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# The Unflinching Mr. Smith and the Nuclear Age\*\*

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**Summary:** This article focuses on the U.S. diplomat and nuclear arms control negotiator Gerald (Gerry) Coat Smith in order to cast new light on the importance of diplomats in the context of the set of international activities currently labelled as "science diplomacy." Smith, a lawyer by training, was a key negotiator in many international agreements on post-WW2 atomic energy projects, from those on uranium prospecting and mining, to reactors technologies to later ones on non-proliferation and disarmament. His career in science (nuclear) diplomacy also epitomized the shortcomings of efforts to align other countries' posture on nuclear affairs to U.S. wishes. In particular, the unswerving diplomat increasingly understood that strongarm tactics to dissuade other countries from acquiring nuclear weapons would not limit proliferation. Not only did this inform later U.S. diplomacy approaches, but it lent itself to the ascendancy of the new notion of "soft power" as critical to the re-definition of international affairs.

**Keywords:** science diplomat, atomic energy, nuclear age, Cold War, international relations, soft power, disarmament, nuclear detection and verification, nuclear proliferation

Political scientist and former diplomat Joseph Nye is widely acknowledged for recognizing that soft power is just as important as commanding power in the shaping of diplomatic practice. If a state can make its power seem legitimate, it will encounter less resistance, especially if it prioritises collaborations in the world of culture (both in the science and the humanities), rather than hard-nosed approaches.<sup>1</sup>

It is less known, however, that the new paradigm of international relations was heralded by the abysmal outcome of US negotiations on nuclear weapons in the

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<sup>&</sup>lt;sup>1</sup> Nye 1990, on 167–168. For a broader analysis of modern nations' "complex interdependence" requiring softer approaches, see Keohane and Nye 1989.

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late 1970s. Nye, then deputy to the Undersecretary of State for Security Assistance, Science, and Technology, contributed to troubled talks in Rio de Janeiro confirming that Brazil, a country seeking to acquiring nuclear capability, would not comply with US demands—no matter what offer of scientific collaboration, or implicit threat, was thrown on the negotiating table.<sup>2</sup> Nye didn't even wait for the talks' final banquet and left South America empty-handed.

The world of nuclear diplomacy was then the oyster of US Ambassador-at-Large for Non-Proliferation Negotiations, Gerald Coat Smith. And "Gerry," then a navigated diplomat a few years away from retirement, was the first to understand Nye's fiasco as signalling a need for change. He authored the report for US President Jimmy Carter recognizing Nye's misfortunes as path-breaking. Smith also remarked that the inconsistent approach of US diplomacy, combining offers to threats, had not served well the cause of non-proliferation,<sup>3</sup> hence urging to supplant the inflexible diplomatic tactics used that far.

Yet these "unflinching" approaches to diplomacy, and their pitfalls, had been decisive to Smith's career up until that point. And while he could now espouse the merits of a constructive approach, Smith's earlier dealings relied upon a more problematic mix of hidden intelligence-gathering and openly hard-nosed tactics; approaches so far unexplored in the literature.<sup>4</sup> Actually, while we know today a great deal more about how US assistance to foreign nuclear projects played a decisive role in shaping its relations,<sup>5</sup> and how efforts to complete global surveillance networks helped monitoring other countries' activities in the nuclear field,<sup>6</sup> this paper reveals how restricted scientific intelligence was actually utilized by diplomats like Smith on the negotiating table. In particular, the paper shows that this intelligence often helped to outlined proposals that counterparts would only be able to accept, or, in alternative, threats dissuading them from pursuing alternative schemes. On many occasions this distinctive combination forged diplomatic propositions that, in essence, could not be refused.

Smith's approach has broader implications too, especially for understanding the history of what we call today "science diplomacy." Promoting scientific collaborations as a way to build constructive relations at bi- and multi-lateral levels has recently come to the fore (also in light of Nye's notion of soft power)

522 Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>2</sup> The US diplomatic community had failed in "*ordering* others to do what it wants." Nye 1990, on 163–166.

<sup>&</sup>lt;sup>3</sup> Tab B and C in "Memorandum from the President's Assistant for National Security Affairs (Brzezinski) to President Carter—Subject: Non-Proliferation Policy—Report of Gerry Smith," 24 November 1980, Foreign Relations of the United States (hereinafter FRUS) collection, US Department of State, Washington, D.C., frus1977-80v26/d395 (as for other FRUS documents herewith cited; the FRUS series is also available at: https://history.state.gov/historicaldocuments). Smith returned on Nye's precarious position in Brazil in his autobiography. See Smith 1996, on 198–199.

<sup>&</sup>lt;sup>4</sup> On other aspects of Smith's diplomatic career, see Knudsen 2016.

<sup>&</sup>lt;sup>5</sup> See, for instance, Freire Jr. and Silva 2019; Mateos and Suárez-Diaz 2015; Krige 2008; Krige 2005. For a broader view on policy implications, see also Krige 2006b.

<sup>&</sup>lt;sup>6</sup> Richelson 2007; Jacobson and Ziegler 1999. On the interplay of scientists and intelligence officers, see Doel 2015; Turchetti and Roberts 2014; Doel 2010; Doel and Needell 1997; Krige, 2006a. On broader cultural implications, see Wolfe 2020.

as a useful device to innovate the management of international affairs and build trust between nations.<sup>7</sup> Yet the idea of science diplomacy as a consistently benign force in foreign affairs perpetuates an idealistic image of scientific exchanges and their role in international relations, also overlooking how they connect diplomacy to ulterior motives and intelligence operations to advance national interests.<sup>8</sup> In particular, Smith's science diplomacy dealings show how collaborative US offers played a constitutive role in the definition of asymmetrical power relations with other countries, making their administrations fall in line with the US diplomatic agenda.<sup>9</sup> They also cast new light on the importance of "hybrid" negotiators like Smith operating in both international and scientific affairs as avant-la-lettre science diplomats. And they reveals, in contrast with the current emphasis in the literature on these practitioners' scientific upbringing,<sup>10</sup> that ancestors like Smith drew on a wider repertoire, including humanistic training (law studies especially) as well as extensive diplomatic practice.

The article explores Smith's ascendancy in the US diplomatic community and later decline. Hard power tactics were successful in the early days of his career, but the blows he received later on paved the way to Smith's disillusionment. His proselytizing on softer methods just before retirement thus resulted from the realization that these approaches no longer bear the expected fruits.<sup>11</sup>

# 1. Building the US Nuclear Arsenal with Other Countries' Resources, 1954-1957

Photography can capture someone's personality in unique ways. Smith's own portrait (Figure 1) shows a confident and intimidating figure who approached negotiations with a distinctive swagger. A former colleague in US diplomacy circles described Smith as an official who "had the look of a bulldog wearing a well-tailored, pin-striped suit. No diplomat's jaw seemed more able to take a solid punch."<sup>12</sup>

The description suits well the arrogance of a diplomat who at the end of the Second World War developed an awareness about the implications of nuclear proliferation. But, actually, it was not this awareness that typified his early dealings, characterized instead by an ambition to bolster the hegemonic stances of his administration through a distinctive combination of efforts to know more about other countries' plans to develop atomic energy research, and to persuade their of-

Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>7</sup> See, for instance, Royal Society and AAAS 2010, on iv; Kaltofen and Acuto 2020.

<sup>&</sup>lt;sup>8</sup> Flink 2020; Millwood, 2020. For ties between scientific diplomacy and intelligence, see also Smith 3rd 2010.

<sup>&</sup>lt;sup>9</sup> For an overview on these historiographical issues, see Turchetti et al. 2020.

<sup>&</sup>lt;sup>10</sup> See, for instance, Gual Soler 2015.

<sup>&</sup>lt;sup>11</sup> It is an argument developed in light of a partial reading of the conspicuous amount of archival documents regarding Gerard C. Smith available in the US National Archives and Records Administration (hereinafter NARA) collections at College Park, Maryland, US and the previously mentioned FRUS. Additional papers are available at the Eisenhower Library, Abilene, Kansas, US, online: www.eisenhowerlibrary.gov/sites/default/files/finding-aids/pdf/smith-gerard-papers.pdf.

<sup>&</sup>lt;sup>12</sup> Michael Krepon, "Gerard C. Smith," 14 November 2011, online: https://www.armscontrolwonk. com/archive/403268/gerard-c-smith/ (accessed 6 May 2019).



Figure 1: Gerard ("Gerry") C. Smith, n.d. Courtesy: National Archives II, Still Pictures Division – Public Domain.

ficials into agreeing to the research collaborations that the US administration wanted.

A graduate of the prestigious Yale Law School in New Haven, Smith cut his diplomatic teeth during WW2 as US Navy official responsible for the procurement of electronic systems. This work made him more confident about the relative importance of legal provisions in setting international collaborative agreements.<sup>13</sup> When after the war Smith returned to public service working at the

524 Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>13</sup> For an overview on some of these wartime agreements, see Turchetti 2020.

newly-established Atomic Energy Commission (USAEC), he further refined a diplomatic practice that combined intelligence-gathering and (forceful) offers to allow the US administration to obtain what was needed to complete its atomic energy programme.

From 1950 he was Special Assistant for the commissioner Thomas E. Murray, and he then joined chairman Gordon Dean's office. This made Smith privy to the scientific information gathered by the USAEC Division of Raw Materials on the world deposits of natural uranium and the ongoing research on how to find these deposits. At this point in time it was primarily the control and stockpiling of main raw material needed for atomic weapons that gave the US the upper hand in the nuclear arms race. So Smith sought to contribute to the commission's effort to secure ever-larger provisions, a strategy aiming to "facilitate the production and transfer [...] of raw and semi-processed materials required by the United States."<sup>14</sup> Originally implemented by the Special Assistant to the Secretary of State on Atomic Energy, R. Gordon Arneson, in conjunction with Smith's USAEC office, it also entailed making available instrumentation and scientific knowledge for geophysical research following surveys on the foreign country's uranium deposits.

On many occasions Smith outlined the deals for exclusive surveying, mining, licensing and transfer of raw radioactive materials. These were implemented without further ado, at times even without making his counterpart privy to the reasons why they were needed. US offers, intimidatingly, could not be refused, and Italy and Brazil were singled out as targets of these strong-arm tactics. At some point in the summer of 1953 Arneson and Smith jointly instructed the Italian authorities to surrender their state-owned deposits in the North if they still wished to coordinate defence in the context of Cold War and exchange scientific information in the nuclear field.<sup>16</sup> By December they had the US ambassador in Italy, Clare Booth Luce, approaching directly the Italian PM, so that "any uranium produced [in Italy] could be freely exported to the United States."<sup>17</sup> The following year it was Brazil's turn. As CIA reports further confirmed deteriorating Brazilian economic conditions taking the country on the verge of famine, an unusual deal was tabled, namely to exchange another nuclear material, thorium, with one hundred tons of wheat, and the promise of furthering assisting the Brazilian in researching how to retrieve the uranium deposits identified.<sup>18</sup> Brazilian authorities knew by

Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>14</sup> Memorandum, 23 Dec 1953, Secret, NARA, RG 59, Box 502.

<sup>&</sup>lt;sup>15</sup> Niel M. Johnson, Oral History Interview with R. Gordon Arneson, Washington, D. C., 21 June 1989, Truman Library, Independence, Missouri, US, online: http://www.trumanlibrary.org/oralh ist/arneson.htm (accessed 31 July 2011). See also Hewlett and Duncan 1990, on 426. Knowledge on these deposits was eventually published by the Division of Raw Materials' deputy director. See Nininger 1954. On US uranium diplomacy, see also Helmreich 1986. On Italy, France and Spain, see Adamson et al. 2014. On Greenland, see Nielsen and Knudsen 2013. On African countries, see Hecht 2014.

<sup>&</sup>lt;sup>16</sup> Gerard C. Smith to US Counsellor in the Italian Embassy, Eldridge Durbrow, Secret, 24 May 1953, NARA, RG 59, Box 502.

<sup>&</sup>lt;sup>17</sup> Memorandum, 23 December 1953, Secret, NARA, RG 59, Box 502. See also Adamson et al. 2014, on 23–45.

<sup>&</sup>lt;sup>18</sup> The Ambassador in Brazil (Kemper) to the Department of State, 1 April 1954, FRUS, frus1952-54v04/d208.

then that their thorium and uranium was earmarked for the production of US nuclear weapons but could only comply.<sup>19</sup>

In developing this work at the crossroads between scientific intelligence-gathering and (what today we would call) science diplomacy, Smith acquired the skills that eventually placed him at the top of the bureaucratic machinery responsible for US hard-nosed approaches. Firstly, Smith's previous experience as a lawyer specializing in licensing foreign technologies helped him to design the "Atoms for Peace" provisions (including the revised Atomic Energy Act of 1954, section 109) allowing US companies to export technologies associated with the production of atomic energy.<sup>20</sup> And, as a consequence of that, he was rewarded by replacing Arneson as Special Assistant Secretary on Atomic Energy matters at the State Department, thus being given greater latitude in the administration of these relations and sitting at the centre of a diplomacy network comprising officials, including experts in the geophysical and nuclear sciences, in US embassies around the world.<sup>21</sup>

This transition happened at a crucial time. Possession of raw nuclear materials was still decisive by the mid-1950s, but certainly less so given the increasing abundance of uranium worldwide. Smith and his associates at the State Department had therefore to find ways to couple control in the circulation of these materials with that of nuclear knowledge and technologies.

There is ample evidence about the tightening nature of the diplomatic deals Smith was prepared to offer. Outlined in the (restricted) knowledge on advances in nuclear science in other countries, these deals could be refused, but only at considerable costs. The cases of Brazil and Italy are worth exploring again. In 1954 Smith had a prominent role in the scientific information-gathering operation that led US officials to learn about the Brazilians' effort to obtain centrifuges from Germany in order to enrich enough uranium to allow developing their atomic energy programme. Smith learnt about the deal thanks to the economic (and atomic affairs) counsellor at the US embassy in Paris, Robert Terrill, who he promptly dispatched to Rio de Janeiro.<sup>22</sup> Importantly the USAEC Director of Intelligence (and CIA operative) Charles Reichardt played a part in these information-gathering operations.<sup>23</sup>

The scientific intelligence collected helped Smith in dissuading Brazilian colleagues from going further. Meeting with Brazilian foreign ministry officials, Smith and his successor at the USAEC, John Hall, reiterated that acquiring German centrifuges would have been the wrong move.<sup>24</sup> An undated and unsigned document deliberately hiding its provenance (what diplomatic jargon labels as "non-paper") further clarified that while the US government would not

526 Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>19</sup> Memorandum of Conversation, 25 October 1951, NARA, RG 59, Box 45, 21.10 Brazil j. Uranium 1947–1952. See also Adamson and Turchetti (forthcoming).

<sup>&</sup>lt;sup>20</sup> On this, see Turchetti 2014a.

<sup>&</sup>lt;sup>21</sup> Smith 1996, on 8.

<sup>&</sup>lt;sup>22</sup> The Deputy Counselor of the Embassy in France (Terrill) to the Department of State, Paris, 28 March 1951, FRUS, frus1951v01/d239. See also Adamson and Turchetti 2020.

<sup>&</sup>lt;sup>23</sup> On Reichardt's role, see Richelson 2007, on 122–123.

<sup>&</sup>lt;sup>24</sup> Gerard C. Smith to Robert Terrill, 12 October 1954, NARA, RG 59, Box 477, 21.10 Brazil d. General, 1953–1954.

stand in the way of any project, continuation of the centrifuge plan would entail "no export and import bank financing [of] any Government venture in Brazil" and damage "to Brazil's friends in the US." Similar threats were made against the Germans, of course.<sup>25</sup>

Not indifferently in the very same period Smith and his assistants were prepared to bully the Italians knowing fully well from their own intelligence sources that they had made plans for an independent atomic energy project, also seeking to independently manage related advances in nuclear science. In January 1955 Hall, Smith, Luce and the new AEC chairman Lewis Strauss agreed to no longer push for acquisitioning the Italian uranium, while at the same time making impossible for them to acquire either the expertise or the materials needed for completing a nuclear reactor. The Italians would acquire their nuclear reactors in the US instead, thus being constrained to advance atomic energy research in cooperation with the USAEC.<sup>26</sup>

Were the Italian and Brazilian cases an exception to Smith's science diplomacy practice? Smith carefully controlled developments in other countries too, so as to prevent scientific exchanges that would go against US interests. State Department correspondence with the US Embassy in Norway confirms for instance that using scientific intelligence to apply unduly pressure on other administrations was a routine exercise. When, in 1956, US diplomats learnt "through the grapevine" that Norwegian atomic energy authorities had been contacted by their Soviet colleagues with a collaborative offer on atomic energy research, they immediately prepared an alternative scheme to sway the Norwegians. As in other cases they also outlined ways to make them aware of "difficulties" arising from accepting the Soviet deal, as it would prevent a "classified agreement for cooperation" with the USAEC.<sup>27</sup>

Smith also played a vital role in the creation of the International Atomic Energy Authority (IAEA) outlining provisions on safeguards and outweighing competing schemes by Soviets, French and Indians.<sup>28</sup> These developments were underpinned by his understanding that any bi-lateral or multi-lateral collaborative agreement, including those on atomic energy research, ought to be approved by the US administration and fall under its overarching objectives for global control over the circulation of nuclear materials, knowledge and technologies.<sup>29</sup> And while rejecting a State Department proposal for a US veto on other countries' participation to the IAEA, Smith nonetheless appeared inflexible in stressing that his government should routinely use its power to withdraw from the agency if these countries sought to collaborate in ways that didn't align to its administration's agenda.<sup>30</sup> Similarly Smith let plans for the creation of the European atomic

Ber. Wissenschaftsgesch. 43 (2020): 521 - 541

<sup>&</sup>lt;sup>25</sup> Aide-memoire, n.d., Folder 27, CNPq (Brazilian National Research Council). The paper is part of the archival documents of the Brazilian negotiator, Admiral Alberto Alvaro: Arquivo Almirante Álvaro Alberto, Centro Interunidade de História da Ciência, Universidade de São Paulo, Brazil. See also Adamson and Turchetti 2020.

<sup>&</sup>lt;sup>26</sup> Memorandum of Conversation, 28 January 1955, Confidential, NARA, RG 59, Box 503. See also Turchetti 2014a, on 482.

<sup>&</sup>lt;sup>27</sup> Telegram from the Department of State to the Embassy of Norway, 21 March 1956, FRUS, frus1955-57v27/d173.

<sup>&</sup>lt;sup>28</sup> Smith 1996, on 50.

<sup>&</sup>lt;sup>29</sup> For an overview, see Krige 2016.

<sup>&</sup>lt;sup>30</sup> Memorandum of Conversation by the Consultant to the Secretary of State for Atomic Energy Affairs (Smith), 24 August 1954, Secret, FRUS, frus1952-54v02p2/d242.

energy consortium, Euratom, go ahead only when the French scheme for the building of an enrichment plant, which would have considerably increased the consortium's independence in acquiring materials, knowledge and technologies, were made less relevant to the overall project. In writing to the Secretary of State for European Affairs, Smith emphasized the need to bind the Europeans; as any other plan would make them "independent of us."<sup>31</sup>

By 1961, when Smith left his office at the State Department, he had thus set in motion a diplomatic machinery harnessing considerable power in the administration of international affairs through provisions regarding nuclear science and technology. Indeed he even looked for an alternative to incoming negotiations on a test ban, hoping that the US and Soviet Russia would sign instead a treaty preventing any other world country from stockpiling plutonium to terminate once and for all independent efforts in the nuclear realm.<sup>32</sup> Such a treaty never saw the light of the day, but as the resolute diplomat moved to new responsibilities, he could actually be satisfied about his unwavering approach to science diplomacy. Being "unflinching" had paid off that far.

# 2. The ACDA Triangle, 1968–1973

Smith's second stint as a manager of international nuclear affairs started in 1968, following several years in which he acted as a consultant in a number of private organizations and for John F. Kennedy's and Lyndon Johnson's administrations. In particular, he played a part in the (failed) attempt to develop a nuclear Multilateral Force in Western Europe, before he was called to direct the US Arms Control and Disarmament Agency (ACDA).

Established in 1961 as independent agency of the US government, the ACDA was the brainchild of another lawyer, John McCloy, who had been an adviser and consultant with many presidents since Franklin Delano Roosevelt's administration.<sup>33</sup> The act that ratified the ACDA creation indicated it as an organism "formulating, advocating, negotiating, implementing and verifying effective arms control, non-proliferation, and disarmament policies, strategies, and agreements."34 Sitting within State Department's own infrastructure, the ACDA ended up operating right in the middle of an invisible triangle uniting the collection of scientific intelligence on worldwide (nuclear) arms development efforts, the science of nuclear detection and verification, and the diplomacy of non-proliferation and disarmament. Originally directed by the chemical engineering-trained businessman William C. Foster, the ACDA employed leading scientific intelligence officials such as the former CIA chief scientist Herbert Scoville Jr to routinely find effective ways to gather the information on nuclear weapons programme that alerted ACDA officials about potential threats. In turn this evidence informed diplomatic work by helping prepare collaborative offers in the scientific and

528 Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>31</sup> Memorandum from Gerard C. Smith to Livingstone Merchant, 8 December 1955, FRUS, frus1955-57v04/d134. For an overview, see also Krige 2016, on 28–29.

<sup>&</sup>lt;sup>32</sup> Smith 1996, on 53.

<sup>&</sup>lt;sup>33</sup> On McCloy, see Bird 1992.

<sup>&</sup>lt;sup>34</sup> ACDA 1977.

atomic energy realms aiming to dissuade other administrations from proliferation efforts.<sup>35</sup>

Smith emerged as a valid candidate for Fisher's job in light of his experience in the management of atomic energy affairs and especially because of the distinctive combination of scientific intelligence-gathering and strong-armed tactics that had typified US science diplomacy in the nuclear field that far. The autonomy Smith was given in managing the agency is further confirmed by the fact that one of his former collaborators in the Atomic Energy office, Philip Farley, was now appointed as ACDA Deputy Director. The hybrid combination of scientific and lawmaking skills that nurtured both scientific intelligence and science diplomacy work under Smith was thus transferred from State Department to the ACDA on the occasion of this appointment.

Smith's nuclear disarmament stance also reaffirmed the legitimacy, globally, of asymmetrical proliferation. He thus aimed to strengthen an international regime in which the U.S could legitimately possess a nuclear arsenal, while new verification systems discouraged Soviet Russia from expanding their nuclear stockpiles, and dissuaded other countries from seeking to acquire nuclear weapons.<sup>36</sup> But the unwavering approach Smith practiced as Assistance Secretary on Atomic Energy Affairs was less successful at the ACDA, mainly because of the emergence of competing views within the US administration on the latitude in diplomacy that the acquisition of new scientific intelligence granted.

The approach that Smith elaborated relied upon the aforementioned triangle uniting scientific intelligence, verification, and non-proliferation diplomacy. Effective verification measures would make available the intelligence needed to spot new threats. These measures would set the conditions for the US to constructively engage in new talks. Those with the Soviets aimed primarily at preventing the expansion of nuclear stockpiles. Further talks would play a decisive role in dissuading other countries from acquiring nuclear weapons, while accepting US offers for scientific collaboration in the atomic energy field. Potential nuclear proliferators would be found out thus facing the distinctive set of soft and hard approaches (including "non-papers" making them aware of the consequences of non-compliance).

But when Smith arrived at the ACDA he faced considerable resistance towards its programs. The agency routinely utilized the sheep's clothing of science diplomacy to hide its far-reaching scientific intelligence ambitions and in the early 1960s had placed seismic observatories in many world locations to monitor atomic explosions.<sup>37</sup> And while the deriving world seismic network was instrumental in better understanding important events occurring at the time such as the devastating earthquake that hit the Macedonian capital Skopje in 1963, and that it later propelled

Ber. Wissenschaftsgesch. 43 (2020): 521 - 541

<sup>&</sup>lt;sup>35</sup> On Scoville's activities, see Turchetti 2014b. See also Zuckerman 1989, on 327.

<sup>&</sup>lt;sup>36</sup> Popp 2014, on 196-199 has referred to this convergence of interests of the superpowers as "atomic complicity."

<sup>&</sup>lt;sup>37</sup> As shown by State Department documentation available at the NARA. For instance, ACDA to Amembassy Lagos, Airgram, Confidential, 22 February 1963, NARA, RG 59, Box 4181, Dept. of State Central Foreign Policy File, Sci-Seismology.

earth sciences studies, especially through plate tectonics,<sup>38</sup> it was becoming increasingly clear that its main objective was nuclear verification and monitoring of Soviet tests. Hence Mexico and Sweden refused to support the ACDA program identifying it as a concealed information-gathering operation. In light of what this paper has showed so far it is not surprising that Brazil's administrations was unwilling to accept seismological equipment too.<sup>39</sup> The Yugoslavs plainly refused the offer stating that the apparatus was a "cover" for American detection.<sup>40</sup>

The growing unwillingness of other countries to host US seismic equipment was instrumental in Smith's efforts to make ACDA more reliant on electronic reconnaissance methods, especially aircraft- or satellite-based monitoring instrumentation targeting radar and communication networks.<sup>41</sup> Being air-based these systems enabled the US to manage scientific intelligence needs without the same amount of foreign assistance. These intentions materialized in growing interactions between the ACDA and the defence organization responsible for air-based surveillance activities, including the CIA and the US National Reconnaissance Office. Farley took responsibility for managing some of the contracts.<sup>42</sup>

The implementation of these scientific intelligence programs reassured Smith, who was particularly confident that more effective verification measures would positively impact on non-proliferation talks. A few months after being appointed he discussed with the Soviet ambassador in the US, Anatoly Fyodorovich Dobrynin, about plans for a reduction of superpowers' nuclear armaments. Asked at a meeting of the US National Security Council (NSC—the forum comprising all the security components within the administration utilized by the president to take decision about specific security issues) about whether verification measures would be useful in preventing the Soviets from "cheating," Smith reassuringly stated that: "The intelligence assessments [...] are a great help. If verification is tampered with, then the deal is off."<sup>43</sup>

But whether reliant on seismic or electronic methods, published and unpublished sources confirm that many within the NSC did not share Smith's trust in verification measures. And while Smith continued to negotiate with Dobrynin new non-proliferation agreements, competing views emerged within the council. Plans for a more comprehensive ban following the signing of the 1963 Partial Test Ban Treaty had been opposed. The bone of contention was how to verify

<sup>&</sup>lt;sup>38</sup> On the intelligence ambitions, see Turchetti 2014b. See also Jacobsen 2016; Barth 2003; Bolt 1976. On how the study informed plate tectonics, see the account of one of the scientists involved: Sykes 2017.

<sup>&</sup>lt;sup>39</sup> ACDA to Amembassy, Rio De Janeiro and Mexico City, 16 April 1963, Confidential, and Amembassy, Mexico City to Department of State, 15 May 1963, Confidential, NARA, RG 59, Box 4181.

<sup>&</sup>lt;sup>40</sup> Amconsul, Zagreb to Department of State, 9 August 1963, Limited Official Use, Airgram, NARA, RG 59, Box 4182.

<sup>&</sup>lt;sup>41</sup> For an overview, see Greenwood 1972, on 22–24 (Chapter 5: "Electronic Reconnaissance"). These two sets of surveillance initiatives were coded as VELA UNIFORM (the underground seismic network) and VELA HOTEL (air-and space-based electronic reconnaissance).

<sup>&</sup>lt;sup>42</sup> Memorandum for the Record, 27 June 1970, Top Secret, online: https://www.nro.gov/Portals/65/ documents/foia/declass/NROStaffRecords/13.PDF (accessed 6 May 2019). Recent FOI requests show ACDA Contracts to be part of the Major NRO Programs and Projects.

<sup>&</sup>lt;sup>43</sup> Minutes of a NSC Meeting, Top Secret, 8 October 1969, FRUS, frus1969-76v32/d34.

<sup>530</sup> Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

"whether an underground disturbance is a nuclear explosion or an earthquake."<sup>44</sup> The controversy polarising NSC meetings had important science diplomacy repercussions. For instance, the disagreement with the US stance was conducive of a rapprochement between British and Soviet diplomats and scientists who jointly criticized the US position.<sup>45</sup> It was also vibrantly criticized by scientist-led independent organizations such as Pugwash, and the Stockholm International Peace Research Institute (SIPRI), which was set up by the Swedish government to promote a transnational dialogue between verification experts.<sup>46</sup> Meanwhile US nuclear tests made other administrations anxious. This was especially the case for the 1971 tests in the Aleutian Islands which Canadians and Japanese governments vibrantly opposed in light of their environmental impacts (which famously stirred the setting up of *Greenpeace*).<sup>47</sup>

The hawks' distrust of verification measures hamstrung Smith's plans for nonproliferation talks in a situation already somewhat compromised. By 1969 France and China had acquired and tested thermonuclear devices. And while the 1968 Non-Proliferation Treaty (NPT) discouraged other governments from acquiring nuclear weapons through the promise of substantial benefits in the realm of peaceful applications (bearing in mind the system of controls Smith had previously set in place through the IAEA), many countries did not sign the treaty.<sup>48</sup>

The archival documentation confirms that, in contrast with what had happened in his previous stint at the State Department, this time Smith was actually prevented from exercising hard power diplomacy. Israel was the case in point. As the CIA reported in 1967, Israel had acquired sufficient materials for this goal at a particularly problematic juncture as the Six-Day War had recently ended showing a search for more effective weaponry to face the resentment of Arab countries.<sup>49</sup> Unsurprisingly, Smith's first task after his appointment in 1969 was to find ways to address the potential threat of Israeli nuclear capability.

That said, Smith could not be as forceful as in previous years, nor use collaborative offers as a science diplomacy device to persuade potential proliferators. The White House position presented a substantial ambiguity as US President Richard Nixon did not oppose that Israel acquire nuclear weapons, and posited just that such an acquisition should never be announced by the Israeli, so as to avoid embarrassing the US administration. So talking with Dobrynin in March 1969,

Ber. Wissenschaftsgesch. 43 (2020): 521 - 541

<sup>&</sup>lt;sup>44</sup> Quoted after Bolt 1976, on 231.

<sup>&</sup>lt;sup>45</sup> Zuckerman 1989, on 332–336.

<sup>&</sup>lt;sup>46</sup> On Pugwash, see Kraft and Sachse 2019. A praise for its science diplomacy work is Royal Society and AAAS 2010. On SIPRI, see Chillaud 2011.

<sup>&</sup>lt;sup>47</sup> These points were at the time captured in a *Nature* editorial written by John Maddox: Maddox 1971. See also Kinney 2012.

<sup>&</sup>lt;sup>48</sup> The NPT was an initiative of the Eighteen Nations Committee on Disarmament five nations from the Western Bloc (France, Italy, Canada, UK, and US), five from the Eastern Bloc (Bulgaria, Czechoslovakia, Rumania, Poland, and the USSR) and the non-aligned countries Brazil, Burma, Ethiopia, India, Mexico, Nigeria, Sweden, and United Arab Republic. On NPT history, see Popp et al. 2018.

<sup>&</sup>lt;sup>49</sup> "President: This gets down to 'mission Gerard Smith has.'[ACDA]." Minutes of NSC Meeting, 4 February 1969, FRUS, frus1969-76v23/d5. On the programme, see Cohen 1998, on 298.

Smith feigned confidence about his ability to persuade Israel (and India) to accept the NPT. $^{50}$ 

Was the strong-arming maestro now being strong-armed from above? Had Nixon, and especially his National Security Advisor, Henry Kissinger, secretly worked towards dampening Smith's unflinching approach? That's the impression that one gets by reading the memorandum of a conversation between US and Soviet delegations at the 24<sup>th</sup> session of the UN General Assembly, when urgent topics regarding proliferations—from US/Soviet Union relations to Israel's stance—were comprehensively covered. Yet, when the discussion moved to the Middle East, nuclear proliferation suddenly vanished from the diplomatic table. Even the Soviet foreign minister, Andrei Gromyko, attempt to keep it alive by remarking that the US was not doing enough to influence Israel led nowhere. Crucially, the most advanced network of scientific intelligence agencies in the world had yet to put together final evidence on Israel's nuclear weapons, or so it was claimed.<sup>51</sup>

Smith himself acknowledged in the book *Doubletalk* that he faced substantial opposition in Washington, D.C.<sup>52</sup> In particular, resistance to his plans existed in the NSC. In November 1969, Smith headed the US delegation in Geneva as the Strategic Arms Limitation Talks started. But his approach created enmity back at home. Already in October 1969 the military assistant to the US President for National Security Affairs informed Kissinger of "continuing problems" deriving from Smith's leadership in the talks and overreliance on ACDA's own use of scientific intelligence. Particularly problematic was Smith's effort to move beyond talks on missiles reduction to propose a ban on Multiple Independent Reentry Vehicles (MIRV or multiple warheads missiles).<sup>53</sup> Notably the problems were now synthesized at the NSC in terms of Smith's propositions as aiming to "string us along."<sup>54</sup>

Smith had thus to present a viewpoint he did not really agree with at the follow-up talks of November 1969. In particular, he had to reiterate to the chief Soviet delegate Vladimir Semenov that his delegation was not prepared to negotiate on a "Forward-Based Systems," i.e. a new set of tactical, light delivery weapon systems.<sup>55</sup>

By April 1970 the conflict brewing between Kissinger and Smith was plain to see.<sup>56</sup> Smith was aware that the White House, partly because of the opinion of the Joint Chiefs of Staff and the Secretary of Defense, opposed especially a ban to MIRVs.<sup>57</sup> The government panel on verification, chaired by Kissinger, didn't help taking Smith's propositions forward. Meeting in January 1972 with Nixon,

532 Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>50</sup> Memorandum of Conversation, 10 March 1969, FRUS, frus1969-76ve02/d70.

<sup>&</sup>lt;sup>51</sup> Memorandum of Conversation, 22 September 1969, FRUS, frus1969-76v12/d81.

<sup>&</sup>lt;sup>52</sup> Smith 1980 (as recalled in his biography *Disarming Diplomat*; Smith 1996, on 162).

<sup>&</sup>lt;sup>53</sup> The actions were described as "freewheeling, undisciplined and frequently disloyal." Alexander Haig to Henry Kissinger, 29 October 1969, FRUS, frus1969-76v02/d85.

<sup>&</sup>lt;sup>54</sup> Paper prepared by the NSC staff, n.d., FRUS, frus1969-76v32/d38.

<sup>&</sup>lt;sup>55</sup> Millett 1983, on 81. See also Smith 1985, on 90–97.

<sup>&</sup>lt;sup>56</sup> Memorandum of Conversation, 8 April 1970, FRUS, frus1969-76v32/d65.

<sup>&</sup>lt;sup>57</sup> Particularly telling is a phone conversation between Nixon and Kissinger in which Nixon was explicit about the need not to give Smith "too much" and to "handle" him. Telephone Conversation between Richard Nixon and Henry Kissinger, 5 May 1971, FRUS, frus1969-76v13/d203. See also Smith 1996, on 167.

Kissinger, And Secretary of State William Rogers, Smith had to fend off the president's alleged concern that a more comprehensive treaty would be "improvident."<sup>58</sup> Clearly his stance that the availability of scientific intelligence gave enough room to negotiate from a position of strength had now lost appeal.

The SALT I treaty was eventually signed in Moscow on 26 May 1972 but its only concrete measure was to ban anti-ballistic missile (ABM) systems. And a Verification Panel Meeting of the following June renewed the disagreement between Smith and Kissinger so that although the treaty was mostly completed, its implementation halted. Kissinger now intended to submit for Senate an approval of independent statements by various branches of government, something that Smith viewed as unnecessary.<sup>59</sup>

US Senate approved SALT I unanimously and in turn, more negotiations began which, however, no longer had Smith leading the US delegation. On 20 December 1972 Smith resigned as ACDA director, writing to President Nixon a letter indicating that "our hard FBS [forward-based systems] line had chagrined" the Soviets.<sup>60</sup> There is no final evidence on whether Smith was ousted out (as he claims in his autobiography), but it is telling of Nixon's and Kissinger's enmity to his approach that, after his departure, the ACDA budget was cut significantly and several staff members dismissed.<sup>61</sup>

These developments certainly had an impact on non-proliferation negotiations, as other countries now displayed greater eagerness to acquire nuclear weapons and unwillingness to comply with what the US offered, also in terms of scientific collaboration. They played a part in India's decision to go ahead with its nuclear weapons test, US intelligence-coded *Smiling Buddha*, in May 1974. Over the years competing positions have emerged as whether or not India's nuclear testing would have happened anyway, or whether it marked its growing dissatisfaction with the role of other nuclear players (Soviets and Chinese) in the Asian continent and the mounting lack of effectiveness of US diplomacy internationally.<sup>62</sup>

India's nuclear armaments ignited tensions with Pakistan too, making it more eager to acquire nuclear weapons. And the lack of reassurances was an equally decisive factor in strengthening South Africa's nuclear efforts in response to the growing threat of (Soviet-backed) Angola. At this point Smith started realizing that "proliferation begets proliferation" (as US policy adviser George Schultz once stated). Even when coupled with substantial surveillance and intelligence work, Smith's efforts to coerce other countries to renounce to nuclear weapons, also through the promise of assistance in atomic energy R&D, had become less productive. Smith's final stint in the "corridors of power" made him realize this further.

Ber. Wissenschaftsgesch. 43 (2020): 521 - 541

<sup>&</sup>lt;sup>58</sup> Memorandum of Conversation, 3 January 1972, FRUS, frus1969-76v32/d220.

<sup>&</sup>lt;sup>59</sup> "The more we tell them, the more they will want to know." Minutes of a Verification Panel Meeting, 7 June 1972, FRUS, frus1969-76v33/d10.

<sup>&</sup>lt;sup>60</sup> Backchannel Message from Smith to President Nixon, 20 December 1972, FRUS, frus1969-76v33/d10.

<sup>&</sup>lt;sup>61</sup> Leaving the agency in the hands of a former RAND strategist, Fred Iklé. Smith 1996, on 177.

<sup>&</sup>lt;sup>62</sup> See Chengappa 2002. For an overview on the Indian test and nuclear programme, see Abraham 1998.

## 3. Crisis Moment? 1977-1980

Presumably we will never know if Smith's last foray as science diplomat was a lastditch attempt to forcefully dissuade countries like India, Pakistan, Brazil, Argentina, and South Africa from acquiring nuclear weapons, or rather the first try of a more constructive approach to diplomacy; one less reliant on offers of collaboration conceived entirely in the name of national interest (and coupled with veiled threats). Smith returned to office after his experience as chairman of the non-governmental delegation that David Rockefeller set up as part of the Trilateral Commission—the organism created to strengthen financial ties with Japan and Western Europe.<sup>63</sup>

Smith's final spell was in the Democratic administration of US President Jimmy Carter, who appointed him as Special Representative (and Ambassador-at-Large) on Non-Proliferation Negotiations. His nomination followed, interestingly, a missed appointment as CIA director,<sup>64</sup> and this prospect further suggests a proximity between the areas of scientific intelligence-gathering and diplomacy that he oversaw.

Once appointed Ambassador-at-Large, Smith worked to tie more countries to a non-proliferation regime through the offer of cooperative schemes in atomic energy research under the umbrella of the US nuclear complex. This was clearly in line with Carter's efforts to prioritise a dialogue with interested governments as a way to discourage them from possessing nuclear weapons.<sup>65</sup> Further implementation of this scheme entailed for instance preventing the diversion of spent fuel towards weapons' production; something on which extensive research had been recently carried out in recent years. The 1978 US Nuclear Non-Proliferation Act had by then vetoed exports to any nation not accepting the IAEA "full-scope" international safeguards. This issue ignited a confrontation between US and French diplomats and Smith was called in to address it, especially since the French opposed plans for an International Nuclear Fuel Cycle Evaluation scheme.<sup>66</sup>

If the talks with the French proved difficult, so did those with the German Chancellor regarding a collaboration with Brazilian atomic energy experts. If in 1954 Smith had successfully helped to dissuade the Germans from shipping centrifuges to South America, now the situation had reverted as they openly refused to accept US requests for deferring new supplies of technologies and knowledge in light of a bilateral agreements signed in 1975.<sup>67</sup> The failed mission discussed at the beginning of this paper revealed to Smith their unwillingness to be dissuaded again and was coupled with mounting evidence of French and German support to Argentina's own nuclear programme.<sup>68</sup> This is the stage when a young Nye

534 Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>63</sup> See Knudsen 2016.

<sup>&</sup>lt;sup>64</sup> Smith 1996, on 191.

<sup>&</sup>lt;sup>65</sup> Hence making offers conditional upon NPT compliance. For the case of Morocco, see, for instance, Adamson 2020. For the case of Japan, see Johnston 2017.

<sup>&</sup>lt;sup>66</sup> Carter notably commented on Smith's mission to Paris that "We'll form a policy, along with others either with or without the French." Memorandum From Secretary of State Vance to President Carter, 8 July 1977, FRUS, frus1977-80v26/d349.

<sup>&</sup>lt;sup>67</sup> Memorandum of conversations with FRG Chancellor Helmut Schmidt, 13 July 1977, FRUS, frus1977-80v26/d417.

<sup>&</sup>lt;sup>68</sup> "The implications for nuclear weapons development were obvious." Smith 1996, on 197–198.

began to collaborate with the veteran science diplomat on persuading Latin American administrations to adhere to the 1967 Tlatelolco Non-Proliferation Treaty. But the usual mix of concessions and threats was plainly unsuccessful.

Smith was thus called to rein in multiple proliferation efforts all occurring at virtually the same historical junction. The US Secretary of State, Cyrus Vance, once again tasked the "Smith & Nye" duo to take up the new cases, but State Department correspondence reveals once more their lack of success. In particular with Pakistan, they "tried out various compromise formulations" but found the Pakistani foreign minister as "unflexible [sic]" as the US officials had been that far.<sup>69</sup>

Smith's threat to South-Africa's President "P. W." (Pieter Willem) Botha, especially with regards to stopping US supplies of lowly-enriched uranium for nuclear research reactors, were plainly rebuffed.<sup>70</sup> By the end of the year there was still hope among State Department officials that Smith would succeed in dissuading the South Africans from independently enriching uranium instead.<sup>71</sup> The US– South Africa talks of June 1978 combined offers with less explicit intimidations about the consequences of not accepting them. Smith now handed over another "non-paper," this time to the South African foreign secretary Brand Fourie, listing (as with the Brazilians two decades earlier) the economic sanctions to follow.<sup>72</sup> And when Smith returned to the US he promptly filed a report for the CIA director letting him know about the sensitive sites visited in South Africa.<sup>73</sup>

But this time the usual cocktail of scientific intelligence and diplomacy didn't work. Smith's visit was actually the prelude to famous Vela Incident of September 1979; the suspected test of a nuclear weapons by the South Africans first revealed by the Soviets and then confirmed through a VELA HOTEL satellite. As William Burr and Avner Cohen have recently argued, the event represented a diplomatic blunder for Smith, especially given his high-level role in Carter's administration and the suspect that the Israelis had contributed to it, effectively finding a way to test a device of their own. In the end a White House panel overruled the initial CIA conclusions that a nuclear weapon was tested, sparking accusations of "white-washing" in US newspapers. Burr and Cohen, on the basis of recently declassified records produced in Smith's office, claim that the Ambassador-at-Large could not harness the evidence needed to conclude that the explosion was a nuclear test, and to confirm that the Israelis were behind it.<sup>74</sup>

Either Smith had become increasing disillusioned about coercive tactics, or, not indifferently from his previous role under Nixon's administration, prevented

Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>69</sup> Memorandum from Secretary of State Vance to President Carter, 24 March 1978, FRUS, frus1977-80v19/d275.

<sup>&</sup>lt;sup>70</sup> Memorandum From Secretary of State Vance to President Carter, 15 September 1977, FRUS, frus1977-80v16/d309; State Telegram, South Africa Embassy to White House, 13 September 1977, FRUS, frus1977-80v16/d307.

<sup>&</sup>lt;sup>71</sup> Memorandum of Conversation, 11 November 1977, FRUS, frus1977-80v16/d321.

<sup>&</sup>lt;sup>72</sup> Telegram from the Embassy in South Africa to the Department of State, 28 June 1978, FRUS, frus1977-80v16/d343.

<sup>&</sup>lt;sup>73</sup> Memorandum from Ambassador-at-Large (Smith) to CIA Director, 11 July 1978, FRUS, frus1977-80v16/d345.

<sup>&</sup>lt;sup>74</sup> A detailed examination of these 2016 revelations is in Burr et al. 2019. See also Burr and Cohen 2016; Richelson 2007, on 313–315.

from being as forceful as before. In particular, since 1978 Smith had been less open in discussing South African and Israeli efforts with Soviet officials. On one occasion, he listened silently to Vance's statement that the US "accepted" that the Israelis had not produced nuclear weapons, and that, Dobrynin's persistence notwithstanding, "there was no evidence that Israeli assurances were untrue."<sup>75</sup> Scientific intelligence on the South African effort may have been lacking in Washington, D.C. But it is less plausible that the same knowledge was not available on the Israeli atomic programme.

A few months before the Vela Incident Smith prepared a resume for Carter summarizing a vast number of issues still unresolved: the international fuel cycle evaluation scheme had achieved "only modest results," and, especially in light of Israel's (alleged!) nuclear capability, the US would "face criticism" at the forth-coming NPT Review Conference. He now started realizing that the US needed to collaborate more with other countries, especially in Europe, to achieve non-proliferation goals, in a new "regime" emphasizing trust building rather than forceful diplomacy.<sup>76</sup>

The uncertainties regarding proliferation in other countries, and the inability (unwillingness in the case of Israel) of the US administration to successfully deal with allied nations unnerved the Soviets and in turn complicated the completion of SALT II. Technical issues now added to Soviet anxieties over US efforts to dodge questions (and Soviet intelligence data) on nuclear proliferators. Now Smith failed to reassure Dobrynin—even though the two had by now been discussing treaties for more than a decade, also developing an amicable relation.<sup>77</sup> SALT and CTBT talks continued with ups and downs, and the SALT II treaty was eventually signed on 18 June 1979. The Soviet invasion of Afghanistan, however, prevented its ratification.

A similar drawback typified talks on nuclear testing. In 1974 the US and the Soviet Union had signed a Threshold Test Ban Treaty (TTBT) which made the signing of a comprehensive test ban even less likely as it arbitrarily set the limit for underground tests to 150Kt.<sup>78</sup> After that the US government continued to reiterate that verification measures, even when grounded on multiple sources of scientific intelligence, would prevent a comprehensive ban. This produced the rift between experts on verification measures that typified the early 1980s, as US seismologists now shared Smith's scepticism on the government (and ACDA) stance that Soviet tests would go undetected.<sup>79</sup>

The inability to operate his unflinching approach in situations where stakes were higher eventually overcome Smith, and disagreements at government level had by then markedly grown. He could bully the Brazilians, but not Israel, espe-

<sup>&</sup>lt;sup>75</sup> Memorandum of Conversation, 16 March 1978, FRUS, frus1977-80v06/d92.

<sup>&</sup>lt;sup>76</sup> Memorandum from Ambassador-at-Large (Smith) to President Carter, 27 July 1979, FRUS, frus1977-80v26/d373.

<sup>&</sup>lt;sup>77</sup> Memorandum, 16 March 1978, FRUS, frus1977-80v06/d92. In leaving office as ambassador in the US Dobrynin recalled that he would be missing his country retreat "on the Eastern Shore, some 15 miles from Gerard Smith's place." Memorandum of Conversation, 18 November 1981, FRUS, frus1981-88v03/d104.

<sup>&</sup>lt;sup>78</sup> See on this Bolt 1976, on 246–247.

<sup>&</sup>lt;sup>79</sup> See on this Evernden 1998.

cially given its key position in the Middle East chessboard. The Pakistanis could not be dissuaded either and the war in Afghanistan made them even less eager to comply.<sup>80</sup>

When Smith left office in November 1980, he prepared the memorandum for Carter and for Kissinger's successor, Zbigniew Brzezinski, introduced at the beginning of this paper. It exuded disillusionment. He now advocated a policy change examining the situations of Pakistan and Argentina. More significantly he stressed the negative impact that the US search for an exclusive control of the global circulation of scientific knowledge on nuclear weapons. It was about time to devote more attention to understand the *motives* of proliferation. The US, in essence, should have approached foreign policy in a less assertive way.<sup>81</sup>

## 4. Conclusions

Photographs of "Gerry" Smith taken at the dawn of his career shows a revered science diplomat now somewhat hurt, defeated (Figure 2). He certainly didn't look anything like the dogged diplomat that had taken responsibility for atomic energy affairs at the State Department at the end of WW2. Could his jaw take more diplomatic blows?

In leaving office Smith reviewed thirty years of diplomatic practice now realizing that while the US arsenal had grown, it was unclear if this growth had strengthened national and global security. The overall number of nuclear states in the world had increased and rendered ineffective thirty years of unflinching diplomacy. In October 1980 he filed the report urging for the adoption of a "more balanced approach."<sup>82</sup>

This paper has attempted, in light of an examination of some of the relevant archival documents, to firstly recall the importance of diplomatic practice and humanistic education, as complementary to scientific training, even in the realm of what we call today science diplomacy. Over thirty years the lawyer-by-training Smith developed distinctive skills enabling him to make use of restricted scientific intelligence to elaborate further proposals for scientific collaborations then tabled in critical talks with US allies. Given his lack of scientific training, it is worth wondering how did he managed to occupy such a prominent space in US science diplomacy. Unfortunately, the archival evidence available does not fully enlighten on this. Smith could seemingly count of a pool of collaborators (like Farley, Scoville and other intelligence experts) helping him to further evaluate how to more effectively implement specific diplomatic tactics in light of the scientific intelligence available. We now know more about how this network operated even if we lack details on how specific tasks were distributed among the personnel within it.

In any case, a close examination of Smith's practice has shed light on unknown aspects of what we now call science diplomacy, dispelling naïve assumptions about its nature as a consistently mutually-beneficial force in international relations. We have seen how US offers of scientific collaboration often forced poten-

Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

<sup>&</sup>lt;sup>80</sup> Smith 1996, on 201.

<sup>&</sup>lt;sup>81</sup> Memorandum from the President's Assistant for National Security Affairs (Brzezinski) to President Carter, 24 November 1980, FRUS, frus1977-1980v26/d395.

<sup>82</sup> Smith 1996, on 202.



Figure 2: Smith meeting US President Jimmy Carter on 24 October 1979. Courtesy: Jimmy Carter Presidential Library – Public Domain.

tial allies to fall in line with the wishes of its administration and that the intelligence available to negotiators like Smith helped them to formulate proposals that could hardly be refused. And when un-declinable proposals were declined, Smith and his assistance were ready to threaten (e.g. Brazil, South Africa) through "nonpaper" papers outlining a rejection's problematic consequences.

Through Smith's career as a science diplomat, we have seen how science diplomacy closely tied to scientific intelligence. In the ascendant phase the offer of scientific exchanges and collaboration in resource geophysics and nuclear science made to other countries often followed the gathering of scientific intelligence in order to help the US administration to seize vital nuclear materials (Brazil, Italy) or to better control the circulation of scientific knowledge (Norway, IAEA). And Smith took over as ACDA director at a time when science diplomacy aimed to expedite US intelligence-gathering on Soviet tests, especially in the realm of seismology, through the offer of scientific equipment that would better detect earthquakes as much as nuclear explosions (Mexico, Yugoslavia). In the descendant phase of his career, Smith struggled to effectively tie scientific diplomacy and intelligence as he had done that far. Firstly, US hegemony in the nuclear field alienated other countries now seeking to join forces in competing science diplomacy initiatives (UK/Soviet Russia, Pugwash, SIPRI). Meanwhile the availability of more nuclear materials, technologies and knowledge made US offers of scientific collaboration less alluring. Nixon and Kissinger's scepticism on Smith's reliance on scientific intelligence further weakened his diplomatic approach, and, presumably he was never given sufficient latitude to intimidate countries such as Israel

538 Ber. Wissenschaftsgesch. 43 (2020): 521 – 541

and Pakistan into accepting a non-proliferation regime. The lack of conclusive evidence about the Vela Incident further undermined him, persuading Smith that to operate authoritatively in international relations meant to rely more on building collaborative relations recognizing an interest higher than the national one.

Following the Vela Incident, Smith left office with a sense of disenchantment about his role. He now questioned the US wisdom and legitimacy in building a nuclear arsenal. "We were less likely"—he wrote—"to persuade others to forswear nuclear weapons when we ourselves declared them central to our national security, continued their testing, and continued to expand and upgrade our arsenal."<sup>83</sup> He was not alone in emphasizing his career as punctuated by failure. In recognition of his contribution, Carter awarded him the Medal of Freedom (the highest accolade for US civilians). The citation recalled that "In *helping formulate* [Emphasis mine] our national security policy [...] he has helped us all to perceive that, in this nuclear age, security and peace are indivisible." Unsurprisingly Smith judged the citation ambiguous—"helping formulate" suggests an unfinished business.

Whatever the case, Smith's career offers a tremendous historical lesson. US President Donald Trump's renunciation of another pillar of non-proliferation such as the Intermediate Nuclear Forces (INF) treaty, coupled with the possible repudiation of Open Skies, and the abandonment of international talks with Iran, suggests that resolute stances always secure diplomatic victories.<sup>85</sup> Not only does Smith's career show the opposite, but it fortifies the conviction that a different approach is needed. The ascendant and descendant phases of his career clearly show how alluring, but unyielding, intelligence-based coercive approaches have been to US science diplomacy. Smith's autobiography ends by recalling that the abolition of nuclear weapons is the only sensible, ultimate policy objective. And since it is an unflinching science diplomat who was involved in nuclear negotiations for thirty years to claim it, his words may well deserve greater attention.

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<sup>&</sup>lt;sup>83</sup> Smith 1996, on 208.

<sup>&</sup>lt;sup>84</sup> Quoted after Smith 1996, on 204.

<sup>&</sup>lt;sup>85</sup> For an overview on recent decisions, see Hudson and Sonne 2020.

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Ber. Wissenschaftsgesch. 43 (2020): 521 – 541