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What's in a pipe?

NATO's confrontation on the 1962 large-diameter pipe embargo

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Abstract

By the late-1950s, the Soviet Union acquired a strong position as a world oil exporter, thanks to major discoveries in the Ural-Volga area. The new availability prompted the USSR to greatly increase its exports, especially to West European countries. Such strategy was met with ambivalent reactions, depending on each country's position and status on the world oil scene, as well as on their political and economic needs. In order to transport their oil to strategic areas within the Soviet Union and to Europe, the Soviets devised a project for a colossal pipeline system. This plan caused anxiety at NATO since Russian oil could be wielded as a weapon to weaken the West both militarily and economically. Beside being seen as potentially threatening for the interest of Anglo-American and French oil majors, the considerable amount of cheap oil the pipeline system would carry generated worries about Western Europe becoming dependent on the USSR for its energy. In order to complete the system, however, the Soviets needed considerable amounts of large-diameter steel pipes and equipment, which they had to import from the West. Thus in 1961 the US delegation at NATO proposed a comprehensive embargo of large-diameter pipes in order to delay the system's construction. The proposal met with strong British opposition and a lukewarm attitude by a number of NATO members, and the debate soon came to revolve around 1) the definition of steel pipes as strategic items, and 2) whether a security rationale should be prioritized over an economic one when dealing with the Soviets. In this paper, I argue that the definition of what oil pipes are as technological artifacts, as well as their ultimate content, was ultimately shaped by the NATO debate on the US proposition. What an oil pipe was – or was not – and how it could be used, derived from the struggle to control or suppress commerce with the Soviet Union.

Keywords: transnational history, Cold War history, NATO, pipelines, material politics

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Introduction

Between 1955 and 1965, Soviet oil production rose spectacularly from 71 to 243 million tons (Mt). This bonanza was the result of an immense prospecting effort, which bore its finest fruit in the Ural-Volga region, where a number of large oilfields were discovered. Soon the crucial issue for the Soviet oil industry became the marketing of the newly-found oil, and a solution was found in its exportation to industrially-expanding Western Europe at prices that were significantly lower than those of the international oil market.¹

The extent to which such low prices were part of an explicit political strategy aimed at making Western Europe dependent on the USSR for its energy, or were rather an economic consequence of the quantities of oil found and of the Soviets' urgent need of Western technologies in exchange, has long been debated ever since the phenomenon appeared.² If one looks at the issue in hindsight, as energy analyst Robert Ebel did, the economic rationale stands out as the most likely.³ However, when one looks at the unfolding of events from a historical viewpoint, the knot is harder to unravel.

In cases such as the one presented in this paper, it is not easy to distinguish between political, economic and military motives underlying a country's policy. Most of the times these aspects were part of the same discourse, and the weight assigned to each of them by different historical actors varied according to each country's contingent political agendas. While one may want to eliminate the roots of the problem by lumping economic and military motives under the rubric of 'national security', it is instead important to try and make a distinction among the diverse inflections of the phrase, because the prevalence of either narrative does not only define the competent institutional loci where matters are to be debated, but also gives an indication of which argumentative framework may be more opportune to employ in those loci.⁴ This inherent intricacy will become

1 John A. Berry, "Oil and Soviet Policy in the Middle East," 150. Source reported: Economist Intelligence Unit, *Quarterly Economic Review*, "USSR Annual Supplement - 1971", 10; Robert E. Ebel, *Communist Trade in Oil and Gas*, 40; D. L. Spencer, "The Role of Oil in Soviet Foreign Economic Policy," 98.

2 See for example: Ebel, *Communist Trade in Oil and Gas*; Harold L. Hoskins, *Problems Raised by the Soviet Oil Offensive*; Jonathan P. Stern, *Soviet Oil and Gas Exports to the West*.

3 Ebel, *Communist Trade in Oil and Gas*.

4 Joseph J. Romm, *Defining national security*; Prabhakaran Paleri, *National Security*.

patent in the paper, when I show that constant, economically-oriented consultations between governments and their respective national oil companies took place in parallel to the military-oriented debate at NATO, and contributed to shape it.

While the rationale of the Soviet oil export strategy may not be easy to grasp, the means chosen by the Soviet administration to bring the country's oil to Europe was straightforward: a gigantic pipeline system (see Fig. 1) would connect production sites to its prospective markets, namely the westernmost brims of the Iron Curtain, and possibly extend to Western Europe. The pipeline system, whose westernmost terminals were planned to be in Eastern Germany and Czechoslovakia, was also expected to reach the shores of the Caspian Sea, and as far as China on its eastern path. More branches had been planned to the Baltic ports of Klaipeda and Ventspils, and to the Far Eastern port of Nakhodka.⁵ This project, nevertheless, would require particular abilities in producing the materials for building the pipeline system, namely a number of advanced technological artifacts such as turbines, compressors, and especially large-diameter steel pipes (namely, pipes with a diameter larger than 40"), which the Soviets did not have the adequate know-how or industrial might to produce in required amounts in the early 1960s. It was the Soviet effort to get hold of these technologies, and the different estimates of Soviet productive capabilities, that gave origin to the debate at the core of this paper.

Historians of technology have long recognized the importance that social, political and economic factors play in shaping what a technological artifact is. In particular Gabrielle Hecht has proposed that we should think about the underlying political dimensions of technological networks and their interconnectedness in favoring the spreading of some technologies globally (she coined the term 'technopolitics' to indicate such indissoluble connection). On the one hand, this paper enriches her analysis by showing the crucial role that oil pipes had in affecting international relations during the Cold War. On the other hand, it also highlights that the Cold War shaped the definition of what 'strategic' oil pipes were.⁶

5 NATO Archives, Brussels (NATO) – AC/127-WP/56 (Revised), confidential, 'ECONAD, Sino-Soviet Bloc Oil on World Markets, Note by the Economic Service,' 11 July 1960, p. 2.

6 Trevor J. Pinch, and Wiebe E. Bijker, "The Social Construction of Facts and Artefacts," 399-441; Gabrielle Hecht, *The Radiance of France*; Michael Thad Allen, and Gabrielle Hecht (eds.), *Technologies of Power*; Gabrielle Hecht, and Paul N. Edwards, *The Technopolitics of Cold War*; Dolores L. Augustine, *Red Prometheus*. See also: John Krige, *American Hegemony and the Postwar Reconstruction of Science in Europe*.

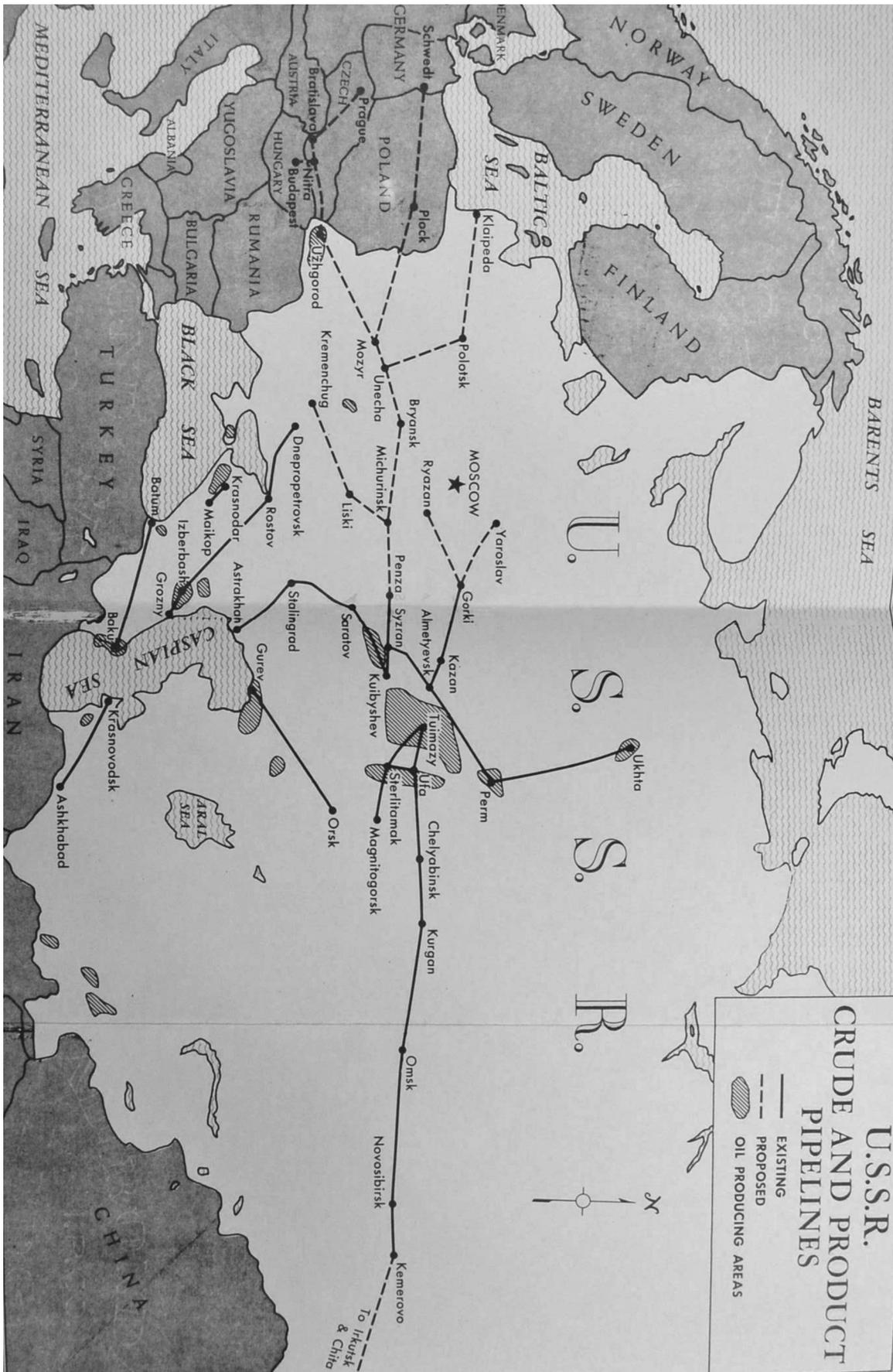


Fig. 1 USSR crude and product pipelines in late 1960⁷

7 Archives Historiques du Groupe Total, La Défense (AHTOTAL) - Fonds Total-CFP, b. 92.26/31, excerpt from the

In particular, the actual understanding of the pipes' sizes and functions was negotiated in the measures that the North Atlantic Treaty Organization (NATO) implemented to face the Soviet 'oil flooding' threat. The one and a half year long debate that followed the proposal by the US delegation at NATO of an embargo on large-diameter pipes and pipeline equipment was indicative of the manifold status of pipes as technological items, and reminds of the argument Hecht put forward about uranium. Like 'nuclearity' for uranium, the strategic nature of pipes was all but obvious; rather, it depended on the political context in which these items were immersed.⁸

The present study also refines our understanding of the role of pipelines in political history, which has been emphasized by historian, Timothy Mitchell, and more recently by geographer, Andrew Barry. Amongst other things, Mitchell and Barry have highlighted the importance of pipelines as sites of intense political struggle, and of the control over points of passage such as railway connections and pipelines for flows of materials to be effective. As will become clear in what follows, the availability of large-diameter pipes came to constitute an example of such points of passage; it can also be interpreted, in Thomas Hughes's terminology, as a 'reverse salient', namely a component of a technological system that, because of its insufficient development, compromises the effective operativeness of the system as a whole.⁹

Finally, moving from the history of technology and political science to the history of energy, my paper follows up the work by historian Per Högselius on Euro-Soviet gas trade from the late 1960s on, and aims to extend his narrative back in time to the early 1960s, at a time when oil not gas was the main actor of energy trade relations between the USSR and Western Europe. My analysis of the NATO embargo also aims to enlarge to a transnational framework Angela Stent's seminal monograph on West German-Soviet relations, which extensively covered the embargo from the West German point of view, and which because of its early date of publication could not make use of contemporaneous archival sources.¹⁰

I will first examine the global consequences of the Soviet oil strategy, including national political reactions to it. I will then move to the core of the paper, namely the embargo debate at NATO, and

Journal des Carburants, 20 November 1960.

8 Gabrielle Hecht, "The Power of Nuclear Things," 1-30; Gabrielle Hecht, *Being Nuclear*. In *The Radiance of France*, 15, Hecht defines technopolitics as the "strategic practice of designing or using technology to constitute, embody, or enact political goals".

9 Timothy Mitchell, "Carbon democracy," 399-432; Timothy Mitchell, *Carbon Democracy*; Thomas P. Hughes, *Networks of Power*; Andrew Barry, *Material politics*.

10 Per Högselius, *Red Gas*; Angela Stent, *From embargo to Ostpolitik*.

show how it ultimately became polarized over a British, pro-trade position, and an American pro-security (and thus contra-trade) stance. Throughout the debate, US and UK administrations held conflicting points of view, which corresponded to two markedly different perceptions of the Soviet threat, the former being based on the preponderance of arguments linked to military security, the latter centered on prioritizing considerations relative to bilateral trade.

In general, NATO members fought their battle through industrial estimates, the mobilization of their military and intelligence agents, as well as of their oil companies, and through the possibility to distinguish between different kinds of pipes according to their possible contents (oil or gas). During and *because of* this debate, the nature of the ‘pipe’ artifact changed, its final status as technological artifact ultimately resulting from a co-produced negotiation. I will conclude my paper by analyzing the resolution of the debate and its repercussions on European trade.

The ‘red oil flood’

One of the first signs of American anxiety vis-à-vis the increase in Soviet oil production is to be found in the words of Allen Dulles, the then-Director of the Central Intelligence Agency (CIA), who in 1958 warned the US cabinet, led by President Dwight Eisenhower, that “[t]he free world face[d] a quite dangerous situation in the Soviet capacity to dislocate established markets”.¹¹ Indeed, as mentioned, the Soviet Union soon increased its exports. Over ten years, the exports’ share of total Soviet production rose from 5.2 percent to 26.4 percent, and oil exported to non-Communist countries increased from 3.8 Mt in 1955 to a stunning 35.5 Mt in 1965. Prices offered by the USSR were so low compared to the international market price that most US sources did not hesitate to talk about market dumping. To exemplify, in 1957 the Soviet oil barrel on the international market sold at \$2.06, compared to \$2.79 for Middle Eastern oil and to \$2.92 for Venezuelan oil; and in the next years Soviet price to West European countries further decreased to as little as \$1 a barrel in the case of an Italian-Russian agreement signed in 1960.¹²

In 1958, however, Soviet oil transportation was still being handicapped by an overloaded railway, which carried around 60 percent of its overall amount, compared to 5 percent in the USA. The Soviets aimed to meet 35 percent of oil transport requirements via a new pipeline system, whose

11 Quoted from: Daniel Yergin, *The Prize*, 497. Source reported: Eisenhower Library, Cabinet Minutes, July 25, 1958, Whitman Files, 1953-1961, Cabinet Series, b. 11.

12 Ebel, *Communist Trade in Oil and Gas*, 40, 44, 61. Ebel’s data are sourced from various annual statistical trade handbooks issued by the Ministry of Trade of the USSR; Halford L. Hoskins, and Leon M. Herman, *Soviet Oil in the Cold War*, 5.

European branch would be named *Druzhba* (the Russian for ‘friendship’), and which would connect the new oilfields to its potential outlets. Besides allowing them to relieve their railway network, the system would also allow the Soviets to increase exports and reduce the demand for tankers. In addition, the pipeline could easily be connected to seaport terminals where the Soviet Navy’s vessels were moored.¹³

As a consequence the Soviet oil flow, at least at a first analysis, promised to upset the Western bloc militarily and economically. More worryingly for the US, by the late 1950s individual countries that were members of Western-bloc international organizations, such as the European Economic Community (EEC) and NATO, notably Italy and West Germany, were already in the process of negotiating agreements to import Soviet hydrocarbons, and also agreed to sell the pipes and equipment the Russians needed. The US administration first, and NATO afterwards, swiftly moved in to block these deals. The bone of contention, oil-for-technology barter deals, and large-diameter pipes in particular, did not just feature as an object of political controversy, but their very nature was moulded in the clash between national representatives.

Soviet oil exports were part of a larger scheme, in which barter agreements were employed as powerful economic and diplomatic weapons, enabling beneficiary countries to find outlets for their productions. When trading with Egypt, the Russians bartered oil for cotton; in the case of Cuba, they swapped oil for sugar. Technoscientific expertise was also used as a lever to convince developing countries to collaborate. This was a cornerstone of Soviet oil policy, and was successfully employed in Afghanistan, Ethiopia, Pakistan and Egypt. The USSR provided crews of experts to assist the locals with building pipelines and tankers, executing geological studies, and training executives of national oil industries. Indeed, such training was not limited to technical aspects: it catered for political and social engineering.¹⁴

Due to its possible military effects, Soviet plans for *Druzhba* soon generated frantic debate at NATO. From 1960, the analysis of the pipeline question came under the scrutiny of NATO’s Committee of Economic Advisers (ECONAD), operating under the authority of the North Atlantic Council (NAC). Founded in 1957, ECONAD was the place designed for the study of a number of

13 NATOA – AC/127-D/68, confidential, ‘ECONAD, Report by the Ad Hoc Study Group on Soviet Oil Policy to Econad,’ 23 May 1961, pp. 8-12.

14 Niklas Jensen-Eriksen, “The Cold War in Energy Markets,” 201. Source reported: The National Archives, Kew (TNA) – Ministry of Power (POWE) 33/243, “Russian oil imports”, MOP, 13 May 1960. See also: AHTOTAL – Fonds Total-CFP, b. 90.4/102, Revue de presse, n. 30, Chronologie des accords politiques entre l’URSS et les pays arabes, December 1958; *The Reporter*, “The Soviet Oil Offensive”, by Leon M. Herman, 21 June 1962. p. 27.

oil-related issues, including assessments of Russian oil production, exports and reserves, NATO countries' oil imports from Communist countries, and issues regarding pipelines. ECONAD was particularly concerned with those issues that had political or defense implications, or that affected the economic health of the Atlantic Community. Envisioned as a standing committee, it was meant to complete the functions conducted by the Committee on Soviet Economic Policy (however, the functions of the two committees sometimes overlapped).¹⁵ In order to understand the positions successively taken by NATO country members at ECONAD in 1960-2, it is firstly essential to examine country members' stances with respect to the Soviet oil offensive and pipeline projects.

National reactions to the Soviet oil offensive

Reactions to the Soviet oil offensive varied from country to country. While, quite expectedly, the American government firmly refused to allow Soviet imports into the United States, European positions were more varied, depending on each country's historical record in trading with the USSR, as well as on the situation regarding their industrial needs. In terms of purchase of Soviet exports, the top three West European countries in 1957 (the UK, West Germany and France) imported merchandise for 756, 286 and 268 million rubles respectively. Exports to Italy amounted to 117 million. However, Italy was the only country among these whose balance of trade was negative.¹⁶

As far as the UK was concerned, in late-1950s Harold Macmillan's government had been divided on the issue on an oil embargo on Soviet imports. It eventually implemented one in 1959, but serious divergences remained between government departments, notably between the Board of Trade (against) and the Ministry of Power (in favor), which would reemerge over the next years. In France Victor de Metz, the President of the flagship of French oil, the *Compagnie française des pétroles*, feared that Soviet trade could extend to the entire EEC and threaten the marketing of recently-found oil from French territories in Africa. He hoped that an alliance between oil majors and Arab producers could counteract the 'oil flood'.¹⁷ However, the heavy dependence of a number of Arab countries on the Soviet economic and technical expertise discouraged them from taking

15 NATOA – AC/127-D/1, confidential, 'Committee of Economic Advisers (ECONAD), Date of the first meeting and programme of work - Note by the Chairman,' 22 March 1957, p. 2.

16 The equivalence in 1957 was 1 ruble = 4 dollars (http://www.cbr.ru/currency_base/OldVal.aspx, accessed 10 April 201), so the figures reported correspond to \$3.02 billion for the UK, \$1.14 billion for West Germany, \$1.07 billion for France, and \$468 million for Italy. Bruna Bagnato, *Prove di Ostpolitik*, 97.

17 Jensen-Eriksen, "The Cold War in Energy Markets", 204. The embargo notwithstanding, Italian-labelled oil products made from Soviet oil were sold by ENI's British affiliate in the UK in the early 1960s (Spencer, "The Role of Oil in Soviet Foreign Economic Policy," 100-1); Emmanuel Catta, *Victor De Metz*, 289.

retaliatory measures.¹⁸

Italy and West Germany were instead deeply involved in trading with the USSR, and commercial exchanges existed between Soviet firms and many large Italian industrial concerns such as FIAT, the car manufacturer. In particular in 1960 the Italian public oil company, Ente nazionale idrocarburi (ENI), led by Enrico Mattei, signed a massive oil-for-technology supply contract with Soviet state-run company, Soyuznefteexport (SNE), which caused scandal in the Western industrial and political world. The Soviets would provide ENI with 12 Mt of crude and fuel oil over four years, in exchange for synthetic rubber, steel pipes and pipeline equipment.¹⁹

Germany's steel producers from the Ruhr region were also in good terms with a number of Soviet firms, and two months before the Italian contract, West Germany also signed an important barter contract with the Soviets. In general, West German trade with the USSR rose from \$196.5 million in 1959 to \$401.5 million in 1962. Among German exports to the USSR were plants for chemical and extractive industry, iron and steel products, ships and large-diameter pipes; among its imports, crude oil and products.²⁰ However, unlike France and Germany, which could count on large domestic resources of coal, Italy almost totally depended on oil (and to a lesser extent, on indigenous gas). Therefore, its reliance on Soviet imports was seen as a greater threat to western security than in the German case.

In general, by early 1960 Europe's trade with the Soviets came under the scrutiny of American political circles. In the US press, as well as in the National Security Council's and State Department's reports, dangers deriving from dependency on Soviet oil were repeatedly highlighted: the Russians, most commentators claimed, may decide to abruptly interrupt their deliveries following unfavorable political decisions by Western bloc governments.²¹ Soviet dependency on

18 On Soviet aid to Arab countries, see: NATOA – AC/89-WP/67, confidential (later unclassified), 'Sub-Committee on Soviet Economic Policy – The Economic Offensive of the Sino-Soviet Bloc, Note by the Chairman', 6 July 1960; AC/89-WP/76 (Revised 1), confidential (later unclassified), 'Sub-Committee on Soviet Economic Policy – The Economic Offensive of the Sino-Soviet Bloc (1st July, 1960 - 31st December, 1960)', 12 May 1961; Archives Nationales, Pierrefitte-sur-Seine (AN) – 19900317/8, fd. 1, sub-fd. Afrique 1957/77, secret, Note SDECE, *Pénétration italienne (ENI) et soviétique dans le domaine pétrolier en Afrique*, 30 August 1960 (FOIA n° 111 382).

19 Archivio storico del Ministero degli affari esteri, Rome (ASMAE) – Telegrammi ordinari, Russia (Ambasciata Mosca), 1960, vol. 59 arrivo (Jul-Dec), n. 36288, Italian Embassy in Moscow (Itemb Moscow) (Pietromarchi) to Ministry of Foreign Affairs, 'Contratto ENI-Finsider', 3 October 1960; n. 37331, Itemb Moscow (Pietromarchi) to Ministry of Foreign Affairs, 'Importazione petrolio', 11 October 1960.

20 Stent, *From embargo to Ostpolitik*, 97; ASMAE – Telegrammi ordinari, Russia (Ambasciata Mosca), 1961, vol. 55 arrivo (Jan-Jun), n. 13, Itemb Moscow (Pietromarchi) to Ministry of Foreign Affairs, 'Stampa sovietica', 2 January 1961; Stent, *From embargo to Ostpolitik*.

21 TNA – Foreign Office (FO) 371/153362, fd. RT 1532/17, P. J. E. Male, FO, to J. Gwynn, Ministry of Power, 'Italy and Russian Oil', *New York Times* article, 'Italy Oil Deal With Soviet Weakens Her Ties to West', 11 November

Western technology, however, was largely neglected in those articles and reports. Discontinuing exports would have deprived the Eastern giant of part of its industrial power. This reason, more than any other, made an interruption of supplies unlikely: energy dependence on the European side was thus balanced by technical dependence on the Soviet side. In addition, Stent notes, the urgency of the American rhetoric was not commensurate to the real supply situation, in that Western Europe was not at the time heavily dependent on Soviet oil. Political factors linked to Cold War climate may have distorted perceptions of the economic significance of Soviet oil exports, and may have joined worries by Western oil companies about a likely loss of market shares.²²

American anxieties were clearly expressed in two documents produced by the US Senate in 1961 and 1962 respectively, namely *Soviet Oil in the Cold War* and *Problems raised by the Soviet oil offensive*. In those studies, Halford Hoskins, a senior specialist in international relations, and Leon Herman, an analyst in Soviet economics, warned that Soviet exports to foreign countries constituted “a political hand that has worn the economic glove”.²³ They maintained that if the Italian attitude spread over Western Europe, more countries would dislocate part of their supplies from the majors to the USSR, thus causing fewer revenues to American, British, Dutch and French international companies.²⁴

The American position mirrored the stance held by the French administration. Tellingly at the European Parliament, the French Gaullist deputy, Christian de la Malène, prompted the European Commission to set up periodical exchanges of data on imports of oil products from all origins. In the statistics provided by the Commission for the first five months of 1960, the position of Italy as the largest Soviet oil importer was striking; Italy’s imports were three times larger than West Germany’s and four times larger than France’s.²⁵

ENI’s plans to build a pipeline for the Soviets between the USSR and East Germany, and a second one to connect Italy’s Adriatic seaport of Trieste to Vienna, did nothing to appease Western governments. The first threat was defused through international diplomatic pressure. The French and US governments were promptly informed by their national secret services of the news of the

1960.

22 Stent, *From embargo to Ostpolitik*, 100.

23 Hoskins and Herman, *Soviet Oil*; Halford L. Hoskins, *Problems Raised by the Soviet Oil Offensive*. The quote is from: Hoskins and Herman, *Soviet Oil in the Cold War*, 4.

24 *Ibid.*, 6.

25 AN – b. 19800118/3 CEE/Hydrocarbures, 1960-2, fd. Politique vis-à-vis des pays de l’Est, Council of European Communities - General Secretary, ‘Note d’information - Assemblée Parlementaire européenne’, 7 October 1960 (FOIA n° 111 382).

Italian-Soviet East Germany project, which threatened to favor the possibility of a future connection with West Germany.²⁶ The State Department suggested the Italian Embassy in Paris apply pressure on his government, and eventually the pipeline agreement was not finalized.²⁷

As for the second project, the Trieste-Vienna pipeline might easily be linked to Bratislava, where the Soviets planned to establish one of Druzhba's terminals.²⁸ From a geographical viewpoint, argued the Swiss newspaper, *Neue Zürcher Zeitung*, the Soviet project was more enticing than a continued commitment to majors' oil from the Middle East, transported through the Mediterranean. The proximity of Sweden and the Netherlands to the Baltic port of Klaipeda, where another terminal of the Soviet European pipeline was to be built, would make the Soviet pipeline a constant temptation for countries belonging to the Western Bloc, thanks to the savings its use would allow. Moreover from the Baltic port, oil could easily be carried to West Germany by railway. On top of that, by linking the Soviet pipeline to ENI's planned pipeline, Soviet oil could reach the Mediterranean through a new outlet, and thence be exported by tanker to areas already supplied by Anglo-American majors in Southern Europe, thus increasing the quantities that were already being delivered from the Soviet Union via the Black Sea.²⁹ It was over this complex background that ECONAD started its meetings on Soviet oil in the summer of 1960.

“Measures need to be taken”: ECONAD's early study and the embargo proposal

In July 1960, ECONAD met to examine the impact of Soviet oil on world markets. In the same month, it decided that NATO members should prepare statistics on their trade with the Soviet bloc,

26 Archivio Storico ENI, Pomezia (ASENI) – Fondo ENI, Estero, b. 2, fd. 7E6, letter, Itemb Moscow (Pietromarchi) to ENI President (Enrico Mattei), 25 November 1959; ENI President (Enrico Mattei) to Itemb Moscow (Luca Pietromarchi), 28 December 1959; AN - 19900317/13, fd. 1, sub-fd. Italie 1955/1979, secret, Note SDECE, *L'attività de l'Ente Nazionale Idrocarburi (mai 1958 - settembre 1959)*, 23 October 1959, p. 5 (FOIA n° 111 382); National Archives and Records Administration, College Park, Maryland (NARA) – CIA Records Search Tool Database (CREST), CIA Current Intelligence Weekly Summary, confidential, 'Italian Oil Combine May Build Pipeline for USSR', 28 January 1960. p. 11; NARA – Record Group (RG) 59, Central Decimal File, 1960-1963, b. 2694, file 865.2553/1-2660, confidential, Foreign Service Dispatch, US Embassy Rome (Amemb Rome) to State Department, 26 January 1960; Bagnato, *Prove di Ostpolitik*, 176.

27 ENI eventually supplied certain pumping and auxiliary equipment, while the plan to provide technical assistance toward installing the pipelines was dropped. NARA – RG 59, Central Decimal File, 1960-1963, b. 2694: file 865.2553/2-660, confidential, Memorandum of Conversation, 'Italian Government Guaranteed Credit for Soviet Pipeline Project', 6 February 1960; file 865.2553/3-160, limited official use, Amemb Rome (Zellerbach) to State Department, 1 March 1960; AN – 19900317/13, fd. 1, sub-fd. Italie 1955/1979, secret, Note SDECE, *L'attività de l'Ente Nazionale Idrocarburi (ottobre 1959 – ottobre 1960)*, 18 October 1960, p. 15 (FOIA n° 111 382).

28 TNA – FO 371/153362, fd. RT 1532/6, f. RT 1532/6D, A. A. Jarratt, Ministry of Power, to J. T. Fearnley, FO, 17 June 1960, p. 10.

29 ASENI – Rassegna stampa estera 1961, n. 39, para 370, *Neue Zürcher Zeitung*, 11 June. The project for the Trieste-Vienna pipeline was approved only in 1963. The laying of the Transalpine Pipeline, as it would be called, was eventually to include a number of majors beside ENI. It was commissioned in 1967, while its extension to Vienna had to wait until 1970 to become operational.

and proposed a common policy be outlined for Western oil-supplying countries in the face of the Soviet oil threat. An ad hoc Study Group on Soviet Oil Policy was then established. NATO's need of such an assessment became even more urgent following the creation in September of the Organization of Petroleum Exporting Countries, which generated fears the USSR may conclude an agreement with Arab producers to the ultimate detriment of Western oil majors.³⁰

ECONAD had charted Soviet efforts to increase oil exports since the beginning of 1960, noticing that these had been highly successful, especially outside Europe, and that attempts to stop them had failed. Were this not enough, at the same time the Russian tanker fleet's capacity had been growing at an alarming speed, further boosting Soviet exporting capacities.³¹ From September, the Study Group debated a common policy to stem these dangers. The national delegations abided to the recommendations issued by their national oil companies. That national enterprises collaborate with their NATO delegations within the Study Group was to be expected, and adds to the strength of the argument about a symbiosis between military and economic motivations in confronting the Soviet oil export strategy. But these contacts also reveal the network of acquaintances between the oil industry and top-rank personalities in national administrations.

US majors such as Standard Oil of New Jersey, Standard Oil of New York and Texaco lobbied the State Department. British Petroleum and Royal Dutch-Shell also had frequent exchanges with the British Foreign Office, and as historian Niklas Jensen-Eriksen has emphasized, when the Joint Intelligence Bureau of the Ministry of Defence was asked to draft a memorandum on Soviet oil exports in 1958, it was to Shell that the Ministry of Power asked to collect materials for it.³² The Compagnie française des pétroles worked closely with the French Foreign Ministry, to the point of plainly suggesting which tactics to pursue, and ENI had frequent contacts with the Study Group's Italian delegation.³³

30 NATOA – AC/127-WP/56 (Revised), confidential, 'ECONAD, Sino-Soviet Bloc Oil on World Markets, Note by the Economic Service,' 11 July 1960, p. 1; *Petroleum Press Service (PPS)* (1959) "Dix millions de tonnes de pétrole exportées par le bloc soviétique", XXVI (3): 111-2; NATOA – AC/127-R/53, confidential, 'ECONAD, Meeting held at the Permanent Headquarters on 21 July 1960, Decision Sheet,' 22 July 1960, p. 1; NATOA – AC/127-WP/64, confidential, 'ECONAD, Study Group on Soviet Oil Policy, Note by the Chairman,' 23 September 1960, p. 1, 3. On the ad hoc Study Group, see also: Bagnato, *Prove di Ostpolitik*, 383 ff.

31 NATOA – AC/127-WP/66, confidential, 'ECONAD, Recent Facts and Figures on Petroleum, Note by the Economic Service,' 30 September 1960, p. 9, 11-3; Spencer, "The Role of Oil in Soviet Foreign Economic Policy," 102.

32 Niklas Jensen-Eriksen, "British government, business and the Soviet Cold War oil offensive, 1957-1964", 8-9. Sources: TNA – FO 371/153362, fd. RT 1532/10, secret, 'Relations between Signor Mattei and the Western Oil Group,' Ashley Clarke, British Embassy Rome, to Sir Paul Gore-Booth, K. C. M. G. FO, 11 August 1960; TNA – POWE 33/2443: "Note on Soviet Bloc oil exports to the Free World," J. R. Jenkins, 16 September 1958; A minute by A. B. Powell, 19 May 1960.

33 AHTOTAL – Fonds Total-CFP, b. 92.26/31, fd. Pétrole soviétique: Notes de M. de Laboulaye, confidential, 'Note pour M. Granier de Lillac,' 18 November 1960; ASENI – Fondo ENI, Estero, b. 2, fd. 7E2, Ruffolo (ENI) to Giorgi

The NATO Study Group, under the chairmanship of the British Keith Stock, Undersecretary of the Petroleum Division at the Ministry of Power, met for the first time two months after the signature of the 1960 ENI-SNE agreement. Group members were asked to provide data on current and planned Soviet oil imports to their countries and of their exports to the USSR; on the conditions under which such trade took place; and on the destination of imported oil.³⁴ A draft report by the Study Group was ready by May 1961: it stated that due to the substantial trade in Soviet-bloc-originated oil products by both NATO and non-NATO countries, restrictive measures needed to be taken and implemented by all members.³⁵ NATO's ambition to reform East-West oil trading was now taking oil geopolitics to a new level, making the Atlantic Alliance the transnational forum for conflicts that had hitherto unfolded through national representations.

Based on the results of this group, the US NATO delegate, Alfred Reifman, suggested an embargo on Western-bloc large-diameter pipes and pipeline equipment, based on the strategic and military advantages the USSR would achieve from its exports. The embargo, comments Stent, "more than any other single incident, highlighted the U.S.'s primary role both in the establishment of the East-West trade agenda and in the politicization of specific economic issues".³⁶ It also marked a turning point in the definitional pathway that would transform pipes from freely tradable to embargoed merchandise.

The American argument: Druzhba as a military threat

Following the embargo proposal, ECONAD requested that a study be made before taking a definitive decision. The new study group was formed in Washington, and when its final report reached ECONAD in September, it closely reflected the American viewpoint. The report argued that Druzhba had "obvious military significance".³⁷ As a consequence, at a following meeting of the pipeline Study Group, US General Major Francis Piggott, Assistant Chief of Staff (Intelligence) at the

and Carbone (Italian delegation to NATO), 'Memorandum,' 29 December 1960.

34 NATOA - AC/127(O)R/1, confidential, 'ECONAD, Ad Hoc Study Group on Soviet Oil Policy, Meeting held at the Permanent Headquarters, 9 December 1960, Decision Sheet', 21 December 1960, p. 2

35 NATOA - AC/127(O)-WP/2 (Revised), confidential, 'Ad Hoc Study Group on Soviet Oil Policy, Draft Report to the Econad', 28 March 1961; NATOA - NATOA - AC/127-D/68, confidential, 'ECONAD, Report by the Ad Hoc Study Group on Soviet Oil Policy to ECONAD,' 23 May 1961, pp. 2-6.

36 NATOA - AC/127-D/83, secret, 'ECONAD, Soviet oil and gas pipelines, Note by the Secretary,' [2 or 3] October 1961, p. 5; AC/127-R/71, confidential, 'ECONAD, Meeting held at the Permanent Headquarters, on 20 July 1961, Decision Sheet,' 4 August 1961, p. 5. On the pipes issue, see also: Bagnato, *Prove di Ostpolitik*, 382 ff. Stent's quote is from: Stent, *From embargo to Ostpolitik*, 93.

37 Quoted from: NATOA - AC/127-D/68, p. 6.

Supreme Headquarters Allied Powers Europe (SHAPE), urged that the construction of the pipeline be delayed, in order to prevent supplying both the Soviet Navy and Soviet divisions in Eastern Europe. Indeed unlike the Soviet railway, which ran north to south, pipelines would run east to west, and the flow of oil in that direction would make supplying the Soviet military machine in Eastern Europe easier.³⁸

According to the report, moreover, the Soviets were not producing large-diameter pipes over 40” of diameter, and there seemed to be no evidence at that time that they were progressing rapidly enough to build large capacity tube mills or steel rolling mills capable of producing steel plate wide enough to enable single-weld 40” pipe to be manufactured. Considerations on the Soviet ability to access certain technologies led the Study Group to conclude that, although the Soviets claimed to be able to produce pipe by welding two pre-formed halves, there was no indication that they were actually doing so. Large-diameter pipes were critical to the Soviet oil export strategy, as they would make it possible to improve the flow rate at which oil could be delivered to Europe significantly. Soviet industries were also reported to be unable to build gas turbines, electric motors and other equipment required for 40” lines. As for auxiliary equipment, they were in need of Western technology as corrosion was a major problem in their pipes and equipment, due to the high sulphur content of their oil. They also lacked pumps, compressors, turbines, valves, pipe fittings, large electrical engines, gauges, telemetering and short-wave control equipment. An embargo, the report’s compilers concluded, would effectively delay the completion of Druzhba.³⁹

By the time the report was presented at ECONAD, the significance of pipelines for the Soviet marine military apparatus was clearer than ever to NATO, and added to concerns deriving from Russian technological progress in war vessels; concerns, which had eventually led NATO to establish an ad hoc group to produce oceanographic knowledge for anti-submarine warfare needs in late 1958. NATO military authorities were especially worried about the Soviet war ships docked along the Baltic and Pacific coasts. The Soviet railway and naval units, relieved of transporting oil, could then be used to carry logistically critical goods, such as ammunition and foodstuffs.⁴⁰

It was not the first time the USA had proposed blockades in order to hinder Soviet industrial

38 NATOA – AC/127-D/83, secret, ‘ECONAD, Soviet oil and gas pipelines, Note by the Secretary,’ [2 or 3] October 1961, p. 5. The identity of the military representative is not specified in this document, but this is revealed by other documentation.

39 Ibid., 7-14.

40 Simone Turchetti, “Sword, Shield and Buoys,” 208, 224; NATOA – AC/127-WP/85, secret, ‘ECONAD, Soviet Oil and Gas Pipelines, Standing Group views,’ 9 April 1962, p. 1.

projects. For example in 1946, a penicillin plant program launched by the United Nations Relief and Rehabilitation Administration to build up the capacity of the pharmaceutical industry in Eastern and Southern Europe, was significantly delayed by an American embargo on extractor technologies. The State Department refused to grant exporting licenses for the necessary equipment to pass the Iron Curtain.⁴¹ Other products including radioisotopes and computer equipment were also embargoed to stifle Soviet technological progress. In October 1960, after Cuban Prime Minister, Fidel Castro Ruz, nationalized the properties of US citizens and companies, an embargo was famously enacted against the Caribbean island.⁴² It is therefore not surprising that the US delegation hoped to enforce one on western oil technologies: by enacting it, Western countries would create a bottleneck for the Soviet oil flow, and cause a technological ‘reverse salient’ in Soviet trading and military power.⁴³

In hindsight, the 1962 embargo on oil pipes and pipeline technology marked a foundational decision that became a template for future USSR-USA conflicts, as shown by the embargo on pipeline technologies implemented in the early 1980s by Ronald Reagan’s government, which strained US relations with the UK and the European Community.⁴⁴ Back to the summer of 1961, while in the words of US delegates at NATO the main discursive line was that European countries’ Soviet trade was allegedly imperiling the security the entire Western bloc, it is not easy to assess to what extent American responses reflected genuine security concerns, or were rather the disguised commercial interests of US oil majors.⁴⁵ During the NATO debate, the latter interests were never named, but their presence lingered in the discussions and is revealed by the constant contacts between the American representatives and officers from US oil companies. It would probably not be too far from truth to argue that these two preoccupations dovetailed finely and aimed at the same target.

Indeed in 1963, the *World Petroleum* review admitted that the first demand to use NATO and US diplomatic channels to restrict trade in oil between the West and the USSR had been made in November 1960 at an annual meeting of the American Petroleum Institute, by Gulf Oil’s President, Ernest Brockett, and by Jersey Standard’s President, Monroe Rathbone. Jersey recommended exactly what Reifman’s proposal was designed to achieve: a NATO agreement on a list of strategic materials the sale of which would be prohibited, including those allowing them to complete their

41 Sławomir Lotysz, “Democratizing access to modern drugs in postwar Eastern Europe”.

42 Patrick J. Haney, and Walt Vanderbush, *The Cuban Embargo*; Peter Schwab, *Cuba*. On radioisotopes embargo, see: Angela N. H. Creager, “Radioisotopes as Political Instruments, 1946-1953,” 219-39.

43 Mitchell, *Carbon Democracy*; Hughes, *Networks of Power*.

44 Högselius, *Red Gas*, 188-90; Richard Aldous, *Reagan and Thatcher*, 121.

45 Leopoldo Nuti, “Commitment to Nato and Domestic Politics”, 374.

pipeline system and refineries in Eastern Europe.⁴⁶

Whatever the rationale of the American strategy at NATO, the Washington group's report asserted that in order to complete their pipeline system, the Soviets would need significant foreign assistance. The USSR had already been importing large-diameter pipes from abroad for a few years. NATO members had not prevented these kinds of exports ever since the Coordinating Committee for Multilateral Export Controls (CoCom) – an informal non-treaty organization established soon after World War II by the powers allied with the US and NATO to limit the flow of technology to the Eastern bloc – had reduced restrictions on pipe and oil equipment exports to the Soviet Bloc in 1958. In the 1958 review of international strategic controls, however, almost all items relative to the oil industry had been deleted or downgraded to Watch List status, which only required reporting deliveries to the Eastern Bloc to the Atlantic Alliance's authorities. Since Soviet demand for large-diameter pipes had been limited, these items had been deleted from the list.⁴⁷

As a consequence of such regulatory relaxation, by the spring of 1961 the Soviets had placed, or were negotiating new orders with West Germany, Italy, Sweden and Japan.⁴⁸ Soviet companies were also trying to acquire the new industrial technology required to produce the pipes, and by the end of 1960, had already been in contact with German firms, to negotiate the use of a new spiral welding process. The German innovation enabled the construction of pipes from long strips of steel plate fitted together to form helical seams, a process which improved the quality of pipelines, by minimizing leaks.⁴⁹ It was exactly the ease with which the Soviets could acquire foreign technology drove the US to propose the embargo, in a clear manifestation of 'pipe technopolitics'. The request, however, triggered a firm British reaction at the following ECONAD meetings.

The British counterargument: embargo ineffective and a threat to trade

Considering that the UK was top of the list in general Soviet trade, it may not come as a surprise that the British would object to the American argument about the military threat represented by

46 Boris Rachkov, "Oil, Trade, and Politics," 14-20. Source reported: *World Petroleum*, May 1963, p. 29; AHTOTAL – Fonds Total-CFP, b. 92.26/31, fd. Pétrole soviétique, 'Statement of position on the threat of Communist trade,' 19 January 1962. pp. 7-8.

47 *PPS* (1958) "Les exportations aux pays communistes sont rendues plus faciles", XXV (9): 347. On the history of CoCom, see: Michael Mastanduno (1992) *Economic containment*.

48 The Soviets had placed orders for 240 kt in Italy, 135 kt in Sweden and 420 kt in Germany. *PPS* (1961) "Le réseau de pipe-lines U.R.S.S.-Europe de l'Est", XXVIII (6): 204; *PPS* (1962) "Le potentiel d'exportation russe", XXIX (4): 127.

49 NATOA – AC/127(O)R/2, confidential, 'ECONAD, Ad Hoc Study Group on Soviet Oil Policy, Meeting held at the Permanent Headquarters, 30 and 31 January 1961, Decision Sheet,' 10 February 1961, p. 4.

Druzhba. However, if one considers the oil sector alone, British firms (Shell and British Petroleum) would achieve significant benefits from an embargo. So the standpoint taken by the UK with respect to the embargo turned out to be the result of a domestic clash of interests. As mentioned, the British government had implemented an embargo on Soviet oil and oil products in 1959. It is possible that the inter-ministerial discrepancies emerged at the time of that embargo, returned to the surface. In 1959, the opinion of the Ministry of Power had prevailed over that of the Board of Trade, which favored a continuation of trade with the Soviets.

This time, however, the opinion of the Board of Trade was supported by the Treasury, whose Joint Permanent Secretary, Frank Lee, had earlier been the Permanent Secretary of the Board of Trade. Lee was open to the possibility of British oil companies reaching an 'accommodation' with the Soviets, meaning some sort of gentlemen's agreement, but his proposal was firmly opposed by British majors. However by early 1960 the Treasury already doubted oil would be of crucial significance to the country's balance of payments when compared to the remaining trade sectors, and its opinion was the tilt of the scales. Many British manufacturing companies were trading with the Soviet Union, and the significance of these exchanges exceeded that of oil.⁵⁰ So an embargo made little economic sense to the British Treasury.

That was part of the argument that the British delegate at NATO sought to defend at ECONAD meetings. Not only, he asserted, would a ban pose difficulties for the exporting industries of member countries. It would also either be ineffective or only postpone increases in the oil exports from the Eastern Bloc until the Soviets arranged to produce the necessary equipment themselves. In fact, he argued, it would push the Russians into scale up their production installations. The British delegation replied to the American data with its own data, which contradicted the former.⁵¹ The predominantly military nature of the pipeline, asserted by the Americans, was denied by the British. The latter maintained that since the embargo would cover all large-diameter pipes and related equipment, it would have to include all possible materials and equipment useful in the construction and installation of pipelines. But these included items in general use such as valves and earth-moving equipment, which surely were not strategically sensitive technologies.⁵² An embargo would

50 Jensen-Eriksen, "British government, business and the Soviet Cold War oil offensive, 1957-1964". Sources reported: TNA – T236/6237, "Russian oil", Sir Frank Lee, 7 April 1961; Treasury (T) 236/6441, "Note of the meeting on 6 July 1961," G. R. Walker, 10 July 1961.

51 NATOA – AC/127-R/71, confidential, 'ECONAD, Meeting held at the Permanent Headquarters, on 20 July 1961, Decision Sheet,' 4 August 1961, p. 4; NATOA – AC/127-D/83/1, secret, 'ECONAD, Soviet oil and gas pipelines, Note by the Secretary,' 17 October 1961, pp. 3-4. Unfortunately, I could not retrieve the name of the British delegate in the NATO archives.

52 NATOA – AC/127-R/76, secret, 'ECONAD, Meeting held at the Permanent Headquarters on 19 October 1961,' 28

then heavily and unnecessarily hit a number of branches of the European industry.

When in March 1962, French representatives proposed that NATO countries accept a moral obligation to impede their nationals entering into new contracts for deliveries of large-diameter pipes to the Soviet Bloc during embargo discussions, the British reaction to the looming danger clarified that the ‘special relationship’ existing between the UK and the US would not go so far as to put Britain’s Soviet trade in jeopardy.⁵³ The UK delegate questioned ECONAD’s competence in debating the matter, and invoked the help of the Economic Adviser to the UK Joint Intelligence Bureau, Edward Radice. Radice stressed the British preference for a technical and economic analysis vis-à-vis strategic/military aspects. He maintained that, in general, implementing economic measures to stem industrial efforts had proved ineffective, because economic systems were much more flexible than was generally supposed.⁵⁴

As for the 40” pipes, Radice estimated that Soviet requirements for Druzhba were 400 kt, not 1.2 Mt as the American estimates seemed to imply: in fact, the latter estimates referred to the overall Soviet requirements for oil and gas pipeline systems, not to the one system that was seen as threatening for the West, namely Druzhba. Now Radice maintained that, considering the USSR’s expected production - Soviet manufacturers had by then managed to acquire a fair command of the process of production of large-diameter pipes - plus the deliveries from Germany and Italy under existing contracts, the gap would eventually be small, and the Soviets could cover it if they faced an embargo. For example, they might try and step up production of 40” pipes, or use smaller diameters and double the lines of such pipe if necessary (although – but Radice did not mention this aspect – in the latter case the production of smaller pipes would have to be doubled, thus generating further industrial issues).⁵⁵

The main argumentative lever on which the British were insisting regarded the usage flexibility of Soviet 40” pipes. From information in their possession, they knew that the Soviets, unlike European customary technical specificities providing for higher pressure in oil pipes than in gas pipes, were

October 1961, p. 5.

53 NATOA - AC/127-R/86, secret, ‘ECONAD, Corrigendum to AC/127-R/86 (dated 13th March, 1962),’ 16 March 1962, p. 2. The ‘Special Relationship’ is a phrase coined by Winston Churchill in 1946, and used to describe the exceptionally close political, diplomatic, cultural, economic, military and historical relations between the United Kingdom and the United States. David Reynolds, “A ‘Special Relationship’?,” 1-20.

54 NATOA – AC/127-R/87, secret, ‘ECONAD, Meeting held at the Permanent Headquarters on 22 March 1962, Decision Sheet,’ 29 March 1962, p. 5. The British delegate was presumably A. K. Potters, who had taken part in all meetings from 1957 to 1959 with no interruptions. Unfortunately, retrieving from NATO archives the names of national ECONAD representatives after December 1959 proved impossible.

55 NATOA – AC/127-R/87, p. 6.

planning to manufacture oil and gas pipes with similar pressure requirements. In doing that, they had decided to favor flexibility over economic advantage. The equal-pressure requirement would allow Soviet 40"-pipe production to be used indifferently for oil or gas: all manufacturers could then produce the same kind of pipes, and that would result in one large production of 40" pipes instead of two differentiated, smaller productions of oil and gas pipes. It was this flexibility, the British maintained, that would make the embargo ineffective.⁵⁶

But was Soviet economy as flexible as Radice maintained? Not for the US delegation, which retorted that the Soviets were not going to interrupt their gas expansion program, since any interruption in that plan could lead to delays in output for military purposes.⁵⁷ Thus, the Soviet large-diameter pipe gap *would* be significant, and so would the embargo. While the 'special relationship' was deteriorating over technical estimates, it concomitantly polarized the debate at NATO, where it soon appeared that the British government was not the only one alarmed by the embargo proposal.

A technical distinction gone unheeded

Representatives of other countries with large trading stakes with the Soviets in oil and oil industry equipment were not at all convinced that an embargo was a desirable solution. In early 1962, in order to reassure NATO allies, the US representative at ECONAD clarified that the proposal was not intended to prevent existing contracts being honored. The clarification was welcomed with a sigh of relief by the Italians and Germans (though such reliance would later prove fallacious), and earned Belgian, French, Dutch, Portuguese and Turkish approval.⁵⁸

As for the French government, it supported the embargo from the very beginning. Like most other NATO countries, France had no interests in the Soviet pipe trade, and had much to gain in impeding cheap Soviet oil from ruining its plans of exporting French-controlled, Algerian oil to the European Community. Indeed, as highlighted in December 1959 by the *Financial Times* with respect to ENI's Soviet purchases, imports from the USSR would be a tough blow to French aspirations for Algerian oil, all the more so as French oil companies had previously applied pressure on Italy to buy their oil instead.⁵⁹ A similar 'national' argument may be made regarding the Netherlands and the interest of

⁵⁶ Ibid., 6.

⁵⁷ Ibid., 9-10.

⁵⁸ NATOA – AC/127-R/86, p. 1.

⁵⁹ ASENI - Fondo ENI, Estero, Rapporti commerciali con l'estero, b. 2, fd. 7DA, 'Altro petrolio sovietico per l'Italia', *Financial Times*, 11 December 1959.

Shell in an embargo. On the contrary, Italian acquiescence was unexpected, especially in light of ENI-Soviet relations. A rationale for such stance can be found in the fact that during the embargo discussion, the Italian government was effectively torpedoing the NATO Study Group on Soviet Oil Policy through its firm opposition to any effective measure that would force a reduction of Soviet imports.⁶⁰ Any strong opposition to the pipe embargo, the practical consequences of which were economically less problematic for Italy than a stop in oil imports, would be most embarrassing to the Italian authorities. It would also be pointless, since British hostility and German hesitation (see below) were currently preventing the project from being implemented. In addition, thanks to the favorable stance the Americans took to existing contracts, ENI could at least be reassured that no major diplomatic accident would occur between them and the Soviets.

The German government dithered. The German position was more articulated than that of other countries, since large sectors of the German Parliament as well as the industrial circles opposed the embargo, while the ruling Christian Democrat government would not detach from US position. West German firms had been selling large-diameter pipes to the USSR since 1959, taking advantage of Washington's implementation of a policy prohibiting US firms to sell the USSR this kind of pipe: the amount of pipe sold by German firms had increased from 3.2 kt in 1958 to 255.4 kt in 1962. In addition in October 1962, three large firms from the Ruhr region, namely Mannesmann, Hoesch and Phoenix-Rheinrohr, signed a contract to supply the USSR with 163 kt of 40" steel pipe, in exchange for pig iron.⁶¹

German firms were therefore largely involved in steel pipe trade with the Soviet: however, because of its strict political allegiance with – and in fact, dependence on – US policy, the German government could not oppose the embargo from a political standpoint. It may still be able to do that, however, from a technical standpoint: if the pipes involved in the German-Soviet trade were categorized as gas pipes, and thus not strategically relevant to the crux of the embargo, German firms may skirt the NATO resolution and honor their agreements with the Soviets. Thus the German delegation proposed that gas pipes not be blockaded, and advanced an argument to make a distinction between oil and gas 40" pipes.⁶²

60 NATOA – AC/127(O)WP/2 (Revised)/2, confidential, 'ECONAD, Ad Hoc Study Group on Soviet Oil Policy, Comments by the Italian Government on AC/127(O)WP/2 (Revised)', 28 April 1961; NATOA – AC/127-R/71, confidential, 'ECONAD, Meeting held at the Permanent Headquarters, on 20 July 1961, Decision Sheet', 4 August 1961, pp. 3-4.

61 Figures are reported from *Vneshnaia Torgovlia* [recte: *Vneshnyaya torgovlya*] za 1963 – god, 237. Cited in: Stent, *From embargo to Ostpolitik*, 101.

62 Stent, *From embargo to Ostpolitik*, Ch. 5; NATOA – AC/127-R/87, p. 11-2.

At the time of the NATO debate, gas was not regarded as a strategic item, and only from the late 1960s would gas purchases gradually acquire a higher importance in East-West trade. In the early 1960s, gas trade was still relatively little developed in Western Europe, as were gas transmission infrastructures (though with significant exceptions in regions such as the Netherlands, North Italy or France). It is therefore not surprising that gas pipes were not seen as on a par with oil pipes in strategic terms.⁶³

Now, how could the two kinds of 40” pipes be distinguished? We have seen before that, while the possibility of such a distinction in Soviet pipes was unlikely because of the equal-pressure requirement demanded to local manufacturers, Western pipes could in principle be distinguished from pressure characteristics. The core point of the debate therefore regarded such characteristics. The American Petroleum Institute maintained that 40” pipes for gas pipelines (characterized by lower pressure than oil pipes) could be used for the transport of both oil and gas, and that therefore, it would be possible to transport oil in the 40” pipes supplied for gas pipelines. The Germans disagreed, and challenged the US institute’s viewpoint. When trading with the Soviets, German pipe manufacturers had been required to supply them with an impact factor - the ratio of a dynamic force to its static weight - for temperatures of -40 °C and +20 °C. That seemed to indicate that this pipe was going to be used for gas pipelines, since such qualitative requirements, which were responsible for a substantial increase in the cost of pipes, were “pointless in the case of oil pipe since only at temperatures above 15 °C was oil sufficiently fluid for conveyance by pipeline”.⁶⁴

According to the German note, it was to be supposed that the USSR, like any other country, would consider its pipeline projects from the standpoint of economical operation, and that seemed to rule out the use for the conveyance of oil of pipes specifically intended for gas. However, the German experts added a final clause to their document, acquiescing to the American argument that *in theory* there was the possibility that the two types of pipe could *to some extent* be regarded as interchangeable.⁶⁵ This linguistically nuanced specification, underlining a possibility that looked in any case remote through a jargon characteristic of scientific papers, may also have incautiously opened the way to its own ultimate dismissal. As a matter of fact, in the meetings that followed the German statement, no further mention was made of it.

63 Alain Beltran, and Jean-Pierre Williot, *Les routes du gaz*, 109-13. See also: Högselius, *Red Gas*, for a history of East-West gas trading from the late 1960s to our days.

64 NATOA – AC/127-R/87, p. 11. The quote is from: NATOA – AC/127-R/87, p. 12.

65 *Ibid.*, 12. My italics.

The embargo approval and its consequences

As no agreement could be reached at ECONAD especially because of the Anglo-American conflict, the embargo proposal finally reached the North Atlantic Council (NAC) in the spring of 1962.⁶⁶ Eventually thirteen countries out of fifteen agreed to the Council's recommendations. But here too British contrariety became patent.⁶⁷ The work of a further study group was necessary before the conclusion was reached at ECONAD that the Soviets would indeed be short of 40" pipes, and that if such deficits were not going to be filled by further imports from the free world, the pipeline system might be delayed for a period varying from eight months to over two years. As for pipeline equipment, lack of sufficient information ruled out any final decisions.⁶⁸

When the experts' draft was eventually debated at ECONAD, its members agreed to submit it to the NAC with the recommendation that member countries, "under their own responsibility", should "to the extent possible": stop deliveries of large diameter pipe to the Soviet bloc under existing contracts; and prevent new contracts for such deliveries. It was decided the Council would monitor the situation.⁶⁹ In the end, therefore, the provision covered existing contracts: in archival sources, I could not retrieve a rationale regarding the modification of this point, nor any mention of reactions from West Germany or Italy (although it is quite plausible that these were vocal). What we do know is that the disrespect of the 'existing contracts clause' caused serious trouble to West Germany and Italy in terms of their trade relations with the Soviets. The embargo was finally approved by the Council on 21 November 1962 in the form of a recommendation (and thus, at least de jure, endowed with a less stringent value than an order), but its enforcement was going to be problematic.

In early 1963, alleged Polish attempts to place new large-diameter pipe orders in Italy caused the German government to react by requesting member countries take the necessary steps to prevent the execution of Soviet bloc orders placed later than the date of the embargo's enactment.⁷⁰ The

66 NATOA – C-M(62)51, secret, 'Soviet Pipeline System - Note by the Chairman of ECONAD,' 2 May 1962, passim.

67 NATOA – C-R(62)26, secret, 'Summary record of a meeting of the Council, held at the Permanent Headquarters on 17 May 1962,' 23 May 1962, pp. 11-12.

68 NATOA – C-R(62)40, secret, 'Summary record of a meeting of the Council, held at the Permanent Headquarters on 8 August 1962,' 21 August 1962, pp. 9-11; NATOA – AC/127-D/107, secret, 'ECONAD, Soviet Pipeline System, Report of the Group of Experts,' 8 October 1962; NATOA – AC/127-R/97, secret, 'ECONAD, Meeting held at the Permanent Headquarters on 5 October 1962, Decision Sheet,' 10 October 1962; NATOA - AC/127-D/107; C-M(62)104, secret, 'Soviet Pipeline System, Report by ECONAD,' 29 October 1962; NATOA - Annex to AC/127-R/99, secret, 'Soviet Pipeline System, Statement of the United Kingdom Position', 6 November 1962, pp. 1-2.

69 Quoted from: NATOA – AC/127-D/107/1, secret, 'ECONAD, Soviet Pipeline System, Draft Report to the Council, Note by the Secretary,' 19 October 1962, p. 2. The quotes are from: Ibid.

70 NATOA – AC/127-R/106, secret, 'ECONAD, Meeting held at the Permanent Headquarters on 7 March 1963,

tensions generated by the embargo within the German government itself, and especially between this and German industrialists, have been described in detail by Stent, and were linked to the importance for the Ruhr's steel industry of increasing production after a long period of stagnation.⁷¹ Tensions visibly materialized in March, when Adenauer's government avoided a defeat on the embargo resolution by a handful of votes.⁷² Obviously Soviet firms involved in the German contracts, and more in general the Soviet government, were not happy about the cancellation of existing contracts: they saw the German about turn as an openly hostile act, an infringement of the principle of international law, and reserved the right to take retaliatory measures.⁷³

The embargo, notes Stent, and its approval by the German government in particular, marked a diplomatic victory for the US. In late 1962, ongoing negotiations between France and West Germany with respect to a friendship agreement that finally materialized in January 1963, suggested the US administration that Germany was favorable to aligning with France, and with the European policy proposed by French President, Charles de Gaulle, who had just rejected UK's application to join the European Community. Thus the alignment of Germany to the US over the embargo issue may be seen as a way for the German government to appease the US government in such time of political tension between the two countries.⁷⁴

As for Italy, one of the NATO reports mentioned 181 kt of 40" pipes as the amount that Italian firms was to deliver to the Soviets. Yet we know that the 1960 ENI-SNE agreement scheduled deliveries for 240 kt of 40" pipe. The missing 59 kt were at the core of an interesting episode, which paralleled the embargo discussion. The Italian iron and steel manufacturer that had been selected to supply the Soviets with large-diameter pipes was Finsider, a public agency on good terms with ENI. With a view to complying with its Soviet orders, Finsider had started the construction of a plant in southern Italy.

Materials for the construction of the Italian plant were being provided by American company, US Steel. When the company managers realized the factory would supply the Soviets, they prohibited Finsider from using their equipment to produce pipes, and threatened to stop deliveries for the plant's equipment and spare parts. The company's president, Ernesto Manuelli, immediately dis-

Decision Sheet,' 13 March 1963, p. 1.

71 Stent, *From embargo to Ostpolitik*, 93-153.

72 NATOA – C-R(63)14, secret, 'Summary record of a meeting of the Council, held at the Permanent Headquarters on 20 March 1963,' 27 March 1963, p. 23.

73 Stent, *From embargo to Ostpolitik*, 113-4.

74 Stent, *From embargo to Ostpolitik*, 95-6.

cussed the matter with ENI's executives, and lamented being "forced by Italian and American authorities" to cut its Soviet deliveries by 25 percent. Manuelli had suggested the Russians purchase the remaining quantity from the German firm Phoenix-Rheinrohr, which had worked with ENI in the past. The Soviet company, however, refused to comply.⁷⁵

At his meeting with ENI executives, Manuelli argued that he had already committed to the Americans not to export more than 180 kt of large-diameter pipes to the USSR, and called on ENI management to mediate between Finsider and the Soviet companies. Finding a solution was of paramount importance, since a breach of part of the ENI-SNE contract by one of ENI's partners could jeopardise the whole deal. An irritated Enrico Mattei, the ENI President, therefore replied to Manuelli that it was not worth modifying the Finsider contract because of American pressure.⁷⁶

Mattei was also disappointed that the Italian authorities seemed to support, or at least not to oppose, American pressures. Manuelli and the management of the Soviet enterprises that had commissioned the pipes, Siderexport and Promsyrimport, eventually reached a compromise by early March. Finsider's deliveries were reduced by 60 kt, and a clause was added to the new contract, to the effect that the reduction would not affect other exchanges included in the 1960 agreement.⁷⁷ Although there was no direct repercussion on the comprehensive agreement, the whole affair did cause the Soviet First Deputy Foreign Minister, Vasili Kuznetsov, to let ENI know he felt "deeply offended" by Finsider's attitude.⁷⁸

With regard to Britain, the oddity of its position vis-à-vis the embargo was instead highlighted by an episode occurring in April 1963, when NATO's General Secretary, Stikker, was informed by the US government that a British firm, South Durham Steel, was negotiating with the Soviets in regard to large-diameter pipe purchases. Although the UK had not accepted the embargo, the Americans warned this would seriously put the provision through the wringer. In response to the news, US

75 ASEN - Fondo ENI, Presidenza Raffaele Girotti, b. 264, fd. 482E: G. Ratti, 'Promemoria riservato per l'Ing. Mattei', 10 February 1962; G. Ratti, 'Promemoria riservato per l'Ing. Mattei', 12 February 1962 (the quote is from this document).

76 ASEN - Fondo ENI, Presidenza Raffaele Girotti, b. 264, fd. 482E, G. Ratti, 'Promemoria riservato per l'Ing. Mattei', 12 February 1962; ASEN - Fondo ENI, Presidenza Eugenio Cefis, b. 24, fd. CB8: letter, Enrico Mattei to Ernesto Manuelli, 12 February 1962 (the quote is from this document); note for the Foreign Minister [Antonio Segni], unsigned [prob. Giuseppe Ratti], February 1962.

77 ASEN - Fondo ENI, Presidenza Raffaele Girotti, b. 264, fd. 482E, G. Ratti, 'Colloquio con l'Ambasciatore Ortona sulla fornitura di tubi Finsider all'U.R.S.S.', 14 February 1962; ASEN - Fondo ENI, Presidenza Eugenio Cefis, b. 24, fd. CB8, letter, Ernesto Manuelli to Enrico Mattei, 7 March 1962.

78 Quoted from: ASEN - Fondo ENI, Presidenza Raffaele Girotti, b. 264, fd. 482E, G. Ratti, 'Promemoria per l'Ing. Mattei', 30 March 1962. My own translation.

diplomats contacted their British counterparts to settle the matter.⁷⁹

According to NATO documents, these and other similar attempts to break the embargo did not ultimately succeed. By 1963, France and Italy had refused a number of contracts; the West Germans had embargoed 203 kt of 40” pipes, despite orders having been placed before the Council’s decision. Japan and Sweden also generally cooperated.⁸⁰ Maintaining that the outcome of the embargo had been successful, the NAC noted the furious reaction of the Soviet Prime Minister, Nikita Khrushchev, in a television speech on 27 February 1963, where he vehemently attacked the embargo. In addition the Soviets also complained to Germany, and the blockade was extensively covered in the Soviet media.

However, other sources do not seem to agree with this analysis. On the contrary, the embargo seems to have been successful only to a limited extent: the construction of the pipeline system was indeed delayed, but by only one year. Scheduled to be completed in late 1963, the system was only completed in late 1964. The measure adopted by NATO was not able to stop Soviet oil exports to Western Europe either, as these continued to increase in the early 1960s. By 1970, SNE had been exporting wherever it had found the opportunity.⁸¹

Energy expert and former CIA officer, Robert Ebel, contends that Sweden, which was not a NATO member, continued to deal with the Soviets, and that small amounts of pipes were also delivered to the USSR by Italy and Germany. According to Ebel, the amounts of 40” pipes imported by the USSR may have been enough to complete Druzhba by late 1963, but that did not happen because of the Soviet Union’s ongoing program of development of natural gas production, which directed the bulk of 40” pipes to that aim. This factor, not the embargo, would be the reason why, Ebel maintains, Druzhba was eventually completed in 1964. In addition, in order to frustrate the embargo and manufacture more 40” pipes, a number of Soviet pipe mills were converted from small- to large-diameter pipes. All in all, therefore, the embargo seems to have not so much affected the Soviet production of 40” pipes as that of smaller diameters, which the USSR had to decrease to

79 NATOA – C-R(63)21, secret, ‘Summary record of a meeting of the Council, held at the Permanent Headquarters on 24 April 1963,’ 2 May 1963, p. 8; NATOA - AC/127-WP/188/1, secret, ‘ECONAD, Sale of large diameter pipe to Soviet Bloc countries - Addendum to the note by the French Delegation circulated as AC/127-WP/188,’ 6 October 1966, p. 1. On Japan’s foreign relations in the 1950s and 1960s, see: Kevin Cooney, *Japan’s Foreign Policy Since 1945*, 23-36.

80 NATOA – C-R(63)21, p. 9; Ebel, *Communist Trade in Oil and Gas*, 184.

81 NATOA – AC/127-D/220, confidential, ECONAD, “Sale of large-diameter pipe to Soviet Bloc countries - Note forwarded by the Delegations of France and of the Federal Republic of Germany,” 29 August 1966, p. 1; Stern, *Soviet Oil and Gas Exports to the West*, 27, 30.

make room for larger-diameter pipes.⁸²

About four years after the enforcement of the embargo, ECONAD itself admitted that its main, inadvertent result had been a stimulation of the growth of Soviet pipe production. While such production still left much to be desired as far as quality was concerned, the Soviet Union could now use its own manufacturing capacity to implement any project which would be important either from the strategic viewpoint, or from that of its economic policy. The embargo lasted until November 1966, when the French and West German governments requested its cancellation, arguing that its scope had been reached, and that the Soviet rolling mills had by then recovered their backlog.⁸³

Were the American and most West European diplomacies really acting in European security's interests when trying to limit Soviet oil exports? Historian Geir Lundestad disagrees, and maintains the US was more interested in perpetuating Europe's dependence on American national companies. His claim, I believe, has a grain of truth in it, but does not explain the whole picture. On the one hand, strong economic interests were the elephant in the room at NATO discussions on trade restrictions with the Soviets: the plans and lobbying of oil companies, whether American or European, could not be evoked in the Alliance's discussions, but were obviously there.⁸⁴ On the other hand, however, US military circles appeared genuinely concerned by the military implications of Soviet oil strategy, and such anxiety may have been increased by nebulous and partial information on Soviet industrial capabilities that was sieved through the Iron Curtain.

While there is little doubt that the pipe embargo represented a successful American attempt to alter the East-West trade policies of its European allies, whether the intended goal of jeopardizing Soviet pipeline plans was effective to the extent the Americans desired, is highly dubious. Indeed, it appears to me that the question is to be answered in the negative. But the pipeline issue may have been only a part of a larger strategy: as noted by Stent, the US government was aware that most of its European allies were against an embargo measure, and its insistence in having it passed at NATO may have been a matter of principle, stated in order to affirm US predominance in the Atlantic Alliance in East-West trade.⁸⁵

82 Ebel, *Communist Trade in Oil and Gas*, 184-5, 231. Source reported at p. 231: *Vneshnyaya Torgovlya*, "Lessons of an Ill-Fated Embargo," 12 December 1966: 50-1.

83 NATOA – AC/127-D/220, p. 2; NATOA – AC/127-WP/188 (19 September 1966), AC/127-R/185 (same date), AC/127-WP/190 (21 September 1966), AC/127-WP/192 (4 October 1966), AC/127-R/194 (30 January 1967).

84 Geir Lundestad, *The United States and Western Europe since 1945*.

85 This thesis is defended in: Stent, *From embargo to Ostpolitik*, 103.

Conclusions

This article aimed at developing two strands of analysis: first, extending to the oil industry the concept of ‘technopolitics’ formulated by Gabrielle Hecht’s works; second, applying that concept to the social construction of technological artifacts. As for the first strand, by highlighting the geopolitical dynamics of transnational trade in oil technology in the Cold War context, I have shown that the interests of governments and their respective oil companies were so tightly intertwined as to shape national strategies at NATO, and cause different degrees of tensions among allied countries, the clearest manifestation of which can be found in the temporary cracking of Anglo-American special relationship. I have then argued that oil pipe technology was the means by which these national interests materialized in the debate. The winner of the debate would ultimately determine the Western bloc’s strategy vis-à-vis Soviet oil trade. The choices to be made about allowing or restricting the sale of certain kinds of pipes were neither purely technical nor purely political: they were instead ‘technopolitical’, in the sense that aspects concerning the technology and the geopolitics of pipes became indistinguishable in the course of the one and a half year during which ECONAD discussed the Druzhba matter.

By exposing the assemblage of national narratives, and the ways these were strengthened, weakened and modified throughout the development of the pipe debate, my study also further clarifies the fragmentary and ambiguous nature of the Western alliance, and shows that, while US political influence certainly gave the American a hardly disputable hegemonic role within NATO, the strategy US delegates had to deploy to obtain a quasi-unanimous acceptance of the embargo had to come to terms with the exigences of lesser partners. This tweaking operation took a long way, and countries with large trading stakes with the Soviets tried to delay a final decision as long as possible, in order to minimize the consequences of the embargo. Also, the final formulation of the embargo proved to be significantly watered down with respect to US’s initial proposal, and lesser NATO members played a crucial role in this outcome. As Lino Camprubí has recently noted, “[c]ompetition between the two superpowers accounts for only part of the story”: this research contributes to completing the picture by considering the importance of third powers, and stressing the processes of co-constructed hegemony within one of the Cold War’s most influential transnational organizations.⁸⁶

⁸⁶ Lino Camprubí, “Resource Geopolitics: Cold War Technologies, Global Fertilizers, and the Fate of Western Sahara”, 697.

Interestingly, while the debate occurred in a geopolitical and economic context that was quite different from the present one, it has nevertheless marked similarities with the current global hydrocarbon scene, as many of the arguments advanced at the time remain at the order of the day: Europe's energy vulnerability and need of diversification of energy sources; its dependence on foreign hydrocarbon sources (Cold wartime Soviet oil threat being replaced by actual Soviet gas dependency); but also national governments' subjection in foreign affairs to energy company strategies.⁸⁷ Thus this study contributes to further our understanding of long-term, global oil dynamics.

As far as the second strand of my analysis – social construction of technological artifacts – is concerned, this article extends the existing studies on Cold War technologies to an industrial sector that has received constant attention from economic studies, but very little by the domain of the history of technology. Even when the technoscience of oil industry has been considered, the focus has mainly been on exploration technologies, such as those involved in geophysical prospecting, whereas more 'industry-oriented' and less flashy technological processes, such as those involved, for example, in metallurgy, have been neglected.⁸⁸ This article starts to fill this gap.

As I have shown, in the embargo debate issues of metallurgy, as well as estimations of industrial technical capabilities became the cornerstone criterion on which to build powerful narratives, and were wielded as scientific weapons on which to ground attack and defense strategies. We may therefore want to paraphrase Hoskins and Herman's quote about Soviet oil exports mentioned earlier in the paper, and say that in the case analyzed here the issue of pipe exports to the USSR did not just come to constitute a political hand that had worn the technological glove: here there was no glove to be worn.⁸⁹ Pipe technology was not a cover for politics: it was, on the contrary, an essential part of it.

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89 See p. 9 of this paper.

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