



In Arms' Way: Arms Company and Military Involvement in Education in the UK

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Abstract

Arms company and military involvement with schools and universities in the UK takes a number of forms and has a variety of effects. Countering mainstream narratives around national security, good and bad forms of globalisation, and economic competitiveness, I argue that these effects are best characterised as the commercialisation and militarisation of education in pursuit of state and corporate goals. These are both forms of instrumentalisation that damage the autonomous space educational establishments strive to provide. Such developments are not going unnoticed however, and resistance to them continues.

Introduction

There has been a flurry of recent activity in relation to the political and ethical issues around the relationships between arms-producing companies, the military and academia in the UK. There has been a successful campaign to encourage Reed Elsevier, a major academic publishing firm, to end its involvement in organising arms fairs (CAAT, 2007; Chatterton and Featherstone, 2007), a report and campaign on the links between arms companies, the military and UK universities (Street with Beale, 2007a), and the ongoing work of organisations like Scientists for Global Responsibility, which is dedicated to the promotion of



peaceful and socially and environmentally just science (see Langley, 2005; Langley et al, 2007, 2008). Common to all these initiatives is a concern that the activities of arms companies (and, for some, the military) are at odds with the ethos of academia, which should strive to generate knowledge in the public interest and not to promote violent conflict or the profits of companies.

Elsewhere, I have argued that arms companies' involvement with universities – in the form of pension schemes and investments, and research and teaching relationships – is part of a wider trend of the commercialisation of higher education in general, and a more specific militarisation of science and engineering (Stavrianakis, 2006). In this paper I continue these themes, exploring the competing visions of education and the social good that enframe arms company and military involvement with schools and universities in the UK, and opposition to it. The government and arms companies promote an understanding of education that orients it towards a particular vision of the national interest, competitiveness and globalisation, and UK national identity as a leading power and developed nation. More widely in this view, there are both good and bad forms of globalisation, and the UK must do something against the latter (epitomised by terrorism, the spread of weapons technologies, and failed states), because it is morally right but also to protect ourselves from spillover. In a globalising world, it is important for the UK to stay at the cutting edge in terms of its skills base, economic performance and military capability (see MoD, 2003, 2005, 2006).

The UK military and wider foreign and defence policy are thus presented as a force for good in the world, facing new threats associated with the end of the Cold War, rise of the War on Terror and the changing nature of warfare. Against this view, I posit an alternative understanding of this relationship that critiques the commercialisation of schools and universities for arms company profits and their wider instrumentalisation as part of a the neoliberalisation of education, and the militarisation of education for state-led military projects. There is an ongoing struggle over the meaning of education in general: in this paper I argue against the instrumentalisation of reason and commodification of knowledge, and in favour of education as “both a public good and an autonomous sphere for the development of a critical and productive citizenry” (Giroux, 2001, 2).

The involvement of arms companies and the military in education demonstrates the intersection of commercialisation (through the introduction of a profit motive and market mechanisms), instrumentalisation (in which education is seen as a means to an end) and militarisation (in which war and preparation for war are promoted as both normal and positive). Whilst these are distinct phenomena, they are historically and practically linked through the dominance of military definitions of security and the increasing enmeshment of arms companies into the UK state. Whilst much opposition to corporate involvement in education focuses on the influence of private actors on the public good of education, looking at arms

company involvement demonstrates that this is not the only aspect of the problem, as much of the funding for military-related research comes from the state, via the Ministry of Defence (MoD). Science and engineering have a long history of being oriented towards military needs, for example. As Thee argues, “Military R&D was instrumental in starting modern large-scale science-based R&D and thus set the course of its development. The meeting and fusion of science and technology evolved in a long historical process through the stages of the Industrial Revolution, culminating in the emergence of the nuclear age and the explosion of modern military technology” (Thee, 1988, 265). The rest of the paper proceeds in the following parts: an overview of arms company involvement with universities and schools, followed by an analysis of the effects of this involvement in terms of the instrumentalisation and militarisation of education, and the relationship between the two.

Arms company involvement in education

At university level, arms companies are involved in sponsoring students through engineering programmes, co-running courses with university departments, offering student placements, giving equipment to departments and so on, in addition to wider research-based relationships and investments via pension plans. There are at least twenty six UK universities that have conducted research with or for public military bodies (e.g. the MoD), private military industry (e.g. BAE Systems) and/or publicly funded bodies directly supporting military research (e.g. the Engineering and Physical Sciences Research Council) (Street with Beale, 2007a).² It is estimated that at least 1,900 projects, cumulatively worth a minimum of £725m (in terms of income to universities) were conducted across these universities between 2001 and 2006. The universities conducting the largest number of projects were Cambridge, Loughborough, Oxford, Southampton and University College, London (Street with Beale, 2007a).

Cambridge University was involved in 283 projects in this period, worth at least £42,565,637 to the university. Whilst the schools of Engineering, Physics and Metallurgy were the top three in terms of number of projects, schools as diverse as veterinary medicine, physiology and public health also received military or military industrial funding during this time (Street with Beale, 2007b). At Bristol University (ranked 6th by Street and Beale), the MEng degree in Engineering Design features arms-producing companies such as Rolls Royce, Smiths Aerospace (now part of

² The 26 universities are: Birmingham, Bristol, Cambridge, Cardiff, Cranfield, Durham, Edinburgh, Glasgow, Hull, Imperial College London, King’s College London, Leeds, Liverpool, London School of Economics and Political Science, Loughborough, Manchester, Newcastle, Nottingham, Queen’s University Belfast, Oxford, Sheffield, Southampton, Swansea, University College London, Warwick and York.

General Electric), GKN, and Weir Strachan and Henshaw as “partners” in the degree scheme, involved in the interview process to select students and offering student placements during the course (University of Bristol, no date; Stavrianakis, 2006). Loughborough University’s Systems Engineering course is part-funded by BAE Systems, which also offers student sponsorship and placements (Loughborough University, no date). As well as a host of partnerships between the university and military industry, such as the Network Enabled Capability Through Innovative Systems Engineering research programme (jointly funded by the EPSRC and BAE Systems, with Loughborough as lead academic partner; SEIC, 2008), the company’s own employees are also offered the opportunity of further education at the university.

Recently, a Loughborough Engineering student who was awarded a prize for “most improved student” found himself presented with a cheque for £100, not from the university, but from BAE Systems. In protest at the company’s high level of involvement with his degree, he donated the prize money to Campaign Against Arms Trade. His reason for doing so was his sense that the course is “completely in the pocket of BAE Systems” and “Certain elements of the course were tailored to BAE’s requirements.” Reflecting on why this is a problem, he argues that “university should remain distinct from industry. I did not pay £1100 a year for a 5 year graduate recruitment session. Moreover, I believe that university should be using its neutrality to promote ideals about the world we wish to live in. Researching clean energy, improvements in healthcare and communications for all. Not more effective ways of wiping bearded folk off the planet. It is certainly a personal view, and I respect others have a different line, but I resent being subjected to BAE’s influence and coercion on a daily basis with no alternative” (Taylor, 2007).

This student's position succinctly summarises several of the concerns around arms company involvement in education, related to the competing visions of education as an autonomous space for the promotion of the public good via critical scholarship and teaching, or as a place where (predominantly young) people are trained for the workplace and profit can be created. This student accepts that his personal view may not be to everyone's taste – but he is not the one bringing politics in where it does not belong. There is already an uneven playing field in terms of the interests that are privileged through education policy. Rather than representing special interests or even special pleading, interventions such as this are a means of speaking out against the way in which special interests (those of the state, military and arms industry) have been normalised. The role of science and engineering in creating a better society is not obvious or straightforward, but the involvement of arms companies in the provision of education and the wider processes of ideological normalisation around military activity stifle debate about what that role should be.

At school level, BAE runs an Ambassadors programme, through which employees are encouraged to visit local schools in order to “raise awareness of engineering as a career with young people” (BAE Systems Education Programme, no date), and a Schools Roadshow “to enthuse young people about engineering and promote the variety of career possibilities available” (BAE Systems, 2007). The UK Secretary of State for Education and Skills, Alan Johnson, applauded the roadshow, which was aimed at 9 to 12 year-olds, arguing that “To be an innovative, creative and forward-looking nation, we need a rich pool of skilled scientists and engineers. I am encouraged and delighted that BAE Systems is actively promoting engineering in local schools” (Johnson, quoted in BAE Systems, 2007). BAE’s 11-14 year-old roadshow has “So far ... reached over 30,000 young people and we are still counting” in terms of “getting young people excited about a future in engineering and technology;” according to BAE, “the key is to reach 14 year olds before they make their GCSE subject choices” (quoted in New Statesman, 2007). Through the UK India Education and Research Initiative (UKIERI), BAE Systems, alongside BP, GlaxoSmithKline and Shell, have acted as Corporate Champions, helping schoolchildren in the UK and India build “life-long relationships” to “assist them in meeting their need to live and operate in a global economy” (UKIERI, no date). Overall, these initiatives and developments signal similar themes to those in play at university level: getting young people interested in science and engineering, which is deemed important for the national interest because it will develop their skills and help them find employment in a global economy. They also signal the intersection of militarism and commercialisation, discussed in more detail below.

As stated earlier, the involvement of arms companies in education is made possible and represented positively by the discursive context from which it emerges, namely, that of national security and economic competitiveness in a globalising world. The next sections set out an alternative framing of such involvement, characterising it as a contributing to the instrumentalisation and militarisation of education. Ultimately, the choice between these framings is a political struggle: none of them are objective or stand outside of social context or values. But people seeking to raise these issues are often accused of bringing politics in where it does not belong. My aim is to argue that this is already political, and to suggest ways of provoking debate and stimulating discussion. Commercialisation and militarisation are not to be understood in instrumentalist or functionalist terms, as objectively given and inevitable means to an end, defined in terms of the intentions key actors or the supposed structural imperatives of the social order. This is not to deny that social relations are infused with power, or that government and corporate actors act purposively to promote particular values, but to argue that the meaning of arms company involvement in education is itself socially constructed and, ultimately, a struggle over the definition of the social good.

Instrumentalisation of education

Arms company involvement in education encompasses a narrow commercial logic and a wider legitimisation logic, both of which are part of a wider trend of instrumentalisation. That is, arms companies are firms with an eye on their bottom line; their investment in education must ultimately bring some reward for them. So what's in it for them? In part, it is a means of encouraging interest in science and engineering so that companies have a better trained pool of people from which to recruit workers. More generally, this involvement taps into the role of education in preparing children and young people for the world of hierarchically organised work.³ Beyond this, such involvement also serves a wider legitimisation function – putting the positive face of the industry forward as an investor in the education of the nation's children, and making positive associations between the company's educational activities and its role in national defence. This has a less direct impact on profit-making but contributes to positive public perceptions of the company and its activities.

This all takes place in the context of waning state support for higher education and the growing privatisation of school-level education (via academies and the like), and the growing instrumentalisation of both. Whilst not invented by New Labour, processes of marketisation and instrumentalisation of education have accelerated under its rule. The 2003 higher education White Paper saw the increased penetration of neoliberal assumptions into education and the reduction of education to vocational training for the needs of business (Robinson and Tormey, 2003). The 2003 Lambert Review emphasised increased collaboration between business and university research departments in order to increase the economic benefits to the UK and the 2006 Worry report called on research councils to increase their emphasis on knowledge transfer and economic impact. In 2008 a further White Paper emphasised the role of innovation in economic competitiveness and the centrality of knowledge transfer partnerships, increased links with business, and a drive to increase participation in science, technology and maths at school level to this (Gill, 2008).

Overall, these initiatives contribute to the neoliberalisation of education in which students are consumers, teaching is reduced to product delivery, research is defined as intellectual work carried out for payment, and universities become private corporations competing to sell their products on a global market (Chitty, 2008). In this view, universities' contribution to the public good has been reduced

³ This view of the role of education is broadly shared by conservatives and Marxists alike, although their judgment on the social value of this are clearly different. This is in contrast to a liberal understanding, which views education as a means of creating an enlightened and egalitarian society in which all have equality of opportunity.

to helping government achieve policy objectives and/or contributing to the UK economy. Whilst this is an overall trend, it is not all-encompassing: individual academics and departments still strive to retain space and autonomy to promote alternative views and practices of education. Whilst the space for this is ever-decreasing, there is resistance in terms of opposition to the restructuring and reorientation of higher education to the needs of the state and capital, and seeking to explore the possibilities of radical education that plays on the internal contradictions of education policy (on counterhegemony and the possibilities of radical education, see Giroux, 1983; Aronowitz and Giroux, 1993).

Decreasing government funding for (higher) education and the growing emphasis on knowledge transfer and engagement with users as part of a drive to increase the economic impact of education has meant that arms companies stepping in to fill the gap can be presented as a social good. However, forty six university engineering departments were closed between 1994 and 2001 in the UK, with the result that “the choice of centres in which government might find unbiased advice and students find non-military teaching and research is becoming very restricted” (Langley, 2006, 512). This raises the issue of disinterested science and instrumentalisation - the destruction of the principle of disinterested academic inquiry is as much part of the problem as more direct or instrumental profit-making. Academic autonomy, enshrined since the early 1900s under the Haldane principle that research councils should guide research independently of government, should not be understood as asocial or disconnected from the wider society of which schools and universities are a part. Rather, it should be understood as providing a buffer zone between the immediate demands on education by the state and capital: it is one of the elements of the autonomy of the university as a social institution.

The intrusion of commercialisation and market forces into education is “fundamentally at odds with core academic principles,” in that it destroys the disinterested or non-instrumental nature of science (Ziman, cited in Moriarty, no date). In this conception, research is not associated with particular material objectives or corporate goals, is non-proprietary and entirely public, and is open to exhaustive appraisal, critique and analysis. In addition, the supposedly beneficial impact on innovation is not at all well-established (Moriarty, no date): even within the government's framework, its actions are not proven or necessarily effective. The categories of “basic” and “applied” research are not objective or immutable but socially constructed and contested (Calvert, 2006), in that academics might accept company funding and play the game but still try to exercise autonomy. There is thus a difficulty in drawing the line and deciding what counts as military research, as much science has the potential for military application, and companies and the MoD may fund basic research, making it difficult for scientists and engineers to take a principled stance against military funding *per se*. But the increases in corporate funding, in directed research and the instrumentalisation of education

must be taken into account as they create an uneven playing field. Thus, these issues cannot be reduced to one of purely individual conscience in the first instance, as there are wider processes in play that affect academia collectively.

Militarisation of education

A second issue is the militarisation of education and normalisation of military activity in wider social life. Much opposition to changes underway in education policy is based on concern about the intrusion of the private sphere into public policy, as highlighted above. So on the one hand, the commercialisation of science and engineering is part of the innovation agenda and the wider processes documented above. Indeed, the MoD published its own "Innovation Strategy" in December 2007 that called for greater partnership with private industry (DIUS, 2008, 25). On the other hand, this is not just about the intrusion of the private sphere, as much of the funding for weapons research and development comes from the state: the majority of government expenditure on military R&D is spent on R&D in industry (Langley et al, 2007, 4). Of the £2.5bn of income raised by English higher education institutions from research councils, charities, central government, the EU and industry in 2005/6, just over 8% came from industry as a whole (DFES, 2007). Arms company sponsorship is thus a small part of a wider picture of the financing of militarism via government and EU funding. Given the government's emphasis on the innovation agenda, this proportion is likely to increase. Science and technology have historically been appropriated for military use and the military is a blank cheque because of the general ideological overtones of the term "defence" as well as the enmeshment of arms companies into the state, which blurs the distinction between public and private (see CAAT, 2005, for empirical examples).

The involvement of arms companies and the military in education promotes the image of the industry and of military activity abroad, normalising the use of force abroad by states such as the UK. Weapons have no fixed or inherent meaning but, rather, are constituted socially (Buzan and Herring, 1998, ch.11). That is, whilst they are mostly designed to maim and kill if put to use, they are also designed to deter (that is, to have an effect without being used), threaten, impress or reassure. This applies as much to the UK and other core capitalist states as it does to developing states. So, for example, the ways in which former colonies chased the acquisition of fighter jets on independence, the pursuit of sophisticated military equipment by Gulf states despite their lack of strategic depth to operate it, the UK's steadfast insistence on retention of an independent nuclear deterrent, and the USA's moves towards Network Centric Warfare, are all examples of the symbolic function of weapons production, procurement and export, even though this is hierarchically structured via the hegemonic forms of militarisation that dominate the global military culture (Wendt and Barnett, 1993).

Weapons development is constituted by the post-Cold War security agenda, in which the USSR has been replaced by international terrorism, failed states and organised crime, with their associated scourges of small arms proliferation and drugs trafficking. Whilst global military spending declined for most of the 1990s, since 1998 it has started to rise again. The discourse of the “War on Terror” has facilitated increased levels of military spending; by 2005 global military spending was greater than at the peak of the Cold War, and the USA has been the main contributor to this rise, accounting for 48% of world military expenditure in 2005. Military spending in European states, including the United Kingdom, has risen as well, although not by the same extent (Dunne and Surry, 2006, 397). UK military spending in 2008/9 is approximately £34bn; the UK is “in the longest period of sustained real growth in the Defence budget for over 20 years” (MoD, 2008). In addition, increased emphasis on “homeland security” under the guise of the “War on Terror” has led to growing budgets for domestic surveillance and counter-terrorism, and attractive markets for arms-producing companies to expand their sales base to nervous governments. Not only is the UK one of the world’s largest military spenders, it devotes a considerable proportion (approximately 30%) of its research and development budget to military R&D; it is the world’s third largest spender in this regard, behind the USA and Russia (Langley et al, 2007, 4).

One key effect of such a post-Cold War security agenda is to present threats as disconnected from the UK’s role in world politics, requiring us to discount both the role of liberal democracies in attacking non-liberal democracies, the physical violence required by capitalism in the first and last instances, and the structural violence of a capitalist economic system. As Scientists for Global Responsibility argue, the enormous levels of global military spending raise ethical, scientific, social and political questions, including around educational and career choices (Langley, 2006). That is, military spending includes a significant proportion of research and development funding, much of which is channelled through universities. Developments such as the 2006 Defence Technology Strategy further increase the likelihood that university-based science and engineering research will be directed towards military purposes, restating out as it does the importance of advanced weapons and support systems to British military posture, the centrality of science and technology to UK military capability, and increased funding available via doctoral studentships and postdoctoral research fellowships (Langley et al, 2007, 6; MoD, 2006). Academic research and teaching are thus deeply implicated in ethical and political issues around militarisation.

At the more micro level, the involvement of arms companies in education has contradictory social impacts. BAE is a significant employer of young people and is keen to publicise its role in promoting gender equality in engineering. For example, in 2006 BAE met its target to “at least an equal proportion of female graduates to that seeking a career in engineering” (BAE Systems, 2006). Whilst the creation of employment opportunities for young people, and the increasing

access of young women to careers in traditionally male-dominated fields of science and engineering are social goods, this occurs within an overall framework of the promotion and production of military equipment. That is, women's and girls' rights to equality in the workplace are promoted by such initiatives, but the human rights are harmed of those on the receiving end of the equipment they make, and the overall militarisation of social life – itself a thoroughly gendered phenomenon (Enloe, 2001) – is sidelined.

The intersection of commercialisation and militarisation

Arms-producing companies, in particular BAE Systems, often defend their reputations by arguing that they are the saviour of British industry, creating jobs, increasing the country's skills base and stimulating young people's interest in science and engineering studies. They have thus tapped into wider narratives around the state of British education, economic performance and industrial base in order to present their involvement in education as a social good. Instrumentalisation and militarisation thus intersect over the issue of arms company involvement in education.

Arms production, especially in the aerospace sector, has been a post-war British specialism. The UK has historically had a capital- and technology-intensive approach to warfare, with a significant proportion of its high military expenditure going on research and development (Edgerton, 1991, 141, 147). As such, universities are bound to get caught up in this as the sites in which this research is to be conducted, especially as a result of the Thatcher government's privatisation programme that included selling off publicly owned research laboratories and efforts to reduce in-house R&D costs for corporations, which contributed to the use of universities as cheap research bases and income-generators (Langley, 2008). So the problem is not limited to universities, but is a symptom of the wider issues of British military posture and also economic policy. Post-war internationalisation of the UK economy meant that "the UK now has very few significant sectors of manufacturing capital with a secure home market, high levels of investment and research and development and a successful export performance in international competition" (Jessop et al, 1988, 172). Even though military-related engineering is presented as one of the few British engineering success stories, other forms of manufacturing declined *because* of high military spending, which consumed the lion's share of available resources and deprived civilian industry of skilled personnel (Chalmers, 1985, ch.6). Thus "success" in this sector is directly related to failure in others, especially as military R&D has a tendency to underscore militarism and crowd out investment in other – more socially useful – forms of research (Thee, 1988).

Arms are a particular category of manufacturing because, whilst all technologies are socially embedded and symbolically mediated, weapons are designed ultimately to kill, or at least to threaten to kill as part of a social activity

whose goal is to coerce, deter or impress. Even the reassurance factor that comes with weapons development for one population is mirrored by the fear factor on the opposing side(s). And whilst militarism predates capitalism, the latter industrialised militarism and made it more lethal than ever before (Mann, 1988). Arms production is linked to capitalist development, but not in a straightforward way. On the one hand, “McDonald’s cannot flourish without McDonnell Douglas [a leading US-based arms company] And the hidden fist that keeps the world safe for Silicon Valley’s technologies to flourish is called the US Army, Air Force, Navy and Marine Corps” (Friedman, 2000, 464). Thus, the arms trade, military and use of force in world politics functions in the first and last instance as the coercive backbone to capitalist expansion. On the other hand, military spending plays a contradictory role in capitalist development: “At a political and ideological level it is necessary to the system, but its economic consequences are such that it undermines what it was meant to maintain” (Smith, 1977, 61), in that weapons are an inherently wasteful form of production (Carchedi, 2002; Chomsky, 2003, 240). As a hybrid public-private form of actor, arms companies have privileged access to state resources (in the form of state military expenditure). And the ideological function of the term “defence” means that ordinary people often feel they do not have a say in its orientation (Chomsky, 2003, 71; Kurtz, 1988, 53, 95; Melman, 1970, 26), thus restricting the parameters of public debate.

Conclusion

Arms-producing companies are involved with schools and universities in a variety of ways, raising concerns around the commercialisation and militarisation of education, which are both forms of instrumentalisation. These processes take place in the context of waning state support for education, often forcing educational establishments into difficult positions in which the presence and funds of arms-producing companies look attractive. More broadly, these processes lie at the intersection of capitalism and militarism, which promote the neo-liberalisation of education in general and the militarisation of science and engineering in particular (although the role of the social sciences in providing ideological resources should not be under-estimated). Many universities and schools are increasingly reliant on military-related money and, in the current climate, it would be disastrous for them to break these links now without an alternative in place. But the privileging of military concerns in public spending is such that these alternatives are lacking, creating a dilemma for scientists and educators concerned about the effects of military-related funding on their institutions and subjects. Contributing to this is the culture of secrecy around the extent and role of military funding for universities (Langley et al, 2008), which means there is a lack of transparency required for debate around issues of university autonomy and the nature of research and teaching.

These processes have not gone unnoticed, however, and opposition to them ensures that public debate about the direction of our society, and the role of education within it, continues. Research projects such as the Study War No More project (Street with Beale, 2007a), the growing popularity of “clean” or “ethical investment” at universities, the collective debate and action of academics at institutions around the country (see the *Storm Breaking* blog, for example), and individual acts of non-compliance and subversion, are a sign of the resistance to these measures. These are evidence that the dual effects of commercialisation and militarisation are increasingly being recognised and collectively resisted.

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