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The United States, Europe and the Interoperability Gap

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In recent years, the United States has watched with a sense of both scepticism and ambivalence (some might say opposition) the gradual emergence of an integrated European security and defence policy centred on the European Union. Once upon a time, it was possible to deny the emergence of a single European defence entity independent of NATO, but not any longer. The collapse of the Iron Curtain, the enlargement of both NATO and the EU to encompass former Eastern European adversaries, and above all, the need to respond to military crises on the European periphery have reinvigorated what for years had been a pipedream. With the implementation of the "Berlin Plus" accords, and successful EU military operations in the Balkans and elsewhere, the concept of a European Security and Defence Policy is taking on a tangible form, however halting the steps, diffuse and under-resourced the effort. The US concern has been that this evolution will create a countervailing

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power that could stand in opposition to US strategic endeavours and undermine NATO. However, the time is long due for the United States to take cognisance of the changing environment – the fact that Europe will act as Europe in security matters – and move to engage Europe as Europe. In other words, we need to get over it and work to help shape these developments in a manner consistent with our mutual security interests. The signs of evolution of the EU's security function are all there:

- The drafting of a Treaty Establishing a Constitution for Europe, and its signing by EU heads of state at the Rome summit in October 2004;
- Rapid evolution of the ESDP: spurred by the crises in Bosnia and Kosovo, the EU has created new, tailor-made structures to enable more prompt and decisive decision-making in Brussels to respond to military crises in Europe and elsewhere, coming out of the Helsinki and Nice European Councils of December 1999 and December 2000 respectively;
- The decision to create a 60,000-man EU Rapid Reaction Force capable of deployment out of area within 60 days, for peacekeeping, humanitarian relief, and crisis management purposes – independent of the NATO Response Force (NRF) decided upon at the NATO Prague Summit of November 2002. This would be supplemented by a 5000-man police force for international security operations, as agreed at the June 2000 Lisbon Summit;
- The setting up of a single, albeit intergovernmental, EU armaments agency to rationalise requirements formation within the EU, integrate the European defence industrial base, maximise return on defence investments by eliminating fragmentation and duplication of effort, and ensure commonality and interoperability within European defence forces. The cessation of British objections to such an armaments and R&D agency, a reversal of long-standing British policy, practically ensures that this development will be implemented sooner, rather than later;
- Cooperation in military space programs and the development of a more robust European military space capability. The development of the Galileo satellite navigation system, while not technically a defence program, has obvious military implications and stands as a direct challenge to the monopoly of the US NAVSTAR GPS system (which forms the basis for most modern tactical communications and weapon guidance, in addition to navigation systems).

In short, it ought to be obvious by now that the United States can no longer ignore or reflexively oppose these trends. To do so is to risk being left out of the process, with no ability to exert influence over it or to shape it in a manner that enhances or is at least benign to long-term US strategic interests. Moreover, the process of European defence consolidation and integration can have significant ramifications for the US defence industrial base, for

the ability of the US and Europe to operate effectively in coalition environments, and by extension, for the entire transatlantic relationship. Left to its own devices, a single European defence procurement and R&D agency could easily morph in a protectionist direction, blocking US industry out of meaningful participation in an important export market. European development of systems and capabilities without reference to parallel US systems and capabilities creates the risk of incompatibility, especially with regard to command, control, communications, computers and intelligence (C4I), which is the backbone of transformational network-centric warfare. If the US and Europe are locked in a defence industry trade war, if we are fielding systems that cannot interoperate, if our forces cannot fight together on the same battlefield, then a major foundational pillar of our strategic relationship is undermined, and we will continue to drift apart and follow divergent – and eventually opposing – strategic visions. Therefore, the time for realistic US engagement with Europe is now.

The capabilities gap and its implications

Also lurking in the background is the unpleasant reality of the US-European "capabilities gap" – the immense dichotomy between US military capabilities and those of Europe, which first became painfully apparent during operations in Bosnia and Kosovo, and were reinforced by the poor showing of the European forces that participated in the missions in Afghanistan and Iraq. The plain fact is that despite having a larger population than the US, a strong technology base, and a combined GDP roughly comparable to that of the US, Europe is, in the words of Lord Carrington, "a military pygmy". Julian Lindley-French, in a recent study, quantified something which all knew but were loath to acknowledge: despite having some 1.7 million men in uniform, Europe has fewer than 170,000 combat ready troops, of which fewer than 50,000 could be deployed outside of central Europe. The British army, which generates two-thirds of deployable European military power, is smaller than the United States Marine Corps.[1]

Why is this so, when NATO has repeatedly exhorted (through the Defence Capabilities Initiative and the Prague Capabilities Commitment) its European member states to invest in transformational capabilities, to modernise its forces, and to bring its defence posture into line with post-Cold War realities? There are three main reasons: money, institutional resistance, and lack of political will.

[1] J. Lindley-French and F. Algieri, A European Defense Strategy (Guetersloh: Bertelsmann Foundation 2004).

The reality today is that European defence spending is flat at less than half that of the United States, and because Europe maintains a large and obsolescent force structure, an inordinate share of its defence budgets are dedicated to personnel and operations and maintenance (O&M) costs at the expense of procurement, and more importantly, defence R&D (which stands at barely 25 percent of the current US level).

Is it possible to increase European defence spending to redress this imbalance? Probably not. First, economic growth in most parts of Western Europe is anaemic, between 1.5 and 2.5 percent, while in the new EU states of Eastern Europe, one either finds stagnation or rapid growth focused mainly on modernising the antique, communist-era infrastructure. Second, there is the Maastricht Treaty, which effectively prevents Europe from deficit spending its way out of both its economic and military holes. Finally, there is Europe's looming demographic crunch: with fertility rates below replacement, and a rapidly ageing population, demands for pensions and other social services will overshadow demands for increased defence spending.

If the European defence topline cannot be increased significantly, then the procurement and R&D programs presently on the books – Eurofighter, Leclerc, A400M, Mangusta, etc. – will gradually squeeze out funding for modernisation and transformation. In that case, Europe has only a few choices:

- Initiate massive cuts in force structure and redirect the savings into defence transformation;
- Cancel some existing programs to free funding for transformation;
- Move towards industrial and military specialisation at the national level;
- Reform social welfare programs to free funding for defence;
- Override the Maastricht Treaty's spending caps specifically to deal with outstanding defence requirements.

All of these options could be implemented with sufficient political will. But there is no evidence of that at present, nor any factor likely to generate it (short of a massive terrorist incident on European soil – bigger than Madrid – that galvanises public opinion and demands a military response). So Europe is likely to continue in its rut for the foreseeable future, muddling through, doing a little of each of these options, but not enough. Thus, the reality is that the capabilities gap is going to last for at least a generation, and this should be taken as a working assumption by strategic planners on both sides of the Atlantic.

Thus, given this reality of different levels of force capability for years to come across the Atlantic, if we care about coalition warfare and being able to fight together with Europe, we need to change our emphasis to ensuring

that the United States and European forces are nevertheless interoperable notwithstanding entrenched differences in capability. Here the dilemma is that the world is not static and the longstanding interoperability problem is being exacerbated through differential levels of investment on both sides of the Atlantic and differences in focus.

The United States, spurred by the impetus of war, has dramatically increased its defence spending, and particularly its investment in transformational technology and its focus on net-centric warfare. With the R&D budget growing at more than 5 percent in real terms since 2001, more technology is moving into the armed forces faster than ever before, particularly in such areas as C4I, remote surveillance and precision weapons. The "Rapid Fielding Initiative" (equivalent to the UK's "Urgent Operational Requirement" program) has significantly shortened the period between requirement identification and fielding for some critical capabilities. One need only compare the capabilities demonstrated by US forces in Kosovo versus what was displayed in Afghanistan and Iraq to see how rapidly advances are being integrated into the forces.

So the "interoperability gap" between the US and Europe is still growing – indeed, the rate at which the gap is widening seems to be accelerating, particularly in those areas most closely related to transformation and network-centric warfare. As a result, we may be approaching a point when it is not longer possible for European forces (with some specific exceptions) to fight together with the US in a coalition scenario. The "interoperability gap" is in some sense becoming more significant than the "capabilities gap". In the future, interoperability will largely be about information sharing and net-centric warfare, ensuring that we and our allies have the same situational awareness on the battlefield, the same blue-force tracking capability, etc. After all, would European nations fight side by side with us with a "dumbed down" version of situational awareness?

This is not to say that the United States has invested wisely in every area, or that its vision of defence transformation has yielded the best return for the strategic and operational situation in which it finds itself. Indeed, once conventional operations in Iraq ended, the US found many of its most advanced capabilities irrelevant against an enemy who fights in a distinctly low-technology, asymmetrical fashion. And the cost of operations in Iraq has been bleeding money out of the procurement budget, since the US has reached the saturation level for defence budget increases, which must now return to their historically normal levels. Nonetheless, the United States has chosen to forego near-term procurement of some "big ticket" end items, such as the Crusader self-propelled gun, the RAH-66 Comanche scout helicopter, and even the USAF's beloved FA-22 Raptor stealth fighter, in order to

sustain current levels of transformational R&D and new "niche" capabilities that enhance the warfighting effort in Iraq. So even with the drag of war operations, it appears that the US commitment to transformation remains solid, and that the interoperability gap will continue to grow, absent a major change of policy on both sides of the Atlantic.

Addressing the interoperability gap

Why is it so important to close the interoperability gap (and not just focus on broadly-defined capabilities)? Mainly because coalition military operations are not like pick-up games of basketball. If all the members of the coalition are to make useful contributions to the overall effort, then at the very least they need to be able to communicate with each other, keep track of each other's forces, share intelligence and situational awareness information. If they cannot do this, then each coalition member must be assigned a discrete area of operations and act in a semi-autonomous manner. Under such circumstances, the lesser members of the coalition will be relegated to secondary tasks and will not be considered equal partners entitled to an equal say in policy-making and post-conflict settlement. Moreover, in the eyes of the dominant member of the coalition, the other members will appear to be shirking the load, creating resentment and a tendency among policymakers and planners to take them for granted. Conversely, being consistently relegated to secondary tasks, the lesser members of the coalition will feel like "second-class citizens". In both cases, resentment will poison the well of good will, making future coalition operations less likely.

But, if the gaps are growing bigger, and there is neither the will nor the ability of Europe to close them by increasing spending, what solutions are realistic? Several present themselves, and should be pursued simultaneously.

First, within Europe the process of formulating an ESDP with a single European procurement agency and a single R&D agency should be pursued with more urgency. Putting the organisational and bureaucratic mechanisms in place, hard as that might be, is only the relatively easy first step. Europe must be prepared to address the hard issues, which would include development of a single European grand strategy and of the roles of each member nation within that strategy. If true efficiencies are to be realised, then some smaller states may have to give up pretensions of maintaining full-spectrum military forces in favour of specialisation in a particular niche. This goes to the very heart of national sovereignty and the notion of a pan-European identity; getting to that point will take time and effort.

Second, both the United States and Europe must engage each other more closely in armaments development and defence R&D, with a focus on

interoperability rather than capability. This will require a real change of heart on both sides of the Atlantic, but mainly on the US side. A cursory examination of the US defence budget shows remarkably little cooperative development of any kind – in the order of 0.5 percent, and almost nothing in the area of interoperability and defence transformation. Indeed, most of the critical US transformational programs, such as the Army's Future Combat System and Future Battle Command-Brigade and Below (FBCB2), the USAF's Multimission Command & Control Aircraft (MC2A), the Joint Tactical Radio System (JTRS), are closed to foreign participation (except at a limited bilateral basis). Technology transfer regulations, notably the Low Observables/Counter-Low Observables (LO/CLO) Executive Committee and more recently the Anti-Tamper Executive Agency, as well as the National Security Agency's oversight authority for encryption and communications security, have been used to restrict or lock out foreign participation in critical areas.

The problem extends not only to procurement and R&D, but also to information sharing in an operational environment (for example, the prohibition against foreign access of the DoD SIPRNet prevents coalition partners from accessing much US imaging and other technical intelligence in near-real time). Considering that network-centric warfare is based upon the open sharing of all sources of information to facilitate "effects-based" operations, it is apparent that there is a major disconnect between the United States' doctrinal commitment to coalition warfare (as expressed, for example, in "Joint Vision 2020"[2]), and its technology transfer and information-sharing policies. Our national disclosure policies, under which we release information on an *ad hoc* basis, are not set up for true, sustained coalition warfare, where participants need to have ongoing access to the same situational awareness and must be able to train and work with it in advance of conflicts.

Indeed, this disconnect tends to undermine US policy when it does attempt to be more open with its allies. For instance, the Global Program Agreement (GPA) negotiated for the F-35 Joint Strike Fighter program was supposed to alleviate the need for individual TAAs and licensing agreements on every aircraft component. However, as implemented, it excluded more than half of all aircraft systems, including most of the critical ones; and the GPA contained so many "caveats" as to make compliance more difficult than the traditional licensing process. In short, there are systemic problems that need to be addressed, including the fact that there are many individual decision-makers in the process with discretionary authority and that the prevailing culture is weighted heavily towards preserving notional US technical superiority even over close allies rather than ensuring security through coalition warfare.

[2] <http://www.dtic.mil/jointvision/jv2020.doc>

Alternative solutions have been proposed both in and out of government. The most commonly heard one that is "open architecture" and commercial standards will save us from ourselves. That is, if the military simply leaves industry to its own devices, it will evolve universal sets of standards and protocols that will allow for "magical" interoperability. Those of us with experience in dealing with commercial standards, for, say, computer networks, know just how hollow this promise really is: a standard is no guarantee that a particular device or software package is compatible, no matter what it says on the box. The only way to ensure a true "plug-and-play" architecture is for someone to impose standards from above. In a military context, this is especially true of the backbone network architecture to which all users must subscribe, and to encryption. As these have specifically military requirements that will not be met by commercial standards, a centralised standards authority will be needed. NATO's Advanced Capabilities and Transformation (ACT) group would be a useful multilateral platform for such a group.

Without it, we are left with a series of generally unsatisfactory half-measures – software patches, *ad hoc* "kludges" of incompatible systems that work poorly but are accepted in lieu of not working at all. If we go that route, we will remain hobbled as to the extent that we can work together and exploit the capabilities that technology is opening to us.

This problem is already coming to a head in the NATO Response Force. Intended as a vehicle for capabilities acquisition and European defence transformation, the NRF is at present very much the "pick-up team" described above. Not only does it bring together units from several different European countries, which must learn to interoperate and fight effectively as a team, but it must also be able to interoperate with the US forces on which it will have to rely (for at least the next decade) for many of its enabling capabilities (airborne ground sensors, UAVs, ELINT platforms, satellite imagery, broadband satellite communications, etc.). At present, dissimilar communication systems, dissimilar battle command and combat information systems, dissimilar network architectures all make the necessary interoperability problematic. The NRF is just a harbinger or precursor of the difficulties that will confront all European forces attempting to work with the US in a coalition scenario. Before going one step farther on battlefield capabilities, we must solve the interoperability problem.

Fortunately, that goal is much more economically feasible for Europe than matching the US in raw combat capabilities. Communications, combat information systems, computer networks, encryption systems – all these are relatively inexpensive as compared to big end items like armoured vehicles, combat aircraft, or guided weapons. From a strategic point of view, it is not

really necessary for Europe to try to match the US in these areas anyway, provided that European forces are truly interoperable with US forces (indeed, this is stated explicitly in the US doctrinal statement "Joint Vision 2020").

Transformation does not mean imitation

In fact, one could make the argument that it is counterproductive for European military forces to attempt transformation using the US model of network-centric warfare: not only is it not affordable on a scale that would make a European version effective, but it also creates an operational and tactical monoculture, in which adversaries responding asymmetrically can play upon common vulnerabilities on the margins of our capabilities. Allowed to engage in real transformation that is not blind imitation of the United States, Europe can develop a range of advanced military capabilities that best serve its own needs and exploit its own unique areas of expertise. In a coalition context, this would allow for greater operational and tactical diversity without sacrificing interoperability. It would place in the commander's hands a broader and more flexible pallet of options with which to implement his "effects-based operations". It would present potential adversaries with complementary and synergistic coalition capabilities less vulnerable to attacks upon the margins.

The bottom line

The first question we must resolve is whether we are truly interested in acting together in coalition operations? Do we see a future in which the United States and its European allies will need or desire to fight side by side on the same battlefield? Or do we see the United States and Europe on such divergent trajectories that our vital interests will never coincide in such a manner again? There is no doubt that if we continue the status quo much longer, our coalition warfare capabilities will be irrevocably eroded, making the second option a *fait accompli*. What, then, must be done?

First and foremost, we should shift our focus from improving European combat capabilities to interoperability. We need to refocus our transatlantic efforts on ensuring interoperability among forces with significantly different levels of capability for years to come. On the European side, this means cutting force structure where necessary to free funding for the acquisition of the necessary enabling technology – new communications systems, computers, networks, displays, etc. This may require some hard choices between the continued production of legacy systems of marginal utility on the modern battlefield (such as main battle tanks) but which provide both

prestige and high-paying industrial jobs, in favour of less visible and less glamorous information technology. The heart of the new effort must be the development together of some overall net-centric architecture that the United States and its allies can plug and play into, enjoying the benefits of all available sensory inputs and maximising situational awareness.

On the US side of the ledger, there must be first and foremost a change in our basic philosophy on technology transfer, information exchange and coalition warfighting. From a quasi-protectionist attitude that is inclined to reject cooperation unless forced to do otherwise, we must adopt a posture that is inclined to cooperation unless serious reasons can be produced against it. This will require policy guidance from the top. Beyond that, the process itself requires reform, including a reduction in the number of agencies and activities with *de facto* veto power over the release of information, and a reduction or even the elimination of discretionary authority by individuals. Ideally, all actors in the process would be brought under a single umbrella, and all issues would be adjudicated once and for all in a single forum, where explicit rationales for rejection would be required. The number of items on the munitions list should be further reduced, taking into account the commercial availability of many technologies, the rapidly evolving nature of the high-technology marketplace, the ubiquity of "dual-use" technology, and the globalisation of the supplier base. By opening up the US to transformative cooperative programs focused on interoperability, both sides can exploit the technology base of the other, and ensure the growth of common interoperability standards.

To drive those standards, the US and Europe must create some form of joint interoperability office, either in NATO or as an independent agency cooperating with both NATO and the EU to devise a common backbone information architecture for NATO with common interface standards, file structures, communication protocols, encryption permissions, etc. This will help ensure that future systems will be truly plug-and-play. This would allow all NRF members, for example, to have access to full situational awareness during deployments. We also must train together in the use of these new net-centric backbones; we cannot wait for exigencies.

If we begin to act now, we can, over time, work to address the yawning interoperability gap and thereby rescue the possibility of future coalition actions involving the US and Europe, balance the military capabilities of the partners in the alliance and, by increasing the probability of our working together for peace and security, counteract the centrifugal forces that are pulling us apart.