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## INTEROPERABILITY AND OFFSET POWER

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### JCSP 40

#### *Exercise Solo Flight*

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EXERCISE *SOLO FLIGHT* – EXERCICE *SOLO FLIGHT*

**INTEROPERABILITY AND OFFSET POWER**

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## INTEROPERABILITY AND OFFSET POWER

### Introduction

After World War II, the United States of America (USA) set itself up as a major player in the reconstruction of Europe and Japan. In order to bolster Western European and Japanese economies and defences, in light of the Cold War, the USA allowed co-production and licensed production of its advanced weapons systems. “The philosophy was... [that] nations tend to align politically, economically, and diplomatically with other nations with whom they trade arms.”<sup>1</sup> Industrial Regional Benefits (IRBs) or offsets are promoted by governments as being linked to stirring national economies. “Defence offsets are a means to generate economic benefits for the purchasing country. Support to local defence industrial base, increase in employment [and] acquisition of high quality modern technology... are some of the key benefits of defence offsets.”<sup>2</sup>

In reality, they force nations to purchase and manufacture defence industry products based on leveraged national power and control of those products. National control of defence products leverages power over other nations who want access to these products or want to be full members of a multinational coalition. True interoperability is therefore denied when the sharing of defence products is not uniformly administered

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<sup>1</sup> William E. Jones, “The Value of Military Industrial Offsets,” *The DISAM Journal*, (Winter 2001-2002): 109.

<sup>2</sup> Al Masah Capital Management Limited, *MENA Military: The Hidden Industry* (Dubai: Al Masah Capital Management Limited, 2012), 19.

amongst multinational members of a coalition. “Interoperability is often constrained by the least technologically proficient participant.”<sup>3</sup>

Because offsets have been used for so long, they have become ingrained in the purchase process of modern weapons systems by many nations. “US friends and allies have come to hope and expect that political cooperation will be rewarded with economic and technological benefits, particularly in the defence sector.”<sup>4</sup> While all countries promote that offsets are intended to stir economic growth within a nation, their real purpose is to leverage power in order to gain or maintain control over the international system. American national offset policies cause a denial of interoperability within a coalition unless all multinational members acquiesce to US national power.

## **Power**

American internationalism in the twentieth and twenty-first century is focused on the proliferation of its founding principles around the world in order to ensure its own security and economic interests.<sup>5</sup> By providing the tools to promote its brand of democracy, the United States is, in essence, creating a multi-polar world that is aligned with other like-minded countries. That multi-polarity will focus its attention on deepening

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<sup>3</sup> Department of Defence United States, US JP-3.16, *Multinational Operations* (Washington, DC: Chairman Joint Chiefs of Staff, 16 July 2013), III-21.

<sup>4</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 125.

<sup>5</sup> Alan P. Dobson and Steve Marsh, “US Foreign Policy: Evolution, Formulation, and Execution.” in *US Foreign Policy Since 1945*, ed. Alan P. Dobson and Steve Marsh, 1-19, 217-218 (New York: Routledge, 2006), 6.

relationships through international trade and cooperation.<sup>6</sup> Still, power is at the heart of the issue.

For most of the twentieth century, the dominant approach to wielding national power by the USA was the realist approach. “At realism’s core is the belief that international affairs are a struggle for power among self-interested states.”<sup>7</sup> The ability to use military force in order to strike, defend and deter against one’s enemies is of crucial importance in a realist world. During the Cold War, the USA used military force to strike other self-interested states such as the Soviet Union and China in Korea, Cuba and Vietnam. The USA defended its allies by providing advisors, soldiers and weapons to anti-communist freedom fighters. Finally, the USA deterred further aggression via power projection by positioning its armed forces around the globe. This threat or use of force is not the only method to exercise national power.

Since the end of the Cold War and for most of its history, the liberalist approach has been the dominant method to wielding national power by the USA. “Liberals foresee a slow but inexorable journey away from the anarchic world the realists envision, as trade and finance forge ties between nations, and democratic norms spread.”<sup>8</sup> Rather than use military force, liberalists believe that competing states will use international institutions to settle disputes; the rule of law becomes the fuel to sustain international cooperation. The realist and liberalist methods of wielding national power take on very distinctive characteristics when exercised by a super-power.

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<sup>6</sup> Hans Morgenthau, *The Purpose of American Politics* (New York: Vintage Books, 1964), 26.

<sup>7</sup> Jack Snyder, “One World, Rival Theories,” *Foreign Policy* 145 (Nov/Dec 2004): 55.

<sup>8</sup> *Ibid.*, 56.

A dominant nation tending to the realist approach is known as a predatory hegemon and therefore favours a self-centered interdependent world economy. The predatory hegemon looks to attack other nations it sees as threats to ensure its dominant position of power. In contrast, a dominant nation tending to the liberalist approach is known as a benevolent hegemon and therefore favours a democratic interdependent world economy. Benevolent hegemons choose cooperation and mutual growth over conquest and “help to create a structure that profits everybody by promoting growth.”<sup>9</sup> The USA is the sole superpower nation in the world at this time. As the singular hegemon, it has chosen to follow international policies leaning in favour of benevolence rather than predation.

All hegemons, at one time or another, cease to be. The Roman Empire and the British Empire are examples of predatory and benevolent hegemons that eventually lost their status as superpowers. The USA will eventually lose its status as well. Knowing that its prominence is not indefinite, it can choose to set the conditions of its demise and spur on a new world order based on its core beliefs. “Out of conviction that unipolarity is bound to give way to a multi-polar distribution of power in the international system... [the USA] needs to stand apart from others, yet be prepared to act in concert with them.”<sup>10</sup> By fostering a worldwide liberalist approach to power and putting in place the international institutions to ensure global law and order, the USA will be able to step

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<sup>9</sup> Isabelle Grunberg, “Exploring the Myth of Hegemonic Stability.” *International Organization* 44, no. 4 (Autumn 1990): 440.

<sup>10</sup> Glenn P. Hastedt, “Alternative Futures,” in *American Foreign Policy*. 8th ed. (Boston: Pearson Education, Inc., 2011), 367.

back from being constantly involved in the affairs of others. The source of its national power is what will allow it to put this plan in motion.

State power is “the ability of state A to persuade other states to behave in ways consistent with state A’s goals and interests... Therefore the more capabilities a state has at its disposal to reward compliance or punish non-cooperation, the greater its power and ability to influence”<sup>11</sup> Power can also be seen “in terms of the resources that can produce outcomes.”<sup>12</sup> The USA has developed a very strong defence industry which many other countries want to partner with or buy from, in order to obtain modern weapon systems they could not acquire on their own. America is not afraid to use this position of power in order to further its own goals vice the international system.

Today, the broad array of incentives and rewards the United States has to offer for cooperation includes military credits, offset arrangements, technology transfers, loans, economic aid, joint ventures, different forms of military assistance, and the removal of penalties – whether they are arms embargoes, technology transfer restrictions, onerous export regulations, or high transaction costs. Given the potential rewards, access to the US defence industrial sector has become a strong incentive for political cooperation in the current international system.<sup>13</sup>

National power is the ability of a nation to manage alliances, deter hostility and rule over the worldwide system.<sup>14</sup> With this in mind, it is the defence industrial base that is clearly the powerhouse from which the USA derives its national power. “The sheer size and sophistication of the US defence production sector [provides] US policy-makers with a

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<sup>11</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 105.

<sup>12</sup> Joseph Nye, “Power and Foreign Policy,” *Journal of Political Power* 4, no. 1 (April 2011): 12.

<sup>13</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 127.

<sup>14</sup> Glenn P. Hastedt, “Alternative Futures,” in *American Foreign Policy. 8th ed.* (Boston: Pearson Education, Inc., 2011), 362.

variety of policy options from which to choose [and] encourage cooperative behavior from other states.”<sup>15</sup> In order for that cooperative behaviour to translate into cooperation, a method of working together needs to be devised.

### **Interoperability**

Cooperation within a multinational system is a key ingredient when countries are looking to work together, but just as important is the means by which these countries can work together. “Interoperability is the ability to operate in synergy in the execution of assigned tasks. Within [the North Atlantic Treaty Organization (NATO)], interoperability is the ability to act together coherently, effectively and efficiently to achieve Allied tactical, operational, and strategic objectives.”<sup>16</sup> The USA states in its doctrine that “interoperability with friendly nations is important for achieving practical cooperation... [and] greatly enhances multinational operations. Nations whose forces are interoperable across material and non-material capabilities can operate together effectively in numerous ways.”<sup>17</sup>

The belief in cooperation and interoperability is not a new phenomenon for the USA. The bipolar structure, which existed during the Cold War, spurred the prerequisite that armed forces involved in NATO needed to fight together in order to defeat the possible Soviet threat of the day. This cooperative vision also sustained the idea that great

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<sup>15</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 127.

<sup>16</sup> Chairman of the Joint Chiefs of Staff Publications, CJCSI 2700.01E, *International Military Agreements for Rationalization, Standardization, and Interoperability (RSI) Between the United States, Its Allies and Other Friendly Nations* (Washington, DC: Chairman Joint Chiefs of Staff, 18 March 2015), A-2.

<sup>17</sup> Department of Defence United States, US JP-3.16, *Multinational Operations* (Washington, DC: Chairman Joint Chiefs of Staff, 16 July 2013), x.



cost savings could be achieved by collaborating on research and development (R&D). “[Cooperation] between Europe and the US was introduced... to reduce duplication in defence research and development. Its stated goals... [were]: greater standardization and interoperability ... and savings in defence spending.”<sup>18</sup>

Technology is not the only way that forces become interoperable. Developing common doctrine, training and communications are also important factors in the ability to work together.<sup>19</sup> The capability of nations to operate in common, predetermined and rehearsed ways is just as important as a headquarters being able to plug into a common command and control (C2) tool. Having “C2 interoperability within [a multinational force (MNF) provides] greater cooperation through improved technical capability, system interdependence, and [situational awareness (SA)] in the [operations area (OA)].”<sup>20</sup>

Interdependence and interoperability become even more relevant in light of recent attempts by western countries to transform their armed forces from large Cold War structures to smaller and more nimble structures. Smaller forces rely more heavily on advanced weapons, better communication and more interconnectivity. This interconnectivity requires compatible C2 systems that all members of a coalition force can access in order to fight the new threat of non-traditional contingencies. “Central to the goal of transformation is the concept of network-centric warfare whereby sensors, communication systems, and weapon systems are linked into an interconnected grid that

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<sup>18</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 127.

<sup>19</sup> Department of Defence United States, US JP-3.16, *Multinational Operations* (Washington, DC: Chairman Joint Chiefs of Staff, 16 July 2013), I-9.

<sup>20</sup> *Ibid.*, III-21.

provides an integrated picture of the battlefield...’’<sup>21</sup> The lack of or limited interoperability on the modern battlefield is a sure recipe for failure, but who decides what common systems, doctrine or language are to be used?’’<sup>22</sup>

## Offsets

Nations housing the providers of in-demand weapon systems and defence related products decide how these companies do business. “The production and trade of military goods and services is therefore powerfully influenced by governments, usually in ways that strongly encourage the development of the home country’s defence industry.”<sup>23</sup> By encouraging the development of defence related products, a country will ensure its ability to defend itself with up-to-date weapons and at the same time promote economic growth within its borders. To ensure that proprietary defence information does not fall into the wrong hands, states dictate certain rules to purchasing nations on the production, use and maintenance of these weapon systems. “Offset transactions are categorized into co-production, technology transfer, subcontracting, credit assistance, training, licensed production, investment, purchases and others.”<sup>24</sup>

Countries like Canada dictate that companies who bid on Canadian defence contracts must be ready to spend an equivalent to the dollar value of the won contract on Canadian industry and within Canadian borders. “The government’s Industrial and

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<sup>21</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 109.

<sup>22</sup> Department of Defence United States, US JP-3.16, *Multinational Operations* (Washington, DC: Chairman Joint Chiefs of Staff, 16 July 2013), I-9.

<sup>23</sup> Tom Jenkins, *Canada First: Leveraging Defence Procurement Through Key Industrial Capabilities* (Ottawa: Canada Communication Group, February 2013), 3.

<sup>24</sup> Al Masah Capital Management Limited, *MENA Military: The Hidden Industry* (Dubai: Al Masah Capital Management Limited, 2012), 17.

Regional Benefits (IRB) policy, often referred to generically as an offsets policy, stipulates that IRBs can be provided directly through sub contracts [*sic*] for the acquisitions themselves, or indirectly through contracts unrelated to the subcontracts.”<sup>25</sup> In essence, “[many] of the most highly industrialized countries have thus developed explicitly or implicitly, strategies that promote their defence-related industries, recognizing that such innovative, dynamic industries contribute importantly both to sovereignty and to growth.”<sup>26</sup> These strategies have the effect of forcing the purchasing nation to accept the producing nation’s rules or the purchasing nation will do without the desired defence technology. No country has more power in this regard than the USA.

### **Dependency**

Offsets, therefore, become a very powerful policy tool and the measure of how well a state is able to leverage offsets as a policy instrument is dependent on the weakness of other nations. It is not the size of a state’s armed forces that determines a country’s persuasiveness, “but its capacity to capitalize on the preferences or liabilities of other states. Although state A may possess more resources than state B, state B must need, want, or fear state A’s capabilities in order to be vulnerable to its attempts to persuade.”<sup>27</sup> The USA is by far the most persuasive country in the world due in large part to its industrial base and its globally sought-after advanced weaponry. “US industry dominates the world scene with its massive defence, and research and development

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<sup>25</sup> Tom Jenkins, *Canada First: Leveraging Defence Procurement Through Key Industrial Capabilities* (Ottawa: Canada Communication Group, February 2013), 13.

<sup>26</sup> *Ibid.*, ix-x.

<sup>27</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 105.

(R&D) spending combined with a strong preference for self-sufficiency and protectionism in defence industry.”<sup>28</sup>

Very few countries have any defence-related products that the USA needs, therefore making it a net exporter of military kit.

What is more, as the world’s largest exporter of military equipment, the United States is less dependent on foreign exports to sustain its [defence] sector than almost all other major arms producing countries. Dividing the dollar value of military imports by military exports for a crude indicator of a country’s [defence] industrial dependency, we find that US arms imports amount to 0.07 of its arms exports. Thus, other than France and Russia, the US depends less on foreign [defence] imports than any other major arms producing country. This combination of factors – the relative autonomy, larger size and greater strength of its [defence] industrial sector – gives the US a substantial comparative advantage but poses thorny dependency issues for other countries.<sup>29</sup>

The international dependency on the USA is not just for its advanced weapon systems. Since the weapon system is American, the common language of those using it becomes English. Because the weapon system is built for a specific task, the training conducted by those using it becomes US-led. As the aforementioned training drives national doctrinal changes, a country’s doctrine becomes more Americanized.<sup>30</sup> “When no alternative source exists, and the cost of non-cooperation is high, governments are prone to comply with the policy demands of a stronger state.”<sup>31</sup> Interoperability therefore becomes USA-dependant, not just for the C2 or missile system itself, but for the doctrine, language,

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<sup>28</sup> Stefan Markowski and Peter Hall, “Defence Procurement and Industry Development: Some Lessons from Australia.” in *Studies in Defence Procurement*, ed. Ugurhan G. Berkok, 9-73 (Kingston: School of Policy Studies, Queen’s University, 2006), 10.

<sup>29</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 115.

<sup>30</sup> Department of Defence United States, US JP-3.16, *Multinational Operations* (Washington, DC: Chairman Joint Chiefs of Staff, 16 July 2013), III-22.

<sup>31</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 105-106.

training and support of the entire group or coalition using American weapons. Getting countries to accept American power, without the USA sharing its technology fully has received push back.

In order to “pursue its foreign policy agenda, the United States needs the cooperation of allies and friends. But there is a growing gap between what foreign governments hope to receive in compensation for cooperation and how much the United States is willing to share its industrial know-how and technology.”<sup>32</sup> Europeans, not satisfied with their side of the offset deals have tried countering the USA monopoly on advanced weapons by forming their own common defence industry. “To date, attempts to create a unified market and to end costly industrial duplication have foundered on concerns about national sovereignty, the security of supply, and the conflicting strategic interests of Europe’s small and large countries.”<sup>33</sup>

Europe is therefore still dependant on the military market housed in the USA for both the sale of their weapons and the purchase of American weapons. By only having this option at their disposal, a Hobson’s choice is formed. Either accept the offsets policy or do not enter the market. No other country in the world has enough leverage to change the current policies of the USA and its use of offsets continues to contribute to the USA’s power projection ability anywhere in the world.<sup>34</sup>

Unwilling to lose control over the destination and use of its exported technologies, services, and technical data, the United States requires that

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<sup>32</sup> *Ibid.*, 126.

<sup>33</sup> *Ibid.*, 122.

<sup>34</sup> John H. Eisenhower, “Offsets in Military Exports: U.S. Government Policy, Extract of Remarks Presented to the Defence Industry Offset Association,” *DISAM Journal*, (Fall 1989): 27.

even close allies agree to retransfer/end-user restrictions and conform to key US export controls. From the perspective of other governments, the cost of entry into the US market is increased dependence for them and greater political leverage for the United States.<sup>35</sup>

Australia is an example of a country that does not try to compete with the USA and has simply given-in to the American offset policy. “Australia, as a close ally, has aligned its defence policy with that of the US to include not only the core defence of the Australian continent and its maritime belt, but also participation in US-led coalition operations around the globe.”<sup>36</sup> This policy choice by Australia has meant the loss, in part, of their domestic defence industry. By “forgoing the production of one or more classes of weapons, ... [their] military can no longer initiate a full range of military operations except as part of an alliance or coalition.”<sup>37</sup> Australia is a close ally of the USA and has assured its interoperability in a coalition environment because it has given in to the dominance of American national power based in the USA’s defence industry.

## Conclusion

“Arms transfers promote... interoperability in that they result in allies and friends using common weapon systems... Co-production and licensed production provide incentives for allies to standardize on common systems...”<sup>38</sup> Using American modern weapons allows other countries the comfort of knowing that they can defend themselves against an aggressor or join in a coalition of like-minded states countering aggression

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<sup>35</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 118.

<sup>36</sup> Stefan Markowski and Peter Hall, “Defence Procurement and Industry Development: Some Lessons from Australia.” in *Studies in Defence Procurement*, ed. Ugurhan G. Berkok, 9-73 (Kingston: School of Policy Studies, Queen’s University, 2006), 10.

<sup>37</sup> S.G. Neuman, “Power, Influence, and Hierarchy: Defence Industries in a Unipolar World,” *Defence and Peace Economics* 21, no. 1 (Feb 2010): 118.

<sup>38</sup> John H. Eisenhower, “Offsets in Military Exports: U.S. Government Policy, Extract of Remarks Presented to the Defence Industry Offset Association,” *DISAM Journal*, (Fall 1989): 27.

they could not fight on their own. By using a liberalist approach, the USA has leveraged the use of trade and finance rather than military force as a means of ruling over the international system. Many countries around the world want access to advanced American weapons and their large defence market, but the USA will only allow access if these countries agree to their rules. These rules or offsets ensure that the USA retains control over the production, use and maintenance of their advanced technology. In a multinational environment, supporting countries need the ability to work together making interoperability extremely important, but interoperability is denied when all members of the coalition do not have access to the same technology. Access to American markets, weapon systems, training and doctrine are limited to those countries who accept the US offset policies in place. While all countries promote that offsets are intended to stir economic growth within a nation, their real purpose is to leverage power in order to gain or maintain control over the international system. American national offset policies cause a denial of interoperability within a coalition unless all multinational members acquiesce to US national power.

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