrams Tanks they intend to buy. This means that the cost per tank has gone from \$1.8 million to \$3 million each. The agreement to sell tanks to Saudi Arabia brought the price down again to around the \$2 million mark.

At this stage I should stress that this last point - the cost of weapons to our government depends on our ability to export - is controversial. Although most of the industry itself sees it in these terms, it is not accepted by the Campaign Against the Arms Trade. They argue that the cost of modifications to fit the requirements of other countries is such that the saving on development costs, through increases in production runs, is discounted. They also regard it as unhelpful in the campaign to reduce arms exports to assert that exports increase the profit margins for arms companies in Britain. They asked me, if I wasn't going to omit the point from this pamphlet to stress that they disagreed with it.

6) Nuclear Weapons:-

The cost of maintaining a Nuclear Defence posture is spiralling upwards. Even this government believe there is a limit to what people in Britain will bear in terms of the strain placed on public expenditure by the defence budget. Other areas of government expenditure are either being reduced or remain the same and government income is not being increased. So money is clearly being leached away from other areas of government spending to maintain the defence budget. For instance, the proportion of the arms budget that goes on the procurement of these very expensive nuclear systems has increased at the expense of other areas such as the procurement of conventional weapons. The cost of the nuclear weapons systems themselves together with their related equipment is going up faster than the standard rate of inflation. This is even notwithstanding the inconsistencies in the governments figures for the actual cost. (For instance the reported cost of Trident has remained the same for the past four years, while additions have been made to the system, and serious problems in both the design and the production of the system have shown themselves).

Added to which it does not take many people to build nuclear weapons. For a given amount of money they employ less than other weapons systems. For instance, when Trident was first ordered it was said that it would employ 45,000 people in building it. The latest figures are that 7,500 are employed directly and a further 7,000 indirectly. About 50% of the cost of Trident is being spent in the United States, and so produces no work in this country. Therefore nuclear weapons can be seen as eating into a large proportion of the procurement budget and yet are very poor at creating jobs.

7) Concentrating on arms production damages the arms industries:-

This sounds like a contradiction but in fact isn't. Because Britain has consistently spent a very large proportion of our GDP on producing weapons, other part of our industry upon which defence production depends, have suffered. Thus, our capacity to produce particular types of war material has been undermined.

For example, high accuracy machine tools are regarded as one of the key components in producing sophisticated military equipment. One of the few countries which produce such equipment is Japan; Britain does not for the reasons already stated.

The warship yards in Newcastle used to be able to depend on merchant shipbuilding for a stable pool of skilled labour. Merchant shipbuilding has gone, the capacity of the engineering industry in the area reduced and so the flexibility, skill resource, subcontractor's capacity, size of the design teams available etc. have all been eroded. It seemed to happen so quickly that it's as if it simply slipped away in a moment when we weren't looking.

Something similar is true of other aspects of the defence industries. For instance, the Far Eastern electronics industry is technologically the most advanced. It leads the defence electronics industries, partly because of the long lead time in developing systems for defence and because of the inhibiting effect of the secrecy surrounding their production. Far Eastern companies have built up their capacity and the expertise over a number of years in the civilian market. A number of years ago the United States got quite hot under the collar because video games machines (the type found in pubs) were rumoured to be technologically more sophisticated in their simulations than the real thing going into US weapons systems. The Russians were thought to be buying up these machines on the quiet. For instance, the simulation of missile targeting in these machines was rumoured to be more advanced than that being put into some military aircraft.

So Japan may well be better able to produce sophisticated electronic equipment for weapons systems than Britain because Japan has devoted its electronic technology research to developing basic science and developing technological capacity for its industry overall, rather than concentrating upon the specialised area of weapons design. Japan is now proposing to start developing sophisticated fighter aircraft which will presumably compete for orders with the British aircraft industry.

Concentrating on weapons doesn't, therefore, in the long term necessarily leave you in the lead in weapons.

PROBLEMS THE ARMS INDUSTRY FACES IN CONVERSION

1) Work Practice:-

At the conference organised by the NTUDCC in Manchester in 1986 someone from one of the Naval Dockyards described the way that, because the defence industry has such exact standards, it is very difficult to relate the skills and the practice within the industry to producing for the civilian market. He gave an example where producing a picture frame in the joinery shop in the shipyard was costed at £200. He concluded that it would not be feasible to use the skills and the workforce to produce for the civilian market. He was of course 100% correct; only an idiot or a very rich person would pay £200 for a frame when £20 would be normally regarded as excessively expensive.

He was pointing to a problem which will have to be overcome if these workplaces are to survive in the civilian market place. The 'Cost Plus' meant there was no incentive to keep the cost of production to reasonable levels. It wasn't the joiners fault that it cost £200 for him to make a picture frame, it was the inability of the management to follow or understand the process by which they got people working in the shipyard to work efficiently. This in turn arose because of the long tradition of simply

having made what was felt needed to be made regardless of the cost. The sluggish, unimaginative way such places were controlled is a problem that the workforce will have to address now and, because of the current climate in the MOD, even if they continue producing arms. Efficient management practice does not mean stopping tea breaks, stopping people going to the toilet or trying to prove to the workforce what hard chaps you are; it means planning the work effectively and utilising the human resources efficiently.

2) Gold Plating:-

'Gold plating' means the type of processes used in some parts of the defence industries are not the ones that would be used in producing for the civilian market.

Military aircraft have considerable physical demands made upon them. The cost of failure in military equipment may well be measured in peoples live and, in the case of something like a nuclear submarines, possibly hundreds of thousands of lives. So there is a tradition within the defence industry of producing weapons and military equipment to very exacting standards. Standards which are inappropriate to the civilian market. So, for instance, the threads on bolts destined for submarines may well be rolled rather than cut into the bolt.

The quality of finish, the type of coating materials etc. may be wholly inappropriate for the non military market. However, it may be that for a factory or shipyard to survive, problems such as this just simply have not got to be allowed to get in the way. The people working in these industries are often skilled, sometimes highly skilled, people who can generalise on those skills and apply them to a range of quite different situations so long as they feel that doing so is worth doing. This is why involving the trade union membership at every stage in the development of the project is very important in trying to get a conversion project off the ground in a particular plant.

'The best possible', however, makes sense when you are dealing with nuclear reactors in nuclear submarines. Gold plating isn't some sort of immoral practice sanctioned by profligate civil servants and practised by manufacturers as a way of inflating profits. Some politicians point to gold plating as an area where significant savings can be made in arms production. It is difficult to see, however, how that would be possible without increasing the risk of serious accidents. The problem lies in the idea that we need the type of equipment where the cost of failure is so horrendous we have to use the 'best possible'.

3) Old Machines:-

The tradition within British industry of investing the bare minimum and squeezing the last drop out of plant, equipment and the workforce is certainly applicable to the arms industry and especially true of the once state-owned arms industry. Some of

the equipment in the ROF's when they were sold to BAe was certainly startlingly archaic. It's odd that in industries which are producing to such exact standards and often producing material that is technologically the state of the art, that they should be doing it with equipment that should have been laid to rest a couple of decades ago at least.

Although not true of all arms producers, in some plants some of the machines used are so old fashioned that introducing new plant can and will be a painful process. The new skills involved however should not present a major obstacle but bringing in a NC machine tool could well mean seven jobs go from the machine shop. Whether the displaced machinists are redeployed or made redundant is a matter for the JSSC to see what they feel is fit and what they can negotiate and it is certainly not a process I envy them being involved in. But arms industry workplaces are in an extremely vulnerable position if the management and the workforce are complacent about replacing old plant. Even if they have a full order book the medium to long term future of the plant will be problematic so long as the firm remains dependent upon arms production. The industry has to be brought to a position where it can function effectively in the civilian market as a whole. It is difficult to see how this is possible unless they invest in modern equipment.

4) Management and marketing:-

There are two aspects to the way management affects the industry. Firstly, the arms industry has until relatively recently been run by people who liked producing weapons, often retired service people. The relationship between the industry and government learnt itself to this. However this often lead to less than competent managers, engineers and businessmen in charge of the company. Secondly, a very different problem to do with management is the fact that because they were selling predominantly to one customer they never developed the ability to function in the market place. For example, Britain's prominent position as an arms exporter has been achieved with the considerable help of HM Government who have quite nakedly acted as a broker for the British arms industry throughout the world. This means that unless the government is going to do the same for civilian production, those companies simply will not have the marketing ability available to be able to compete in the international market. The same applies to producing for the home market. Working out what mechanisms you need to set up in the company to organise distribution and sales of the things you might produce is not something the British Arms industry has a great deal of knowledge of and that means they will not be competitive unless they learn.

5) Scale:-

There are roughly 200 grade A welders in the Barrow shipyard working on Trident. They can each produce about 30ft of weld a day. That means they can produce between 30,000 and 35,000 ft of weld a week. If conversion is to be a realistic possibility

for the shipyard at Barrow then what is proposed for it to do will have to be appropriate to the skills and the equipment, that can utilise the possibility of 35,000 ft of weld per week for instance, marine technology rather than consumer goods. On the whole the arms industry comprises of factories that would not lend themselves easily to producing consumer goods. What they could do is produce for Britain's industrial infrastructure such as for the rail network, pipelines, shipping, civil engineering, aerospace etc. This doesn't mean that the skills concerned, or the type of products they can make, are inappropriate for the present day but it does mean that arms conversion is not simply a question of coming up with a good idea and then making it.

Conversion is not a simple process. A lack of perception of its complexities has often brought ridicule on it's supporters. Speaking of conversion for conversions sake has in the past damaged the credibility of the goals of conversion especially amongst people working in the arms industries.

Douglas Hurd has been heard to refer to turning Tanks into Tractors. It would be comparatively easy to produce tractors with tracks currently producing tanks. But an earth moving equipment factory has just been shut down near Glasgow. In order for such a transfer from making tanks to making tractors to be feasible there has to be another ingredient other than just the capacity to produce such tractors. That other ingredient is investment in the type of project which uses such tractors.

There is plenty of scope for this; in fact Britain is screaming for investment in it's infrastructure. Britain, for instance, is planning to spend 3.5 billion on the railways in the next five years. This amounts to about 50% of what every other government in Europe is planning and yet our cities are some of the most congested in Europe. We also charge on average about twice per passenger mile what the rail networks in the rest of Europe charge. If the cash is there to build Trident then it is there to build the railways we need instead. Since much of what goes into a submarine is heavy electrical equipment, it would be appropriate to use the same workforce to do it.

6) Lead times and costs:-

Sir Raymond Ligo, a prominent figure in British Aerospace, is on record as saying that to get decent returns from a civilian aerospace project it takes 15 years. If you bottle out after ten years you lose both your shirt and your trousers and the write off on development costs is horrendous. Although the lead time in other areas, such as shipbuilding or heavy engineering, may not be quite so long, they are still considerable. This means that for Sir Raymond Ligo to think about shifting to civilian airliners rather than war planes his returns will have to be underwritten by government. The development costs will have to be underwritten just as they are for military aircraft.

The transition from military production will be in the short term a costly business. That has to be faced and responsibility for the change taken by government. There is even a strong case for public ownership for some of these industries.

7) Ourselves, the workers:-

In many cases in large companies with a number of plants the management have been able to play one factory off against the other and undermine any collective response to closure plans. This should require no further comment because the changes in approach needed should be clear to the trade unionists involved.

RESEARCH AND DEVELOPMENT

NO SPIN OFF ON R&D

Research and Development are both very important to what is happening to our defence industries and key to the possibility of any industrial regeneration. Britain has, for a long time, spent roughly 50% of the government funded R&D on developing weapons while most of our competitors have spent their research money on other things. Japan, for instance, devotes roughly 4% and Germany 10% of government funded Research and Development to weapons. In addition to the money government gives, other countries have arrangements such as tax relief on money they spend on research and development.

In the early 60's Honda began racing at the Isle of Mann TT with a version the 250 Dream as their principle entry. People laughed because the machines they had then were really naff. More careful observers noted they had as many photographers as riders. They were looking at the way the bikes cornered, braked etc throughout a range of road conditions and they built their conclusions in the design of their bikes. What followed wiped the smile off motorcycle producers in Europe and especially in Britain. What hit them was not the capacity to produce and it certainly wasn't something special about the workforce, it was something special about a level of sophistication on Research and Development that ran through the whole of Japanese industry from ball bearing design to market place analysis.

That's what hit the quaint experience of owning one of the products of the British motorcycle industry up to the end of the 60's when howling down the bad roads of Cumberland on the back of a BSA probably meant howling with pain. (BSA, being Birmingham Small Arms, began making motorbikes in the 1890's. They did so because they hit a crisis in production and felt they needed to diversify into producing motorcycles as a way of getting them out of a dependency on defence orders.)

It has, however, often been argued that research on military products produces benefits for other areas of industry. One example used is Teflon, the non stick coating for frying pans, developed as a part of the Apollo programme. However there are two things wrong with this argument. One is that building a missile/moon rocket is not the most efficient way of developing a non stick frying pan. The other is that knowledge itself has become a vital ingredient in the arms race. The understanding of how to produce a particular weapons system could also give you the knowledge of how to deal with or counter the weapons system. So knowledge is carefully hus-

banded, protected from public view in case the Soviet Union managed to get their hands on it. In effect it means the Soviet Union would have to go through the cost of developing that system in order to counter it.

An understanding of the technology involved is therefore seen as being of strategic significance. When scientists in Britain and the United States leaked the information on how to produce the atom bomb to the Soviet Union it meant that the Soviet Union could then make it. Knowledge made the difference of whether the Soviet Union had the bomb or not, or at least that is the way the United States saw it. They see it as becoming more and more significant as weapons systems become more and more sophisticated.

The United States has an office in the Pentagon known as the Military Critical Technologies List headed by a chap called Hopley. He, or rather his staff catalogue all scientific research and decide whether it has any military application. If they deem it to possibly have a military use the technology is clarified and its use is restricted and controlled. The United States also have attempted to extend their trade regulations to Britain. Following the Boeing AWACs deal a number of the British companies involved were visited by a representative from the MCTL office. There followed a bizarre set of events with the Government denying any knowledge of the American visitor, the police being called to have him removed from one of the factories concerned, the records of his hotel being doctored to remove any evidence of his having been there and a number of questions being asked in the House of Commons about this persons activities.

What this goes to prove is that although there may be some spin off for civilian industry from military research, such technology is deliberately blocked from being passed on to civilian industry. Also a substantial part of research being devoted to military purposes means that other research is stifled.

We now have some of the best equipped research institutions in Britain producing nothing that relates to our civilian economy. There is little or no civilian spin off from places such as Aldermaston. The fact that they are well equipped however makes them ripe for use in other areas. The least problematic area of the arms industry in terms of conversion would be these institutions. This would be especially true if the government were to make resources available for them to become sources of information and the development of technology in the way that some of our industrial competitors support such institutions.

A GENERAL PROBLEM OF RESEARCH AND DEVELOPMENT

One area of government consistency in Britain has been our lack of funding for civilian research and development. If we are to expand and thrive as a manufacturing

nation the way we treat science must change. Tam Dalyell MP speculated in the New Scientist recently that the reason why the Prime Minister is so antipathetic to British Science is because she was sacked from her two jobs as a research chemist. She was apparently employed first to look at the chemistry of the plastic for the frames of National Health spectacles and then to look at ways of getting more air into ice-cream without killing the people who ate it. I doubt that even this government would be motivated by such a shallow reason for formulating policy, but the fact that people find the story believable does show how poor this country is in supporting scientific development.

In the 1989 winter issue of the RUSI journal Ivor Yates, an engineering chief executive at BAe argued very strongly that Britain has to, as a matter of urgency, massively increase the amount given to industrial Research and Development. The only difference between his position and the mainstream TUCND position is that he does not see military research and civilian research as being mutually exclusive. TUCND does. A recent editorial in the New Scientist described military R&D as being largely playing with toys, yet it takes up the time of some 40% of all our engineers and scientists.

TRAPS WE CAN DROP INTO

It is obvious that Arms Conversion is a complicated business. On top of the economics the politics of it are a maze and very easy to get lost in. Some of the political complications are outlined below.

1) REGIONAL AID

46% of defence procurement takes place in the South East. In other words, just under half of the arms industry is based in a comparatively small part of the country. This means that there is an imbalance in the way that the industry is distributed, and it would be easy to slip into arguing that this should not be the case. But in the US for instance the industry has been distributed evenly which has made it difficult to get any senators or congressmen or women to raise any objection to continuing the funding of the arms race. Using defence expenditure as a form of regional aid is something which has been raised amongst people involved in the issue and by people within the peace movement from time to time. This has certainly happened to quite a large extent in the US.

2) LIMITED AND ALTERNATIVE DEFENCE

Arguing for limited defence is also a point which is raised regularly. The argument being that if we substitute a particular weapons system for a more expensive system that it would either create more employment or that it would cost less. The problem here is that the decisions on defence are made against the background of political rather than economic criteria. That means it is always open to question whether a specific type of defence strategy is workable or not. What may on the surface look like a money saver may not be on closer examination. For instance the arguments that if we had 'conventional' weapons to stop the Russians invading, then this would employ more and would be cheaper. The figures could be manipulated however to prove that it would cost more to stop them with tanks than with nuclear missiles.

Defence is costing us what it is because we have developed it around the idea of preventing the Soviet Union invading us, if not around the idea of being able to invade the Soviet Union. Tanks are designed around the concept of being able to continue in the event of a nuclear war. Our non nuclear aircraft are designed around the idea of having to fight a nuclear war with the Soviet Union. So the problems for us is the political decision to prepare for an invasion from Russia, which is the cost, rather than the price of a particular weapons system. The alternative is not a cheaper weapon to do the same job; it's accepting the idea that we have got the concepts of what we need in defence and of what we need defence for, wrong.

3) MONEY TOWARDS GOOD THINGS

Money for our social services, housing and industrial infrastructure is clearly being reduced in order to pay for our nuclear defence posture. It is unfortunately too easy therefore to be drawn into arguing that we simply take money out of defence and put it into other areas that so clearly need it, such as housing, pensions and the NHS. One thing which should never be forgotten within this calculation is that the industries that currently represent our arms industries are needed. They represent an extremely valuable resource which requires support. If tomorrow we stop funding the war machine and spend the money on the NHS then our economy takes a nosedive and the day after tomorrow there is no money to pay for anything. Such things have happened before in other countries, there is no reason why they shouldn't happen here too if our government gets it wrong.

Arms conversion can be a part of a package for the regeneration of our industry and of our public services but it only has any relevance as such. If it is argued for as something separate from this it becomes meaningless.

4) THERE'S NO POT OF GOLD FROM REDUCING IN-EFFICIENCY

Some people promote the idea that there is a pot of gold, in terms of savings to government, from increased efficiency and from more sensible handling of the industry. Now it may well be that a close tally of what is happening to orders and careful monitoring may reduce corrupt practices in the allocation of orders from the MOD and money could be saved. Those of us old enough to remember the Wilson years may also recall the government forcing Ferranti to return large amounts of money because they had been economic with the information over the actual cost of production in some cost plus orders they had with the MOD.

If it happened then it is possible that it is happening now, but this does not mean that it is going to be possible to save huge amounts from increased efficiency or from preventing corruption. For example, the current government have been very active in forcing the industry to clean up its act and become cost effective. For instance immediately after privatising the ROF's this government reduced the amount they were prepared to pay for small arms ammunition substantially. BAe accepted the order and made it profitable by making the ROF's efficient. The concept that these industries are run by less than competent people may well have been true in the past and may still be true of some employers, but where jobs depend on getting an assessment of what is happening to the industry correct and acting upon that assessment, as is the case for trade unionists now in the arms industries, it is hardly credible to argue that all that is needed is better management.

On page 18 there are a couple of references to gold plating. At the risk of being repetitive this point is worth stressing. The Komsomolets, a Soviet Nuclear submarine, sank in 1989 after a fire in the engine room with the loss of 42 hands. The Soviet military enquiry pointed at a number of factors as the cause, one of which was that much of the electrical equipment was production line / off the shelf stuff, and it was in this equipment that the fire started. There appears to be a strong argument in favour of very good quality equipment in this type of vessel. Gold plating is, therefore, inherent in the nature of this type of vessel and will carry with it a tendency towards unnecessarily exotic production practices - the two go together. To overcome the phenomenal cost that gold plating implies we will, therefore, have to question why we should have such things in the first place rather than whether we can save a bit on their production.

This is also true of the arguments over 'cost over runs'. If we are to encourage as both parties have in government, a race for the development of military technologies then it is almost inevitable that some of the development costs will initially not be assessed correctly or even be wildly at odds with the final costs. This too is inherent in this type of technology. There is a well established tradition of governments from both parties accepting spiralling costs in order to preserve the development of particular weapons systems. There is little to suggest that this will change. It is very unlikely, therefore, that there are substantial enough savings to have a significant impact on the defence budget by preventing such cost over runs.

It is important to bear these things in mind when considering the political problems facing those advocating arms conversion. Cosmetic solutions may well be offered people in the industry and we should avoid lending them credibility. There are no magic formulae in these circumstances to give us a painless solution to the awful dilemma our industry now faces.

MAKING IT HAPPEN

1) SETTING THE AGENDA

To be effective the campaign to resist Britain's decline into an industrial desert will require social and political forces broader than the trade union movement and broader than those involved in the defence industries. But for it to be possible for those forces not to slip into political irrelevance the trade union movement must be one of the primary factors in setting the agenda. Conversion has to be dealt with primarily as a trade union issue, one which is developed from there into the rest of our community. Not only because it is those who work in the industry who are best placed to recognise their value for the rest of the economy but because they also have the most to lose. Without their active support arms cuts and the resultant substantial shift in the way government relates to the rest of our social system, a shift we so desperately need, will not be possible.

Future generations will look back at what we do now with contempt if we fail to seize the opportunities before us.

2) PROTECTING THE INDUSTRY

It is important not to lose sight of the fact that one of the principle reasons for campaigning for arms conversion is to protect the industrial resources currently being used to make arms so that they can be used to produce for the civilian economy. What ever else is said protecting the industry sets the framework and the criteria of how we should act over arms conversion.

3) THE SHAPE OF A CONVERSION PROJECT

A number of problems face any group of workers trying to look at arms conversion in their factory. It is possible to give some indication of what a group of workers should be looking for in a workable project.

What the JSSC did at Lucas is a good starting point. They did what's called a skill audit and an assessment of what the factory could produce. They made a list of how many fitters there are, how many welders, how many of them have a Lloyds certificate, how many turners, labourers, maintenance staff etc. This gave them a picture of what type of work the factory could be involved in and what the plants capacity is. They also asked the workforce for suggestions on what could be done with the existing factory and set up a system for assessing these suggestions - a committee.

One thing that is extremely useful is cooperation from the management. At the Royal Naval Stores Department (RNSD) in Llangeneth for instance they were able to arrange facility time and an office for their conversion plan; they called the scheme Alterplan. This carried with it the very real advantage of providing access to the workforce throughout the day so that discussions could be held on how the project could be developed. Alterplan produced a regular newsheet which meant that the people in the plant were kept in touch with each other and cross departmental friction was kept to a minimum.

Because the RNSD encompassed a group of different functions the conversion project set up a series of working groups. So there was one for the joinery shop, one for the garage, one for the engineering facility etc. This had the advantage of bringing the workforce very much to the fore and giving them a sense of participation. In the RNSD the working group for each area assessed the viability of each project. They also set up support for individuals who wanted to lease part of the plant to set up in business for themselves. For this they drew on the support of the Wales Cooperative Development Corporation.

Alterplan raised a significant amount of money, £26,000, to pay a firm of industrial consultants. Other projects have felt they got a great deal more from Local Authorities through their Economic Development Department or from a University or college. Bernard Harbour at Kingston Polytechnic for instance produced a rigorous, well researched and well argued study of BAe in Kingston. More recently the people working at Filton for BAe near Bristol were able to draw support from Bristol University and from the City Council to produce another well researched and rigorously argued document which forms the basis of their campaign to retain aerospace jobs in Bristol. Colleges, Universities and Local Authorities have a better track of excellence in this field which should be drawn upon.

One key to being able to draw on such resources is Local Authority involvement. Apart from the resources they themselves can offer the local college is probably more likely to respond if you have the support of the Local Authority. This may involve getting local councillors to raise a request for such support formally in the council.

Of those workplaces that have looked at conversion all have regarded the active support of their union as vital. On the whole, therefore, it is worth avoiding, if possible, rifts between the union workplace organisation and the union either locally or nationally.

4) WORKPLACE ALTERNATIVE USE COMMITTEES AND UNION EDUCATION

One process which would be very useful indeed to see developing, is the type of committee which the Lucas and Vickers JSSC combines set up in the mid 1970's and which a number of others have established more recently, ie factory based alternative use committees. Their nature varies according to the industry, the employer and the type of product that the factory has traditionally been involved in producing etc. But it is true that arms conversion in any plant can be aided and encouraged by such an alternative use committee. Setting up such groups has been advocated by a number of leading figures in the trade union movement for some time. Bill Morris of the T&GWU, for instance, has made the point forcibly on a number of occasions.

But, although the idea has been supported by influential trade unionists and has been seen to work well in defending jobs at a number of places, such alternative use committees are not common. Another element needs to be added, therefore, if such committees are to become a common feature of factory life. The one that comes naturally to mind is the role of trade union education. For those education structures to begin to encourage and run courses on how such alternative use committees could function, the request for such education has to be raised consistently within the relevant unions, both through the democratic process and through direct requests from districts for such education.

5) THE ROLE OF LOCAL AUTHORITIES

In the past a number of local authorities have been directly involved in setting up conversion projects. These include the Greater London Council, Strathclyde and Sheffield amongst others. If you include encouraging employers to diversify their product range the list is larger, including such councils as Cumbria County Council.

Employers in Britain, especially those in the arms industry, have tended to very conservative in their approach to commerce. They have not traditionally been noted for imagination outside of the production of weapons. One or two have attempted to deal with the major structural problems facing their industry by trying to reduce the time their workforce spend in the lavatory. (This may sound crass but it is actually happening now in some workplaces). Coupled with this myopia has been tendency to see the workforce as the enemy, with the unions filling a role as the organisers of the enemy. This image may well have a degree of truth in some situations but where the industry itself is threatened that threat is as real for the employer as it is for the workforce. Local Authority involvement may provide a platform that both employer and unions can find acceptable.

Many Local Authorities accept a responsibility for supporting industry in their area by establishing economic development committees as a part of their structure. They

have over the years acquired a great deal of expertise in industrial development and they may be, financially beleaguered as they are, able to offer some financial support to companies looking to develop alternatives. For companies who have painted themselves into a corner, by putting all their available resources into developing arms, they could represent a lifeline for survival.

So people involved in Nuclear Free Zones, in regional trade unions structures, councillors, trade unionists in an area and people with access to the democratic structure within political parties are in a position to do something about encouraging their local authorities to start planning for what is happening to the arms industry in their area.

6) JSSC'S AND OTHER STRUCTURES

It would help if some of the structures we currently have within the trade union movement were enhanced. Given the inherent suspicion that the rank and file and officer levels within the trade union movement harbour for one another it is unlikely that full and formal recognition and resourcing of JSSC's and their combines is a runner. It is also possible that such recognition could encourage the type of acrimony that was just below the surface but nevertheless a very potent feature, of what happened around the Lucas JCCS combine alternative plan. That doesn't mean that there is not a great deal within the present framework that could be done to enhance the role such combines could play in planning for arms conversion. Notwithstanding the financial constraints unions could and should support and help resource them to a far greater degree than they do at present.

Some unions already have mechanisms within their structures for bringing together people working in the arms industries as a national trade group. Others have trade groups which cover industries which are heavily dependent upon arms production, such as, Aerospace or Electronics.

There is a pattern to what each of those groups discuss when they meet. Without going into too much detail there are some aspects a national, company based, combine would naturally discuss such as pay and conditions within the company. There are some which a national trade group would look at, such as the campaign for a 35 hour week, and some which the industry structure would discuss, such as the development of particular production processes. There will also be a great deal of overlap and no union is going to countenance all three.

The general point is that there is a group of structures already existing which could be involved in pressing arms conversion both in the workplace and as a national campaign. Some may need to be beefed up, better coordinated and possibly better resourced, but we do not have to recreate them to get the policies of almost every

union in the defence industry and of the TUC implemented. But they do exist and they are there to be used.

7) THE NEED TO CUT THE ARMS BUDGET

Resources are the key to making a shift away from this dependency on arms production possible. To be credible, where those resources will come from has to be specified. Without doing so there will be no incentive for people working in the arms industry to do anything other than continue supporting the arms race. It will be clear to them if there is a future in the civilian market for their work. For most of the arms industry that future depends on such things as R&D, subsidies, loan mechanisms and support for their exports as a feature of Britain's foreign policy. Unlike many other European states the fate of the arms industry in Britain is very much a part of our industrial future.

The logical conclusion is that a very substantial shift will have to be made - quickly. That shift will have to be in the defence budget. Some of it could be used to sustain the arms industry in the transition, some for regenerating the infrastructure and some for guaranteeing the existence of a technological capacity to function in the modern world, ie education both basic and advanced.

8) RESEARCH AND DEVELOPMENT (R&D)

It isn't only TUCND who regard R&D as crucial for our industrial future, including the future of the arms industries. The CBI met the House of Commons Education, Science and Arts Committee at the beginning of May 1990 and said Britain needed a massive increase in civilian orientated R&D. Much of the arms industry consists of high tech production and absorbs much of our high-tech R&D. The political demands for the current concentration on military R&D have to be raised therefore as a part of our political campaign for a different use of industry.

9) A CONVERSION AGENCY

The Labour Party and the TUC are committed to campaigning for the establishment of an arms conversion agency. Most of the people who have been involved in trying to establish conversion projects have felt the need for the support that such an office could provide. Giving workers guidance and resources to help search for alternatives to producing arms will allow a much more imaginative approach than if it is simply left to the employers.

Such an agency however, can have little impact if it's work is not complimented by a comprehensive industrial policy. It has a great deal of potential but not if this is all that is done in the face of what is happening to the arms industry.

There is also a tendency to assume that we need to wait for a Labour Government for this to happen. But scratch the surface and many of the employers in the defence industries recognise they are in a serious fix. It should be possible, therefore, for some support for industry in line with that given to our industrial competitors to be developed in the current context. It is possible and we should be looking into the way we could turn that possibility into a reality. There isn't space to expand on that here and such a discussion would be speculative anyway, but this should be at part of the role such an agency could perform.

At the time of writing the conversion agency proposed by the Labour Party will be cited in the Ministry of Defence (MOD). There are a number of very strong arguments for placing it instead in the Department of Trade and Industry (DTI). In the MOD it will tend simply to facilitate the rationalisation of defence companies focusing on the need to maintain defence production. In the DTI it's brief would be to intervene in the relationship between defence production and the rest of the economy so that the economy was aided rather than drained by defence production. Unless arms conversion is recognised as a factor in industrial policy rather than a bit of help for arms manufacturers then it will achieve nothing.

In the past when such types of agency have been established by Labour governments they have done little in the interests of the workforce, degenerating into enabling agencies aiding industry to restructure.

10) A NATIONAL CAMPAIGN

In the past those campaigning around conversion have tended to centre that campaign on groups of workers facing redundancy in their plants. This has not a great success. What is clear from that experience is that the campaign around arms conversion has to be both broad reaching and nationally orientated.

There are two reasons for the need to see the campaign as a national one. One is that the problems facing the industries are at root political and that therefore means the political lobbying which is part of the response to that situation has to encompass people from throughout the industry rather than from one plant alone. The other is that employers are adept at playing workers in one plant off against those in another. One factory in a combine isn't going to be able to crack the company's corporate policy on its own (assuming it has one). In order to address a company's policy effectively it has to be done collectively, as a group.

To develop enough political momentum for the things listed above to be both feasible and effective we need a much greater understanding of this issue within the trade union movement. It has to become such an important part of this society that any politician will feel they have to refer to it virtually every time they open their mouths. For those things to happen it will require a long term sustained campaign.

11) THE NTUDCC

The National Trade Union Defence Conversion Committee has at least a working relationship with most of the unions who organise within the arms industries and most send delegates to it. It was established in the mid 80's with Ron Todd as its founding chair. It has existed since then at a relatively low level of activity. It is however very well placed to function as a joint union campaigning body with links to the peace movement. It's role is developing and interest in it is now growing.

It consists of delegates exclusively from unions and some of the local trade union based conversion organisations such as the Better Future For Defence Jobs In the South West and the Northern Region Defence Diversification Committee. The only organisation participating in it which does not fall into either category is TUCND who send an observer to their meetings. It is through this organisation that the Defence Converter, a regular newsheet, is produced which is itself developing into a very important campaigning tool. It has also in the past organised conferences on conversion and it has produced some excellent campaigning material.

Trade Union CND regard the NTUDCC as the principle vehicle for developing work around conversion and we would recommend it to those in the trade union movement interested in supporting this work.

POSTSCRIPT

There are a number of things which I was asked to include in this document which do not easily fit in the body of the text. These have therefore been included as a postscript.

WHATS HAPPENING IN THE UNITED STATES

The United States is unique. Because of its size and its position in international politics it has been able to sustain a greater dependency on arms production than is sustainable in most other economies. In order to sustain that arms production capacity and also to try and counter the effects of an over dependency on producing arms, legislation was framed after the Second World War to aid companies shift to civilian production. This was intended to preserve those industries should the demand for arms increase so they could be shifted back to arms production. This legislation has been relatively successful in helping the shift away from a dependency on arms production. This is a good example of positive and constructive government intervention and it has made sure that many companies which would have had a bleak and uncertain future were given government support in shifting to other work.

There have been a number of attempts recently to get Congress to pass a bill which would require firms to prepare for the diversification of their production so that resources are put into developing production for the civilian market at the same time as they produce for the American military. There are currently three bills before Congress which will probably be dealt with in September 1990. The most comprehensive of these is the one known as the Weiss bill after the Congressman who sponsored the bill. This bill includes provisions for 1) mandatory alternative use committees 2) advance conversion planning 'Blueprint ready' 3) decentralised control of alternative use planning at the facility 4) advance notification of contract termination 5) mandatory occupational retraining 6) community economic adjustment planning 7) assured income and benefit maintenance 8) relocation allowances 9) financed without new appropriations or taxes (the idea would be to take about 2% from the defence budget and the department of energy's budget for producing atomic weapons) 10) a national network of employee opportunity 11) capital investment planning. Another bill, from Congressman Oaker, includes about 60% of the measures in the Weiss bill and a third has provisions only for items 6), 10) and part of 4).

As a result of a deliberate policy arms production is spread throughout every state in the United States. The result is that every Congressman has a strong pro arms industry lobby in their state and so few are prepared to go against it. The Weiss bill,

which has been promoted for about eight years, had little chance until now of passing. One of the reasons why it has been promoted and struggled for within congress by the few who were prepared to support it was that it gave them a vehicle, a rationale to argue a case about the arms economy amongst other elected representatives. At the moment with the relaxation of tension with the Soviet Union and the rest of Eastern Europe the argument for what is termed the 'Peace Dividend' has growing popular support. This is, in part, because of the work that has been done over a number of years by the people promoting the Weiss bill - they coined the term 'peace dividend'. Their arguments, even the terminology, are now on the lips of many and will have an impact. The Weiss Bill was not the forlorn, no-hope cause which many, who are now talking about the Peace Dividend, once claimed it to be.

WHAT'S HAPPENING IN THE SOVIET UNION

By April 1990 the Soviet Authorities had told some 345 factories and plants to shift 100% of their production from arms into producing for the civilian market. They have also, very significantly, told 200 research institutes previously financed by military research that they have to re-orientate their research programmes towards the civilian economy.

By all accounts they haven't found it easy. The early flush of enthusiasm has been replaced by a more realistic assessment of the problems they face. The problems facing people working in the defence industries interested in conversion here, such as lack of appropriate management skills and gold plating, appear to be similar to those being faced in the Soviet Union.

The level of difficulty varies considerably from industry to industry. Lorries, for instance are basically the same if they are to carry tanks or tractors so arms conversion is simple in these circumstances. Practically the only change required is the colour of the paint. In fact there are a number of missile carriers which have had the missile removed and a crane grib fitted to make them into mobile cranes in the Soviet Union. There is a great deal of potential for conversion in other parts of the military machine, for instance some big military camps have been turned into holiday camps. So in some areas there are few problems; in others there are quite significant ones. In the chemical and in the electronics industries, for instance, they do face substantial problems.

In the Soviet Union the problems facing all the industries trying to shift their production are similar to those that will face us. For instance, as in Britain, they face the problems of financing a move into the civilian economy. As in Britain no one worried too much about the production costs for weapons systems and the market came to the factory to explain exactly what it wanted, everything was straight forward. The relationship between the civilian market and the factory is radically different, as it is in Britain.

One thing the Soviets appear to be very keen on is collaborative projects with western companies. Because much of the production in former arms plants has been in high tech areas, development costs are prohibitive even in the civilian market place and so collaboration makes a great deal of sense. Also a lot of the consumer goods areas which have been prioritised for the Soviet Union are common in the west and there is a great deal of expertise they would like to acquire in producing things such as Video Recorders, TV's, High-fi's and the like.

There are two areas the industries are concentrating their efforts on. One is on making consumer products such as electronics, textiles, domestic goods etc. The other is the food processing industry such as large scale refrigeration equipment, meat processing equipment, equipment for turning fruit into jam or into juice, equipment to make heavily processed foods such as crisps etc.

They face serious structural problems in trying to make this change but what they do have is a) systematic government support and b) a readily available market for their goods. The structural problems are regarded as a state problem and the governments resources are being used to overcome them. In that sense they contrast dramatically with the situation in Britain. The other contrast is that the civilian market in Britain represents a serious problem since the shortages here are not so much of consumer goods as of equipment relating to our industrial infrastructure, such as railways and buildings. In this instance it isn't the private citizen who buys the product but the government and the current government ideology is to buy nothing.

Thus there are striking similarities in the problems facing the arms industry in the Soviet Union in trying to shift from producing arms with those that will face Britain's. But there are also fundamental differences.

THE MORALITY OF WORKING IN THE ARMS INDUSTRY

The morality of making a living making arms is something that quite a lot of people have been prepared to question and I think it is an issue which ought to be addressed. Without going too deeply into an argument about what morality is or isn't or into an analysis of various systems of morality the question hinges, as I see it, on how we can bring about a situation where people are free to choose not to produce arms and on how we can rid this country of the pressures which create the production of instruments of mass destruction.

Living in Barrow probably means working for Vickers or for BNFL or being on the dole. It's as stark as that. An individual as such is not in a position to make any serious impact on whether Trident is built or not by refusing to work for Vickers. Condemning the individual for making Trident means we, on the face of it, shift responsibility onto his or her shoulders and, by the simple act of condemning them for

working there, absolves us from any sin in association with Trident. But does it? If condemning them as individuals doesn't do anything to stop Trident then we too are guilty of not resisting it. As such we are as culpable as they are.

There are a number of issues here. Any leading trade unionist has a primary duty to consider the wellbeing of the people who have entrusted him or her with the responsibility for doing so. Individuals have a responsibility to consider the community they live in. But there are certainly some situations where, even under extreme pressure, some things ought not to be done. The Nuremburg trials based their deliberations on an assessment of what it would be better to resist with every fibre of ones being rather than to succumb to pressure and participate.

Having said that, however, one set of criteria which an analysis of the morality of working for an arms producer is an assessment of what will best aid the cessation of the production weapons of mass destruction. Housing, jobs, to be able to help and support other people in your life are moral issues too and therefore the moral issue of how you make a living occurs in relation to the moral issue of how you protect your community. Those two sets of moral principles have to be accommodated. They may be incompatible as with those put to trial at Nuremburg, but in deciding that they are incompatible that assessment is only valid, on the whole, if based on the criteria of what measures are available to bring pressure for change and of how pressing that change is. It would have to be a very extreme case to say it would be better to resist extreme pressure when there was no chance of change.

There is a considerable difference between working to build Trident and standing in the House of Commons and advocating that Britain build Trident. Trident would not defend us and it is dishonest to justify its construction on the grounds of defence. It's cost is damaging our economy and it is dishonest to claim otherwise. It will continue to damage our economy because of its huge maintenance costs and it is dishonest to pretend otherwise. It's cost and the timing for its production are politically significant and it is dishonest to manipulate the figures to accommodate their existing political commitment to the arms race. It is possibly just as dishonest to hide from the political problems in the hope the political problem will go away.

Arms manufacture is a moral issue but it is one which we all carry a responsibility for. Condemning individuals working in the industry tends to shift the responsibility to those individuals rather than accepting that responsibility collectively. Doing that could actually create a barrier to overcoming the need to produce arms for a living.

THE AUTHOR

This pamphlet is based on the experiences of many people involved in campaigning for arms conversion. However, in vetting its contents some said that it ought to have an indication of who the author is.

Jimmy Barnes is the full time secretary of Trade Union CND which is a specialist section within CND. He has filled this position since the beginning of 1986. TUCND regard campaigning for arms conversion as one of it's primary tasks.

Jim was originally an engineer, and worked for a number of companies, both as a machinist and as a fitter, largely in what is termed heavy engineering. He was a steward for a large part of that time. The last of those being for the National Coal Board. He left there to do a degree in Politics and Philosophy as a mature student finishing round about the time when unemployment seriously began to bite in the engineering industry in the North, which is where he lives. Following this he spent a considerable period on the dole and was active in campaigns around unemployment, poverty and deprivation in association with a number of Unemployed Centres in the North of England. During that time he occupied a number of positions his union branch, in trades councils, County Association of Trades Councils and the regional TUC. He was also very involved in CND and in TUCND in the area from 1980 onwards. Also during that time he did an M Litt on a philosopher who wrote a considerable amount about meaning in language.