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New Fighter Aircraft Acquisitions in Brazil and India: Why Not Buy American?

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How do states decide where to source arms? Drawing on theories of international relations, we consider the recent fighter aircraft competitions in Brazil and India, and analyze why the U.S.-made aircraft lost to their European rivals. Official statements offered by the Brazilian and Indian governments have cited inferior aircraft performance, technology-sharing issues, and prices. These explanations may be valid, but their main purpose is to direct attention away from the fact that military procurement is, above all, a matter of international politics and policy. Using analytical eclecticism as our guide, we selectively combine constructivist, liberal, and realist theoretical elements to provide a more comprehensive explanation of why Lockheed Martin and Boeing failed to sell fighters to Brazil and India.

Keywords: Security and Defense Policy, Foreign Policy, International Relations, Arms Deals, Brazil, India, United States, Europe, Fighter Aircraft, Conventional Weapons Sales, MMRCA, FX-2, Global Swing Powers, Emerging Powers, Arms Trade, Analytic Eclecticism, Lockheed, Boeing.

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Cómo es que los estados deciden dónde proveer armas? Teniendo en vista las teorías de relaciones internacionales, consideramos que los concursos recientes de aviones de guerra en Brasil y la India y analizamos por qué los aviones hechos en los EEUU perdieron ante sus rivales europeos. Las posiciones oficiales ofrecidas por los gobiernos brazileño e indio han citado desempeño inferior de las aeronaves y asuntos de compartimiento de tecnología así como precios. Estas explicaciones pueden ser validas, pero su principal propósito es desviar la atención del hecho que la procuración militar es, sobre todo, un asunto de política y políticas internacionales. Utilizando como guía al eclecticismo analítico, combinamos de manera selectiva elementos teóricos constructivistas liberales y realistas para proveer una explicación más comprensiva de por qué Lockheed Martin y Boeing fracasaron en su intento de vender aeronaves de guerra a Brasil e India.

U.S.-based weapons producers possess vast international market power thanks to massive defense spending by the American government and to the expansive structure of the U.S. alliance system. But while Boeing, Lockheed Martin, Raytheon, and others now have more foreign customers than ever before, they often fail to capture key "emerging" markets. Witness the recent fighter jet competitions in Brazil and India code-named, respectively, the Fenix 2 (FX-2) and Medium Multi-Role Combat Aircraft (MMRCA) programs. In India, Dassault Rafale won the tender in January 2012 over the Eurofighter Typhoon, while neither the Lockheed Martin F-16IN Super Viper nor the Boeing F/A-18 E/F Super Hornet made it past the April 2011 shortlist. In Brazil, Boeing was regarded as a front-runner, but it too lost to a European rival in the end. In December 2013, Brasília announced that the Brazilian Air Force (FAB) will soon be operating the Saab Gripen NG.

According to Brazilian and Indian defense officials, these decisions were based on a combination of operational, technical, industrial, and financial criteria.[1] Official explanations have their merits, but one must keep in mind that they tend to be diplomatically scripted to omit or minimize most references to "high politics" and "grand strategy." Yet it is precisely these latter factors that make or break most major conventional weapons deals most of the time. In the case of fighter aircraft procurement, defense policy is especially intertwined with foreign policy given that no country can import such sophisticated weapon systems without simultaneously establishing a long-term strategic partnership with the supplier—a fact plainly illustrated by the contentious nature of the contract provisions between the supplier and the receiver regarding longer-term technology-sharing, industrial offsets, maintenance and upgrades, training, and the like. As such, the FX-2 and the MMRCA deals are akin to mini-alliance treaties—that is, they are costly public signals of what and where Brazil and India wish to be in the international system. Brazil and India's decisions to buy European fighter jets (hereafter fighters for short) over U.S.-made alternatives are not *the* litmus test for the nature of overall security and defense relations between the United States on the one hand and the two key "emerging powers"—some prefer the term "global swing states"—on the other. But they are rightfully regarded as implicated in the emerging structure of the so-called post-American international order (see respectively, Chacko 2014, 340; Hakim 2014, 1162; also Cooper and Flemes 2013; Hurrell 2006; Kliman and Fontaine 2012; Tellis 2005).

In this study, we use international relations (IR) theory to shed new light on the political dimensions of these two major policy decisions. We do so by selectively combining elements drawn from constructivist, liberal, and realist teachings (the ordering is alphabetical), an approach known as "analytic eclecticism." We find that all three theories contribute valuable insights into the politics surrounding the two competitions, without any single logic dominating in terms of overall explanatory power. Constructivism is helpful in underscoring the role of culture, and especially strategic culture. From this perspective, while the technical evaluations and operational requirements did create issues for the U.S. vendors, the fact is that many members of the Brazilian and Indian defense policy communities had *a priori* dismissed the U.S. deal as inherently asymmetric and contrary to national interest. Thus, while Brazilian and Indian suspicions about U.S. hegemony differ in their genealogies, purposes, and contestations, they worked against "buying American" in remarkably similar ways. Next, a liberal idea that weapons sourcing decisions arise from the ebb and flow of domestic politics receives support in both cases, but especially in the case of Brazil. Our finding is that revelations of U.S. spying on the Brazilian President Dilma Rousseff were not as important as the perceived credibility of Saab's promise to assemble Brazil's new Gripens in Brazil

[1]For Brazil, see Affonso and Baptista Júnior (2014), Amorim and Saito (2013), and Soto and Winter (2013). For India, see Business Standard India (2011), Tellis (2011), and Pandit (2012).

(and more specifically in Rousseff's party traditional electoral stronghold in Sao Paulo). Finally, we find the realist notion of "hedging" to be more illuminating in explaining these outcomes than "soft balancing," although we also acknowledge that neither idea can be fully examined in light of the available evidence.

Data for our analysis comes from two sources of knowledge: (1) the secondary expert literature and industry media reports, and (2) semistructured interviews with civilian government officials, military officers, defense industry consultants, and defense industry journalists as well as university and think tank researchers. The latter source was particularly valuable since it provided us with much-needed corroboration, detail, and context.[2] We should stress from the outset that we made a principled decision to assemble diverse theoretical and analytical components in a single narrative rather than adjudicating the relative explanatory potential of each since we believe that large-scale military procurement programs always involve multiple, albeit interlinked, causes and contingencies. We propose further that the significance of this study also arises from the fact that these two programs are deeply implicated in Brazil and India's respective investments in the civilian aerospace sector too, and are likely to have major ramifications in terms of jobs, technology spin-offs, and even balance of payments for decades. Considering that at the time of this writing the FX-2 is conservatively estimated to be worth around $4.5 billion USD, while the price tag for the MMRCA hovers around $20 billion, these programs are likely to establish themselves as sites of major power struggle among different governing actors in Brazil and India for years to come.

The article is divided into four sections. The first unpacks the idea of analytical eclecticism and makes an argument that "buying American" was a plausible option in the FX-2 and MMRCA competitions. The second examines these cases from a constructivist perspective, considering factors like global, strategic, and organizational culture. The third section evaluates liberal theoretical elements, focusing on electoral politics and industrial preferences and their respective influence on the policy outcomes under study. The fourth section evaluates realist ideas about balancing, bandwagoning, and hedging. We conclude the study with a discussion of theoretical and policy implication of our analysis.

Why Analytical Eclecticism?

Our goal in this article is to bring multiple IR approaches to bear on the question why Brazil and India recently decided to buy European, as opposed

[2]In total, 27 interviews were conducted between July 2012 and March 2013 in New Delhi and Bangalore, between December 2013 and February in 2014 in Brasília and Rio de Janeiro, and at three international airshows: Farnborough, UK (2012), Bangalore (2013), and Paris (2013). Since international arms deals revolve around a huge range of sensitive issues about which participants rarely speak on the record unless their anonymity is fully protected, we recruited our participants by committing from the outset to omit the exact date and location when citing interview data (hence the "number-year" citation format).

to American fighters. Our analysis is guided by the idea and practice of analytic eclecticism as advanced by Rudra Sil and Peter Katzenstein (2010b, 43-8). This approach emerged from a growing and pervasive sense that the "inter-paradigmatic" debate has not only stymied cumulative theorizing but also the discipline's ability to engage and inform practical concerns, including the so-called policy-relevant knowledge. In this view, while contestations between and among IR "isms" have many useful purposes and functions, they nevertheless can get in the way of explaining even the basic processes in international political life as, in this case, major military recapitalization programs in the world's key swing states.

Sil and Katzenstein's (2010a, 2010b) intervention begins with a noncontroversial claim that a single "ism" cannot capture the complexities of world politics; complexity, after all, is one reason why IR remains divided in terms of ontological assumptions, conceptualization, epistemology, methodology, empirical interpretation, and so on, all of which change the object of study in fundamental ways. According to Sil and Katzenstein (2010a, 412), this is not an Achilles' heel. On the contrary, so long as scholars pursue their research problems in an open-ended, practical, and *pragmatic* manner, the discipline's theoretical diversity can be a boon for knowledge. Apart from its ability to better communicate IR knowledge to both academics and nonacademics, the main promise of analytic eclecticism lies in its willingness to "forgo parsimony to capture the interactions among different types of causal mechanisms normally analyzed in isolation from each other within separate research traditions" (Sil and Katzenstein 2010a, 412).

The stated goal of analytic eclecticism is to supplement, not supplant, theoretical approaches, and insights drawn from across approaches (Sil and Katzenstein 2010a, 425-6). This qualifier is important for two reasons: first, rather than promoting kaleidoscopic or syncretic interpretations, analytic eclecticism merely offers a corrective to a very narrow focus on "pet" variables or mechanisms. Second, analytic eclecticism fully acknowledges that "bracketing" theoretical and meta-theoretical issues like the levels of analysis or the ideational-material dichotomy in favor of attention to middle-range theorizing and mechanism-based explanations may be said to privilege some IR research traditions over others.[3] However, this pitfall has no bearing on the present analysis given that we focus on only a handful of basic and mutually comparable theoretical constructs drawn from the so-called "three main contending paradigms" (Sil and Katzenstein 2010b, 209). In other words, we assess how *some* causal factors associated with *some* IR "paradigms" interacted with each other to influence the FX-2 and MMRCA decisions. Theoretical and analytical gaps that are intrinsic

[3]On the philosophical grounding of analytic eclecticism in American pragmatism, see Sil and Katzenstein (2010b, 43-8).

to such a first-cut analysis are meant to be addressed in future studies, especially as the documentary residue of the events we describe expands.

Before we move on, let us establish that "buying American" was a plausible option in both competitions. In Brazil, the FAB launched a search for the new fighter in 1996, dubbed the Fenix (FX) program. The goal was to upgrade the force's operational capacity across the board, and this included 24 new fighter aircraft (Kanitz 2013). The next year, Washington lifted its last remaining Cold War-era ban on defense exports to South America, opening the possibility of participation in the FX tender (Peron 2011). By mid-1998, five candidates responded to Brasília's request for proposals: Dassault's Mirage 2000-5, Saab's JAS 39 Gripen, Russia's MiG-29S, and Sukhoi SU-35—and two U.S.-made designs, the Lockheed Martin F-16C and the Boeing F/A-18E. The process went nowhere: a series of industry-level deals violated the basic terms of the competition, and in 2004 the government moved to cancel the FX. Three years later, the FX-2 was born as a centerpiece of the so-called "new strategic thinking" in the Brazilian defense policy (Dagnino 2010). Strategic documents published by the Lula administration, including the 2008 National Security Strategy, called for a stronger aerospace industry and military procurement was identified as one vehicle for achieving this goal. In April 2009, the Brazilian Ministry of Defense received three FX-2 bids: Dassault offered the Rafale, a warplane that had only recently entered service with the French Air Force, Saab pitched the new generation, or "NG," Gripen (E and F versions), and Boeing went with its latest Super Hornet. For the next four years, the FX-2 deal turned into a spectacular three-cornered contest involving no shortage of public relations campaigning and high-level lobbying. According to our inteview data, the Super Hornet constituency strengthened in latter years, possibly due to the fact that in September 2011 the company appointed Donna Hrinak, a former U.S. ambassador to Brazil, as the head of Boeing Brasil (Interviews 15-2013, 1-2014, 2-2014).

India's MMRCA program was conceived as a stop-gap solution to the problem of the rapidly declining fighter aircraft capability.[4] The idea was to acquire a fleet of medium combat aircraft that would enhance India's air superiority over Pakistan, while also helping the heavy combat (and largely license-produced) Sukhoi 30-MKIs in deterring Chinese fighters. New Delhi's decision to go with a competitive process must be regarded in terms of a broader effort to liberalize the Indian state. The original Indian Air Force (IAF) modernization plan, going back to the 1990s, was to sole-source either the MiG-29 or the Mirage 2000s. As years passed, two changes occurred. First, new fighter designs, prefixed as "4.5 generation" and "medium multirole," became

[4]Multiple interviews by the authors revealed that India's reigning air power doctrine calls for 39.5 fighter jet squadrons, but in the mid-2000s the IAF fielded no more than 25, some at quite low levels of serviceability. More generally, see Singh (2007).

available on the market. Second, successive governments became interested in a more transparent system of defense acquisitions as a way of combating corruption. In particular, it was Defense Minister George Fernandes (1998-2004) who "repeatedly" rejected IAF proposals for a single-sourced deal, arguing that India should always seek the best value for money via competitive tendering. An open competitive process, he and other officials argued, would not only be an antidote to corruption that so often plagued previous arms deals (e.g., the 1980s Bofors scandal), but it would also diversify and improve the country's defense cooperation options (Interviews 1-2012, 5-2013, 11-2013).

Details remain scant, but it appears that New Delhi decided to have an "open" competition—also dubbed "objective" and "transparent"—shortly after the 2004 general election. This was a big decision by any reasonable measure. Estimated to be worth $10 billion—subsequent industry media estimates have doubled this number—the MMRCA was not only the largest deal in the country's history but also arguably the largest open tender deal in the world of military aviation ever. In 2007, a request for proposal was issued. By April 2008, six bidders responded—three from Europe (the Rafale, the Gripen, and the Eurofighter Typhoon built by a German-Italian-Spanish-UK consortium EADS), one from Russia (the MiG-35), and two from the United States (the F-18 and the F-16). At this point in time, it was Defense Minister A. K. Antony (2006-14) who was instrumental in subjecting the competition to a two-stage evaluation process, whereby the first focused on purely technical desiderata set out beforehand in the IAF's Air Staff Quality Requirements (ASQR), and the second, coordinated by the Ministry of Defence, on items like offsets and costs. The fact that the U.S.-made aircraft never made it to the second stage came as a surprise even to Indian observers. Some pointed to the fact that U.S. arms exporters had previously won major Indian government contracts for large systems like the heavy lift transport aircraft, special operations tactical transport aircraft, long-range maritime patrol aircraft, and warships, and were offering significant offsets and attractive side-payments. Others noted that U.S. fighters carried lower life-cycle costs, and still others bemoaned the lost opportunity for another breakthrough in the Indo-U.S. strategic cooperation. Judging by the reactions, "buying American" was a real option in India, too (Tellis 2011, 10).[5]

In sum, Brazilian and Indian new fighter aircraft campaigns were both staged as international competitions and U.S. bids were welcomed in each case. Furthermore, there were clear precedents for "buying American"; when U.S. President Barack Obama lobbied for the U.S. warplanes during the state visits

[5]Note that the purchase contract for the Lockheed Martin C-130J Hercules was signed in 2008, and the one for the Boeing C-17 Globemaster received U.S. Congressional approval in 2010. An example of an issue linkage was Lockheed Martin's promise, made in 2009, to offer "preferential treatment" to New Delhi in the future market for the F-35 Joint Strike Fighter, the fifth generation fighter that was being jointly developed by a Lockheed Martin-led consortium and nine government partners (Interviews 7-2012, 8-2012, 1-2013).

to India (November 2010) and Brazil (March 2011), he could credibly point to the fact the Brazilian and Indian air forces were either using or had ordered billions of dollars-worth of gear from U.S. suppliers. By way of a caveat, we should note that that the MMRCA and FX-2 programs remain technically open at the time of this writing. India may well end up abandoning a purchase contract with Dassault, and the budgetary aspects of the Gripen deal are slated to be discussed in the 2015 fiscal year, following the presidential election (Amorim and Saito 2013). But even if both sets of negotiations fall through, it is extremely unlikely that the U.S. fighter aircraft makers will be willing and/or able to renew their bids.[6]

Defense Policy as Culture

In general, constructivism is based on the idea that reality (and knowledge) are socially constructed rather than objectively given. In this analysis, we shall focus constructivist theorization of "culture" at three levels: world, strategic, and organizational. The first draws on the work of John W. Meyer in sociology and the idea that some objects are pursued by states because they symbolize modernity. As Eyre and Suchman (1996) have shown in their landmark study, what attracts states to fighter jets—including, critically, poor states—is not only their military functionality but also the fact that these particular weapon systems emblematize the modern nation state and membership in international society. As modern states, Brazil and India are variously described as emerging powers—"BRICS" [Brazil, Russia, India, China, and South Africa] and "IBSA" [India, Brazil, and South Africa] members (Flemes 2009)—or industrial latecomers, or as less-developed countries (LDCs) and each one of these labels captures some aspects of their defense acquisition record thus far. For decades, both countries have made significant investments toward defense industrialization and an indigenous arms industry that could meet not only domestic needs but also bring competitive products to the international arms market.

According to the literature on global arms production, what an ideal-typical LDC seeks is to move up the "ladder of production" and so reduce its actual, potential, or perceived dependence on outside supply (Bitzinger 2009; Hoyt 2006). Contemporary Brazil and India are today categorized as so-called Tier 2 producers, whereby Brazil's military-industrial complexes privileges select and relatively high-end niche products (there are similarities with South Korea, Taiwan, and Turkey), while India's is more unique in pursuing a broad-based defense base even if it continues to lack industrial capacities to make

[6]International political dynamics behind Saab's triumph over Dassault in Brazil and Dassault's over EADS in India will not be examined here, but see, for example, Bourcier (2012) and de Briganti (2012). For regular updates on these deals in English, see *Defense Industry Daily* at http://www.defenseindustrydaily.com and/or *Aviation Week & Space Technology* at http://aviationweek.com

advanced conventional arms on its own.[7] But while India and Brazil have long worked on developing and producing piloted military aircraft—and are now fast building capacity toward the production of pilotless aircraft—they remain at some distance from a tiny club of states willing and able to support the production of airframes and engines for modern "fourth generation" fighters, to say nothing of the latest "fifth generation" designs.

The Brazilian defense industry has been involved in international joint-venture deals as in the case of the AMX small air-ground jets, and has been successful with the Super-Tucano turboprop aircraft designed for training and counterinsurgency operation (the U.S. government is one of its buyers).[8] As for India, its industry has long struggled to produce the indigenous light weight fighter jet Tejas and the intermediate jet trainer Sitara, yet in mid-2000s it ambitiously teamed up with Russian partners to co-develop and co-produce a state-of-the-art "fifth generation" fighter jet, estimated at over $10 billion.[9] While neither the Brazilian nor the Indian industry attempted to launch a campaign to build an indigenous fighter jet that could meet the respective MMRCA and FX-2 requirements, the transfer of technology—both the know-how and the know-why—loomed large in both competitions. In fact, technological development appeared so commonsensical in these contexts that it ought to be analyzed as a component of the so-called strategic culture—a collection of widely shared beliefs and assumptions that shape how decision makers choose the means and ends of security and defense objectives.

Brazil's dominant strategic culture made large compromises over technology sharing unlikely. From the procurement of dreadnoughts in the 1920s through the establishment of a science and technology-centric war studies curriculum at the Escola Superior de Guerra in 1950 to the national security strategy documents of the post-Cold War era, successive Brazilian governments have always privileged the acquisition of cutting-edge military technology (Proença and Diniz 2008). The Brazilian military not only went along, but in fact frequently framed its hardware requests in terms of *desenvolvimentismo*—essentially a neo-Marxist discourse centered on the idea that the North should deliberately keep the South technologically segregated. The same general discourse called for investment in select "national champions" and the development of industrial "enclaves" characterized by relative technological sophistication and high subsidies (Perucci 1995, 374). Today, several such companies survive, such as Avibras, Embraer, and Mectron. The odds of an American deal were adversely affected by the fact that Boeing and Lockheed Martin would not or

[7]Since independence, successive Indian governments indeed pursued import-substitution of defense material as a way of modernizing and industrializing the economy (see e.g., Basrur, Das, and Pardesi 2007; Hoyt 2006; Singh 2000).

[8]For the link between military acquisitions and the politics of modernization in Brazil, see, *inter alia*, Martins (2010) and Kapstein (1990).

[9]The preliminary design and production timelines have not been specified at the time of writing.

could not match their rivals' willingness to enter partnerships, and also share technology, with these companies.[10]

During the FX-2 process, the FAB did not appear to have a strong preference for a specific fighter jet type—possibly because, unlike India, Brazil faces no "traditional" threats.[11] The organization looked very favorably on Saab's willingness to transfer technology related to data fusion. According to Air General Carlos Baptista Júnior, Commander of Brazilian Aerospace Defense Command, the FAB sought a system that would interoperate with the surveillance systems being developed by the Brazilan military, namely the Army's SISFRON (*Sistema Integrado de Monitoramento de Fronteiras*) and the Navy's SisGAAz (*Sistema de Gerenciamento da Amazônia Azul*). The goal of improving "jointness" through improved communication networks was set in Brazil's 2008 National Defense Strategy, and Saab was wise to respond to this operational need by offering a more generous technology transfer package than its competitors (Affonso and Baptista Júnior 2014). Last but not least, in his testimony to the Brazilian Senate, Air Brigadier José Augusto Crepaldi, president of the commission for Brazilian combat aircraft acquisitions, stated that "only Saab offered access to the source code" (Brazilian Senate 2014, 31-2). Viewed from any level, the U.S. tendency to guard the whereabouts of its commerical military systems at all times—and in Brasília the memories of the 2006 U.S. Congressional veto over the slated Super Tucano sale to Venezuela, estimated at $470 million USD, were particularly fresh[12]—was the single most important reason why Brasília declined to buy American in the FX-2.

In India, "self-reliance" is a long-standing, if still elusive defense policy (Behera 2013, Pardesi and Matthews 2007). Today, New Delhi indexes self-reliance in terms of percentage of the Indian content against total procurement expenditures. The MMRCA mandated a 50 percent offset (Interview 7-2012), and the current plan is to licence-produce 108 out of the total 126 Rafales in Bangalore.[13] Such a high degree of indigenous production cannot be

[10]The original FX competition collapsed because the European vendors were too aggressive in this regard. Dassault moved first to buy a stake in Embraer, a Brazilian aerospace manufacturer, to which Saab responded by proposing a partnership to Varig Engenharia e Manutenção, then the largest aerospace company in Brazil. Finally, the company behind the SU-35, Rosoboronexport, signed a deal with the third Brazilian company, Avibras Aerospacial (Peron 2011).

[11]During the entire FX/FX-2 process, the operating assumption was that Brazil would not be militarily threatened before the end of the life-cycle of the FAB's current fleet, between 2015 and 2025 (see Ministry of Defense, Brazil 2008, 2012).

[12]The Super Tucano cannot function without U.S.-made components (Silveira 2009). The fact that the same applies to the Gripen makes Brazilian officials wary about the imposition of limits on future third country transfer opportunities (Brazilian Senate 2014).

[13]These numbers are subject to negotiations. For example, in the mid-2000s, the government mandated that 30 percent of all multi-million defense purchases must be offset by investments in India's defense sector, but the bar was subsequently raised to 70 percent.

accomplished without an agreement for the transfer of technology, including technology classified as sensitive.

While Indian and U.S. officials publicly downplayed it, the link between U.S. limits on technology transfer and the competition outcome was obvious to many from the beginning. Unfortunately for Lockheed Martin and Boeing, military technology sharing restrictions maintained by the U.S. Congress are particularly stiff in the case of "new partners" like Brazil and India (as opposed to "traditional friends and allies" like Canada or the United Kingdom). Commenting on India's decision not to buy American fighters for the industry publication *Defense News*, an unnamed senior U.S. government representative denied that this issue was a "clincher" issue but added this: "We have a defense licensing system which is consistent with the law of the land, and there are certain technologies we're simply not going to hand over. That's just a fact of life" (Majumdar 2011). One former Indian Ministry of Defence official suggested that even at the first MMRCA stage, the evaluators could not discount the fact that "the Europeans were more flexible on the tech transfer" (Interview 2-2013). Had Washington signaled willingness to allow transfer of at least some technologies that constitute the F-16 and F-18 systems, the U.S. bids would have gained more supporters in Brasília and New Delhi.

In the Indian case, there was another, possibly even more powerful, cultural factor at work. When asked to name the most influential nongovernment document on India's strategic options published in recent years, eight out of 17 of our interviewees named "Nonalignment 2.0," a national strategic guidance published by New Delhi-based Centre for Policy Research (Khilnani *et al.* 2013).[14] As a strategy of ensuring that India remains beholden only to itself in world politics, nonalignment works itself through weapons acquisition inasmuch as nontechnical criteria always include not only items such as offsets and technology transfers but also the ability to hedge the receiver's strategic bets over the longer term. As pointed out by one defense industry-watcher in the context of the MMRCA competition, "India's strategy, above all, is to spread the risk" (Moss 2011).

Turning to the level of organizational culture, our evidence suggests that this factor had considerable impact only in the Indian case. One of the most powerful factors working against American aircraft in the MMRCA was the fact that the IAF wanted a "super hot rod of the skies"—a fighter jet rigged for air combat as opposed to other missions (Tellis 2011, 10). Our interview data confirm that long before the MMRCA competition guidelines were finalized, the IAF-level culture indeed tilted toward a French-made fighter jet, first the Mirage 2000 and then, when it became available for sale, the Rafale. The

[14]Suffice it to say this finding is only suggestive. Currently, there is no reliable survey, ethnographic or discourse/content analytic data on how India's defense community thinks in strategic terms, but see the relevant discussions in Narang and Staniland (2012), Bajpai (2002), and Ollapally and Rajapopalan (2012).

IAF indeed has a positive collective memory of working with Dassault's aircraft, but only one interviewee went as far as arguing that the competition was "skewed from the beginning" such that the air staff formulated the ASQR in a way that only the Rafale could win the competition (Interview 3-2012).

A related point is that the IAF disqualified the F-16IN on the grounds that the rival Pakistan Air Force had recently taken a delivery of the "same" platform. According to our interview data, this was a commonplace reaction among bureaucrats and politicians, but the rejection was not purely symbolic as the F-16 version Lockheed Martin offered to India (Block 60) was heavier and less maneuverable than the version (Block 52) received by Pakistan (Tellis 2011, 9-10). As for the F-18, a high-ranking IAF source suggested that the Super Hornet initially had "many supporters" in the bureaucracy, especially within a "faction" working toward the development of India's carrier-borne strike capability, but that the aircraft's maneuverability and performance of its much-vaunted twin engine during the trials proved to be "disappointing" (Interview 13-2013).

The Electoral-Industrial Complex

Like constructivism, liberalism in IR encompasses a wide variety of theoretical perspectives. In this study, we focus on the basic liberal idea that states primarily act on behalf of dominant interest groups within domestic society. Different issue-areas tend to mobilize different societal interests and have different redistributive implications for domestic constituencies, but in the case of Brazilian and Indian fighter jet replacement processes two causal mechanisms emerge as crucial: electoral politics and industry preferences (see Cooling 1981).

In the Brazilian case, a defense deal with the United States would have carried major domestic audience costs in 2013. U.S. intelligence analyst Edward Snowden blew the whistle about extensive practices of surveillance carried out by the U.S. National Security Agency (NSA) and its "Anglosphere" partners against other countries. Tragically for the Boeing bid in the FX-2, these revelations included evidence that the NSA spied on personal communication by President Rouseff, causing the biggest diplomatic tiff in Brazil-U.S. relations in at least a generation. At the press conference of December 18, 2013, Brazil's Minister of Defense Celso Amorim and the FAB's top commander Junito Saito pointedly refused to answer questions about any linkages between the FX-2 outcome and the espionage affair, but they both confirmed that the decision was made at the presidential level. While the espionage scandal was by no means decisive in this case, the fact is that "buying American" would have carried a major electoral penalty for the ruling government (Duarte 2013, 12-5; Hakim 2014). For one, Rousseff's stewardship of Brazilian sovereignty would have been challenged not only by the left-wingers within her own Workers Party but also by the voters in the 2014 presidential elections.

Another major causal factor behind the FX-2 competition outcome was the public commitment on the part of Saab's officials to build a new fighter jet assembly plant in the metropolitan area of Sao Paulo, a key political base for both Rousseff and the Workers Party. While it is hard to determine how much impact this promise had on the competition process, the fact remains that, in sharp contrast to the European competitors, Boeing never received authorization by the U.S. government to make such promises. Indeed, the best the company could to do was to announce in April 2013 its plan to establish a small "aerospace research center" in Sao Jose dos Campos, a city in the Sao Paulo state that also hosts some of Embraer's production facilities. Overall, it is expected that the Gripen deal will yield up to 3,000 direct jobs and nine times as many indirect ones (Brazilian Senate 2014, 29; also Amorim and Saito 2013).

In India, the domestic audience costs of buying American were not as high, but they existed nonetheless. In fact, the Indian government might have been "lucky" that no American candidate was short-listed. "A two-horse race between a European and a U.S.-made warplane would have increased U.S. pressure for closer military and political ties, but in India there is not yet an appetite for such a foreign policy U-turn" (Interview 13-2013). Had an American fighter jet won the MMRCA competition, the Indian government would have been forced not only to modify the traditional nonaligned strategic vision for the country but also sell that vision to its constituents. This was a sobering prospect for a coalition of political parties led by the Indian National Congress, the party of Pandit Jawaharlal Nehru, the republic's first prime minister and the father of India's nonalignment. Conversely, while a Bharatiya Janata Party-led government would have not pursued a full-blown rapprochement with the United States, it would possibly make it slightly easier for a U.S.-made fighter jet to win the MMRCA.

Like electoral politics, industrial preferences also significantly shaped the outcomes under study. In contrast to the MMRCA, the official explanation of the FX-2 outcome holds that technological and industrial considerations were at least as important as the operational requirements put forth by the FAB. Commander Saito put it thus in front of the Brazilian Senate (2014, 4): "We do not want simply to buy an aircraft from the shelf, but an aircraft from which we can develop our technology and strengthen our aerospace industry." The same point was made by the aforementioned officers Baptista Júnior and Crepaldi (Affonso and Baptista Júnior 2014). For example, Crepaldi argued that the Gripen deal would provide "complete transfer of flight control systems" to the Brazilian industry, and specifically help Embraer, which is the destination of the majority of the deal's work shares, build both military and civilian aircraft (Affonso and Baptista Júnior 2014). The deal is, thus, expected to help boost development, production, and export opportunity for at least four major weapons programs: the KC-390, a medium-size military transport aircraft produced by Embraer and its partners; the Legacy 500 Executive, a new regional transport aircraft built by Embraer; the rocket-launch system ASTROS, a top

export product of the Brazilian defense industry; and the air-air missile A-Darter (Affonso and Baptista Júnior 2014).

Judging by the estimates of independent industry experts, Brazil's goal to indigenize 80 percent of the FX-2 program is more realistic than India's plan to indigenize 50 percent of the Rafale, but the consensus among our interviewees is that neither Brazilians nor Indians believed that a U.S. deal would have allowed any significant indigenization at all. In the Indian case, the U.S. bids were further challenged by an industry-wide perception that it was more efficient to continue working on the familiar production and maintenance lines, mostly Russian and French, than by opening a new one with U.S. partners even if Lockheed Martin and, especially, Boeing had already invested millions in Indian civil aerospace.

Another important factor affecting the dynamics of the MMRCA competition was the government's anti-corruption campaign. As Tellis (2011, 13) observes, Defense Minister Antony was so averse to corruption risks that he went "so far as to insist that even critical geopolitical considerations relating to India's national security writ large would play no role in his ministry's procurement process." U.S.-made designs never made it to the second stage. Given that other vendors could not possibly match the depth and breadth of strategic opportunities offered by the world's reigning hegemonic power, "the lack of political content in the Indian ministry of defence's decision-making actually worked to America's disadvantage in this competition" (Tellis 2011, 15).

The design of the acquisition procedure significantly impacted the MMRCA decision, but to make a case of an apolitical MMRCA process, as Tellis (2011) does, one would also have to convincingly demonstrate that the IAF's technical evaluation team operated at arm's length from the politicians and their advisors at all times between 2008 and 2011. According to our interview data, the balance of evidence suggests that further research is required to validate Tellis's hypothesis.

Strategic Calculus

Within the field of IR, realist perspectives have long been dominant and their explanations of how the politics of arms imports privilege the competitive nature of the system of sovereign states, both regional and international. Realism offers numerous theoretical constructs that can be used to illuminate defense procurement processes. The distribution of military capabilities within a geographic context, for instance, helps explain why the IAF is seven-to-eight times larger, depending on the measure used, than the FAB. But could it be that Brazilian and Indian fighter jet decisions are in fact "grand" strategic choices targeting, indirectly or otherwise, the power of the United States as the preponderant state in the international system? To answer this question, we shall now consider three specifiable strategies for states seeking security in a

competitive inter-state system: balancing, bandwagoning, and hedging (see Nexon 2009, 344; Pape 2005, 10; Paul 2005, 59).[15]

In a realist reading of history and geography, Brazil and India are both major regional powers with a history of balancing behavior. In the South American cone, Brazil traditionally countered Argentina, while in South Asia, India balanced—and still balances—China and Pakistan. As for their behavior *vis-à-vis* the United States, while neither country ever enthusiastically supported *Pax Americana*,[16] the fact is that Brazil acquiesced to it earlier and more often—unsurprisingly considering that the United States is said to have achieved "hemispheric" dominance as early as the 1890s (Scheina 2003, chapters 20 and 38). By the time of World War II, Brazil was formally bandwagoning with the United States—a realist term for a strategy opposite of balancing—via the terms of the 1942 anti-Axis treaty that paved the way for the U.S. military bases in the Brazilian Northeast, exclusive Brazil-U.S. trade in strategic materials, joint naval patrols against German submarine activities, and, last but not least, Brazilian participation in the Italian campaign. In return, the United States committed itself to helping Brazil modernize its military—a relationship that continued well until the 1970s (Mott 2002, 91-2; Svartman 2012, 77-81).

From a realist point of view, it can also be argued that history also suggests that Brazil has a soft spot for soft balancing the United States. Consider the fact that Washington attempted to bring Brasília closer into its Cold War alliance network, first in 1973, when it offered to sell 42 F-5s to the FAB in exchange for Brazil's accession to the Non-Proliferation Treaty, and then in 1981, when it proposed a military cooperation treaty. Both attempts ended being failures for the United States.

> Washington's diplomatic and strategic rigidity in U.S. policy preferences for global Cold-War issues led eventually to Brazil's decision to end the donor-recipient relationship in mild hostility. At best, U.S. military assistance was not successful in Brazil during the Cold War. At worst, it was dysfunctional. (Mott 2002, 113)

What is more, in the second half of the 1970s, the "gentle giant" of South America irked Washington by pursuing a foreign policy tellingly labeled *pragmatismo responsável e ecumênico* (ecumenical and responsible pragmatism) (Brigagão and Proença Júnior 2002). Once this initative fizzled out, Brazil turned toward regional multilateral insitution-building that ran parallel to, and often undercut, the existing hemispheric and global international institutional

[15]On how the international hierarchical order impacts fighter aircraft sourcing, see Vucetic and Tago (2015), and Vucetic and Rydberg (2015).

[16]For one measure of this type of international strategic positioning, see the Supplemental Online Material available at https://srdjanvucetic.wordpress.com/brazilindia

architure centered on the United States. The fall of the Berlin Wall ushered in a more cooperative period, which is one reason why Brazil's foreign policy under the presidencies of Fernando Collor, Itamar Franco, and Fernando Cardoso was dubbed *autonomia pela participação* (autonomy through participation) (Silva 2008). However, in the era of Lula and Rouseff, diplomatic tensions with the United States have again become the norm, the prime illustrations being Lula's May 2010 overture to nuclear-armed Iran and the 2013 Snowden scandal (Hakim 2014).

India's historic inclination toward balancing the United States, softly or otherwise, is a much-studied subject (see e.g., Chacko 2014, 329-46; Chaudhuri 2014; Mohan 2004; Panagariya 2008; Tellis 2005). During the Cold War, successive Indian governments openly sympathized with Soviet socialism, while seizing every opportunity to criticize U.S. foreign policy. Viewed through the realist lenses, this behavior was predictable. The 1971 Indo-Soviet "peace, friendship, and cooperation" treaty, for example, was a natural response to three anti-India policies pursued by Washington—an alliance with Pakistan, a rapprochement with China, and non-proliferation. Also predictable, then, was the fact that the post-Cold War international system shift allowed India and the United States to reevaluate their strategic options. India's economic liberalization, increasing social ties between the two countries, and, as realists would emphasize, the common threat posed by Islamic terrorism and China paved the way for closer Indo-U.S. relations in the period, culminating in the 2005 defense cooperation pact and, more famously, the 2008 civilian nuclear cooperation agreement (Kapur and Ganguly 2007, 642-56; Rubinoff 2008; Tellis 2013). While these shifts have been momentous—the Indo-U.S. nuclear deal in particular pushed the political envelope in India and beyond—there is a danger in overinterpreting their long-term impact potential. For one thing, since 2005 New Delhi has bought from U.S. manufacturers around $10 billion-worth of weaponry, but Russian suppliers still remain dominant in the Indian market.[17] For another thing, and going back to the discussion above, nothing suggests that India might be moving to replace nonalignment with an Indo-U.S. condominium or, for that matter, an Indo-Pacific "league of democracies" that would also include U.S. friends and allies like Australia, Canada, and Japan.

Realist insights about balancing and bandwagoning behavior are useful in interepreting the history of Brazil and India's relations with the United States, but what MMRCA and FX-2 decisions approximate most closely is the so-called hedging—a method of balancing strategic relationships against each other and keeping one's options open as insurance. From this perspective, the aim of the MMRCA was twofold. First, by going with a European fighter jet

[17]Although the United States has gained a new market share in India, the latest data suggest that Russia still accounts for two-thirds of India's imports (SIPRI 2014). In terms of gross domestic product share, India spends less on defense than several industrialized states.

instead of an American one, New Delhi did not miss an opportunity to better balance the growing Chinese power so much as avoid "choosing between" the United States and China. Put differently, India selected an aircraft that facilitates a claim to a nonaligned identity, which, in turn, helps assuage Chinese concerns about U.S.-led encirclement. Second, hedging is what explains India's multiple-supplier arms import record. As numerous critics have pointed out, the lack of streamlined inventories creates logistical problems.[18] But diversification in arms acquisition can also minimize the buyer's vulnerability to supplier embargoes, hold-ups, and other complications. Indeed, several of our Indian interviewees identified the risk of spare parts-denial by the supplier as an "all-important" selection criterion for the Indian government.[19] From this perspective, the United States, with its five embargoes on South Asian military exports since 1965, stands out as the least reliable supplier of all.

To a lesser extent, a similar point can be made about the FX-2 competition, too. That the decision to buy a Swedish-made fighter jet was driven by a desire to minimize Brazil's vulnerability to future U.S. military embargoes is evident from the statements made by several members of the Brazilian Congress (Brazilian Senate 2014). What is more, each one of Brazil's major weapon programs appears to involve a major Brazilian company and a different international partner, including those in South Africa, Israel, Angola, Portugal, the Czech Republic, and Argentina.[20] These connections do not mean that Brazil is avoiding the United States altogether—U.S. exporters still have many reasons to cast hungry eyes on the Brazilian defense market[21]—only that Brazil, like India, may be seeking succour in a more diversified defense cooperation portfolio.

Realist interpretations are doubtless illuminating, but it is important to keep in mind that they cannot be fully examined in light of the available

[18]Think of severely increased maintenance, training, and overhead costs, for example (see Cohen and Dasgupta 2010; Mohanty 2009; Subrahmanyam and Monteiro 2005).

[19]Multiple ($\geq$5) interviews. The three most cited examples were the 1965 Indo-Pakistan War, the 1971 East Bengal crisis, and, somewhat surprisingly, the U.S. nuclear proliferation-related sanctions that in 1990 barred the sale of F-16s to Pakistan. India's tendency to contract with multiple suppliers of arms is consistent with this narrative.

[20]Among these, the industry news media appears to be most fascinated with the possibility of Brazilian-produced Gripens going to the Argentine Air Force (AAF). Tomkins (2014) notes that, "Brazil and Argentina already cooperate on a number of defense projects and during the Argentine minster's visit signed a new cooperative agreement to strengthen ties between their defense industries." Once again, it is worthy keeping in mind that military aircraft transfers are subject to multiple veto points. The AAF is unlikely to acquire the Gripen so long as the U.K. government, a key veto player in the production and whereabouts of this warplane, remains suspicious of Argentine revanchism over the Falklands/Malvinas.

[21]Brazilian officials have spoken about the need for new air refueling aircraft, winking in the direction of the Boeing 767. Also, by the time FX-2 is completed in 2022, Brasília will have started the replacement process for around 50 F-5s and 40 Brazilian-made AMXs, and judging by the current policy discourse, Brazil might well be in the market for the Lockheed Martin F-35.

evidence just yet. To the extent that soft balancing or hedging are deliberate strategies, a proper evaluation of realist hypotheses on the Brazilian and Indian fighter jet competitions calls for an analysis of actor motives.[22] This poses a major methodological problem: gauging "true" motivations, including collective motivations, from policy statements and press conference materials is by default difficult, if not impossible. To make things even harder, when it comes to military procurement decisions, the most relevant policy discourse is generally a state secret and therefore inaccessible to researchers until at least 30 years have passed. The best we could do, therefore, was to comb through policy rationalizations made in public statements—this includes our interviews—and search for key motivational attributions. Judging by this data, we found no compelling evidence that either Brasília or New Delhi deliberately chose European fighter jets as a way of frustrating Washington's geopolitical ambitions. Instead, we found that the Indians and Brazilians both expected the Americans to interpret the FX-2 and MMRCA decisions not in terms of grand strategy and high politics but rather in terms of bland cost-benefit calculations involving politically lowly items such as job creation and acquisition costs.

Conclusion

In this article we have examined the latest fighter jet fleet recapitalizations in Brazil and India from the perspective of IR theory. An explanation put forth here is not a substitute for the official explanations of the FX-2 and MMRCA decisions, but a complement. Our main argument was that these two decisions cannot be understood without due attention to the role of political forces operating at the international and domestic levels of analysis. We then presented an argument concerning an eclectic line of inquiry as a means of bringing together heretofore competing theoretical insights about international arms deals.

Our main finding was that all three major IR approaches contribute valuable new insights about why Brazil and India bought European rather than American fighter jets. From the vantage point of constructivist theories canvassed here, the FX-2 and MMRCA decisions were both impacted by the importance of high-technology industrialization, which in the Indian case was augmented by the discourse on self-reliance. Also critical was a collective belief that the U.S. side was not interested in making a sale so much as in the establishment of a hegemonic patron-client relationship with the buyer. Liberal teachings on domestic preference-formation revealed the critical impact of electoral

[22]As one critic has pointed out, "theories of *any* form of balancing require some reference to the motivations and intentions of actors" (Nexon 2009, 347, emphasis in the original). Note that for most "neoclassical" realists, key actors include heads of government, inner cabinets, and even political elites broadly construed, but not bureaucracies and organized interest groups as in liberal theories of IR.

considerations and industrial interests in Brazil and, to a lesser extent, India. Turning to realist theoretical constructs, we found that Brazilian and Indian fighter jet choices are not manifestations of soft balancing vis-à-vis the United States, but rather of a hedging strategy. While we combined only a handful theoretical constructs in two case studies, we believe that our results vindicate the promise of analytic eclecticism and point to the beginnings of a more comprehensive effort to understand the conditions under which culture, interests, and system-level competition influence how states decide where to source their weapons.

One policy question that arises from this analysis concerns the future of U.S. arms exports to Brazil and India. Where all three IR perspectives agree is that Washington's unwillingness to relax its military technology-sharing regulations did nothing to relax the buyers' suspicions about the fundamentally hegemonic nature of U.S. arms transfers. Counterfactually, a greater flexibility on the part of the United States, Congress, and the Pentagon on this file would have not only substantially improved the positions of Boeing and Lockheed Martin but it would have also compelled the political and chattering classes of the world's key emerging powers to reevaluate their governments' strategies for dealing with the next iteration of *Pax Americana*.

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