Imagining a ‘Jewish atom bomb’, constructing a scientific diaspora

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Abstract
The nexus between transnational mobilization and Science and Technology Studies (STS) offers a productive platform for studying the formation of scientific activism, the influence of mobilization on scientific developments, and the ways science is used to achieve government goals. Integrating concepts from both sets of literature – particularly national sociotechnical imaginaries and socio-spatial positionality – this article explores how Dr Chaim Weizmann, a prominent chemist and a Zionist leader, attempted to construct and mobilize a ‘scientific diaspora’. Empirically, the article draws on new archival evidence, revealing the hitherto unknown early efforts of the Zionist movement to acquire nuclear reactor and utilize the Jewish involvement in the American nuclear project for political leverage abroad. Theoretically, rather than beginning the analysis with a scientific-diasporic network that was ready to be mobilized, we trace the selective and tailored practices employed by Weizmann to animate the Jewish connection among nuclear scientists and professionals.

Keywords
scientific diaspora, international relations, transnationalism, science diplomacy, nuclear weapons, Israel

In the past two decades, scholars have paid increasing attention to Israel’s secretive nuclear program and its history. The existing accounts begin the story of Israel’s nuclear efforts with the establishment of the state in 1948, mainly focusing on three protagonists – David Ben-Gurion, the state’s political leader, Ernest David Bergmann, Ben-Gurion’s...
scientific advisor, and Shimon Peres, his executive right hand (Cohen, 1998; Kandel, 2012; Karpin, 2006; Shalom, 2005). In this study, we broaden the historical scope, demonstrating how early thoughts of an ‘atomic bomb from Palestine’ first emerged within Zionist circles as early as 1945, immediately after the bombing of Hiroshima and Nagasaki. Further, we analyze the early efforts made by Dr Chaim Weizmann, a world-renowned chemist and a prominent Zionist leader, to cultivate and mobilize a Jewish knowledge network related to the Manhattan Project.

Our analysis focuses on several initiatives that Weizmann took between 1945 and 1947. First, we show how Weizmann sought to utilize the involvement of Jewish scientists in the Manhattan project to advance the migration of Holocaust survivors from Europe to Palestine, appealing in particular to Albert Einstein. Second, we demonstrate how in 1947 Weizmann tried to promote the construction of a ‘Zionist’ nuclear reactor in British-controlled Palestine, attempting to win the support of two important Jewish-American figures for this initiative: J Robert Oppenheimer, the former scientific director of the Manhattan Project, and David E Lilienthal, the newly appointed head of the American Atomic Energy Commission (AEC).1

In addition to the historical significance of the case – tracing the roots of Israeli nuclear thinking to the Yishuv period2 – an examination of Weizmann’s efforts sheds new light on the nexus between science and diplomacy, particularly the attempts to cultivate and mobilize a scientific diaspora. The role of ‘scientific diasporas’ and ‘diasporic knowledge networks’ has been widely discussed in the literature concerning the global history of technology, with scholars examining the issue from several perspectives.3 Some studies discuss how the British empire used the dispersion of scientific staff as an instrument of imperial control (Bennett and Hodge, 2011; Buchanan, 1986), while others explore how scientific diasporas are recruited to act as agents of technological and economic development (Barré et al., 2003; Meyer, 2001; Tejada and Bolay, 2010). Our study differs from these two approaches in two significant ways.

First, instead of assuming the presence of a pre-existing ‘diasporic knowledge network’, we examine Weizmann’s attempts to construct a scientific diaspora that did not yet exist. We detail the micro-level practices implemented by Weizmann, a political entrepreneur embedded in a certain context, to animate diasporic feelings of obligation among selected scientists and experts and to channel these feelings toward ‘homeland’-related goals.4 The mobilization of a scientific diaspora may have a wider utility than previously assumed. Indeed, this utility is not limited to attempts to facilitate the transfer of knowledge or skills; rather, it may also include efforts to take advantage of the scientific clout of the targets to accomplish diplomatic goals.

Second, the existing accounts within the literature regarding nuclear proliferation focus primarily on the role of transnational mobilization in promoting non-proliferation goals (Adler, 1992; Evangelista, 2018; Kutchesfahani, 2013; Wittner, 2003) or on the role of illicit transnational trafficking of nuclear technology (Chestnut, 2007; Montgomery, 2005). We add a third aspect to the mix, demonstrating how a non-state actor can use transnational mobilization in an attempt to promote the establishment of a nuclear reactor. To the best of our knowledge, this is the first such case discussed in the literature.

In contrast to mass or collective mobilization, the mobilization of scientific diasporas is a very selective and tailored process. We trace the practices Weizmann employed in his
efforts to cultivate a diasporic affinity among specific scientists, experts, and professionals, seeking to instrumentalize them for the goals of the Zionist movement. Due to the secrecy surrounding Israel’s nuclear establishment, which extends to the years before the state’s establishment, many of the relevant documents are still classified (Jensen et al., 2011: 185–212). To overcome this challenge, we rely on extensive evidence from various sources: biographies and draft biographies, documents, diaries and letters from several international archives.\textsuperscript{5} Significantly, the aim of our analysis is not to determine the impact of scientific diasporas or the conditions under which scientific diasporas are successfully (or unsuccessfully) mobilized. While Weizmann’s efforts in part failed, this article focuses on the underlying process. In the concluding section, we consider the similarities and differences between the Zionist case and other cases of nuclear proliferation that made use of scientific diasporas – China and Pakistan.

**Scientific diasporas**

The use of science by political units – states or empires, especially during wartime – has been widely studied (Forman, 1987; Hamilton, 2003; Herken, 2000; Kevles, 1995; MacLeod, 2001). While most works focus on the mobilization of scientists domestically, the intensification of migratory processes in recent decades has led to increased scholarly attention to the challenges and potential associated with ‘scientific diasporas’ (Barré et al., 2003), sometimes labeled as ‘intellectual diaspora networks’, ‘diaspora knowledge networks’, or ‘expatriate knowledge networks’ (Brown, 2002; Meyer and Wattiaux, 2006).

Scholarly discussion of scientific diasporas, which are generally defined as highly skilled emigrants, has concentrated on questions concerning ‘brain-gain’, ‘brain-drain’, and ‘brain-circulation’. Some examine how scientific mobility influences scientific productivity and collaboration (Anand et al., 2009; Basu, 2013, 2014; Marmolejo-Leyva et al., 2015), while others explore the economic impact of brain-drain, as well as the potential to facilitate economic development by using the talent, knowledge, and skills of scientific diasporas (Barré et al., 2003; Meyer, 2001; Tejada and Bolay, 2010; Tejada et al., 2013).

The existing studies concerning scientific diasporas have three limitations. First, the current use of the concept mainly refers to scientific returnees or emigrants, excluding other forms of national or religious belonging (for instance, members of Kurdish, Palestinian, or Jewish diasporas). Second, scholars study scientific diasporas as agents that facilitate the economic or technological needs of their homelands, downplaying the potential diplomatic role they can play in promoting the interests of their homelands abroad. Finally, and most importantly, these works assume the pre-existence of an already-mobilized scientific diaspora. Some scholars define scientific diasporas in such terms as ‘self-organized communities of expatriate scientists and engineers working to develop their home country or region, mainly in science, technology, and education’ (Barré et al., 2003: 121; Séguin et al., 2006: 1602), making an implicit assumption that diasporas are just ‘out there’ waiting for the home countries to tap into this resource.

As recent developments in diaspora studies show, diasporic communities need to be constituted as such. First, diasporas should not be studied as already-existing entities but
Constructing and mobilizing a scientific diaspora

In the context of scientific diasporas, we study a political entrepreneur’s attempts to cultivate a collective national, cultural, or religious identity among members of a specific ‘knowledge network’ abroad and activate them for goals related to the imagined collective. Simply put, constructing a scientific diaspora involves attempts to animate a diasporic identity in the context of the professional expertise of certain individuals – given our constructivist goals and following Betts and Jones (2016: 26), we use the term animation to describe how a scientific diaspora is brought into existence. This process can take three primary forms. First, political entrepreneurs can encourage the repatriation of diasporic experts by highlighting discrimination abroad and encouraging ethno-religious identities. Second, in the context of economic development, states and international organizations can appeal to diasporic experts not only because of their professional expertise but also due to their intimate knowledge of the culture, society, and politics of the ‘homeland’ (see Brinkerhoff, 2016). Finally, political entrepreneurs can try to animate feelings of kinship among experts and scientists to advance various tasks related to the goals of the ‘homeland’. These include assisting in the transfer of scientific technology or the utilization of prestige and symbolic capital for diplomatic goals. In that respect, the cultivation of a ‘scientific diaspora’ resembles the creation of a diasporic lobby (Ambrosio, 2002; Smith, 2000).

All these examples accord great significance to entrepreneurs – a significance that is also emphasized in the STS literature on scientific activism as well as in recent scholarship regarding diaspora mobilization. Defined by their personal characteristics, social skills, innovative goals, and creative actions, entrepreneurs craft strategies to organize others to participate in action. They are key agents in framing an issue, identifying opportunities, mobilizing resources (social and material), and creatively linking previously unconnected networks (Brinkerhoff, 2016; Hess, 2007; Jia, 2021; Koinova, 2021; Mintrom, 2019). In contrast to policy or social entrepreneurs, political entrepreneurs seek to influence the broader political landscape. Skilled as they are, however, political entrepreneurs are also embedded in structural contexts that shape the ends they envision and the means they employ. When theorizing the cultivation and mobilization of a scientific diaspora, two concepts are analytically useful to define these structural contexts: the national sociotechnical imaginary of the political entrepreneurs and their socio-spatial positionality.

Political entrepreneurs are embedded in a certain epistemic context, captured by the concept of sociotechnical imaginaries. Introduced by Jasanoff and Kim (2009: 120), these are defined as ‘collectively imagined forms of social life and social order reflected in the design and fulfillment of nation-specific scientific and/or technological projects’.
As discursive configurations of the relationship between science, technology, and national identity, sociotechnical imaginaries underpin reigning assumptions concerning knowledge-production (Jasanoff and Kim, 2009: 124). Thus, they actively participate in the process of state-making through scientific knowledge, categorization, measurement and expertise (Carroll, 2006; Leuenberger and Schnell, 2010; Mitchell, 2002; Mukerji, 1989). As such, national sociotechnical imaginaries inform political entrepreneurs vis-à-vis desirable or attainable technoscientific futures (Jasanoff and Kim, 2013; Kim, 2014; Sovacool et al., 2020).

Furthermore, the possibility of engaging in the cultivation and mobilization of a scientific diaspora is not readily available to all political entrepreneurs. Rather, it depends on their socio-spatial positionality, meaning the power that these entrepreneurs amass, or are perceived to amass, from their specific social and spatial context as well as their linkages to other global contexts (Koinova, 2012, 2017, 2018b, 2021). Engaging in transnational mobilization means that political entrepreneurs must possess social and spatial opportunities to act transnationally. They may be linked to institutions, networks, or resources that operate transnationally and they may possess useful social connections and a good reputation that allow them to engage in transnational action.

When referring to the mobilization of a scientific diaspora – a limited group of experts and professionals – political entrepreneurs also consider the socio-spatial position of the targets of mobilization. First, they seek to map the relevant population by creating lists of potential names and gathering information about their positions and contacts. Second, they tailor the means and ends of mobilization based on their perception of the targets’ capabilities, or what the targets are willing to agree to undertake. For tasks related to the circulation of expertise, political entrepreneurs consider the specific expertise and the institutional positions of selected individuals. In the case of tasks related to diplomatic influence, political entrepreneurs take into account scientists’ prestige and clout as well as their personal values and ideology.

In the following, we outline the attempts to construct a nuclear ‘scientific diaspora’ in the service of the Zionist national movement. The first two sections detail the broader contextual and historical foundation for Weizmann’s actions, namely his socio-spatial positionality and the Zionist sociotechnical imaginary. Subsequently, we trace the practices Weizmann used to appeal to Jewish sentiment among scientists, experts, and professionals connected to the American atomic bomb project in pursuit of two goals: (1) to utilize the prominent role Jewish scientists played in the Manhattan Project and nuclear physics at large to persuade the US and other foreign governments to pressure the British to allow Jewish immigration to Palestine, and (2) to utilize their scientific expertise and political clout to promote the construction of a nuclear reactor in Palestine.

**Constructing a scientific diaspora in the nuclear sphere**

*Chaim Weizmann: A political entrepreneur and his socio-spatial positionality*

The key figure at the heart of our analysis is Dr Chaim Weizmann, a world-famous chemist and a Zionist leader, who would serve as Israel’s first President. His discovery of how
to produce synthetic acetone and his role as the president of the World Zionist Organization placed him in a particularly advantageous social-spatial position to promote transnational mobilization. Further, as a naturalized British citizen, throughout his lifetime his British social circle remarkably included no fewer than three British Prime Ministers (Golani, 2016: 217).

During the 1930s and 1940s, Weizmann competed with Socialist Zionist David Ben-Gurion for the leadership of the Zionist movement. After isolating Weizmann politically and marginalizing him within the organization in the early 1940s, Ben-Gurion nonetheless capitalized on Weizmann’s international connections and prestige to accomplish several international tasks (Golani and Reinhartz, 2019: 629–680; Segev, 2019: 213–334). In addition to their different personalities and backgrounds (Keren, 1988: 28), the two strongly disagreed on how the Zionist movement should handle the conflict with the British government. By the late stages of the Second World War, Ben-Gurion saw Anglo-Zionist cooperation as instrumental and temporary, viewing armed hostilities between the Jews in Palestine and the British as unavoidable (Bar-Zohar, 1979: 218–220; Gorny, 1991; Tzahor, 1994: 173). He saw the political decision on the fate of Palestine as mainly a ‘British decision … with American consent’, assessing that the Soviet Union would stay out of the fray (TNA, 1945).

The two differed in other respects as well, for example in their primary reaction to the bombing of Hiroshima and Nagasaki. Ben-Gurion did not initially recognize the significance of the atom bomb. He did not mention it in his diary; indeed, the only related entry appears on 15 August 1945: ‘The war with Japan is over’ (Segev, 2019: 568). As we shall see below, Ben-Gurion began to take an interest in atomic fission only three years later, during Israel’s War of Independence in 1948. At that time Ben-Gurion’s friend, who would later become his scientific advisor, Ernst David Bergmann, a German-born organic chemist (and a former close confidante of Weizmann), together with other leading Yishuv scientists, persuaded him that ‘a national nuclear project was within Israel’s scientific abilities’ (Cohen, 1998: 25). Weizmann, by contrast, had immediately perceived the significance of this new technology.

Weizmann’s mode of operation following the bombing of Hiroshima and Nagasaki and the resulting discovery of the Manhattan Project is embedded in his personal history and diplomatic habitus. First, Weizmann was a ‘diplomats’ diplomat’: he believed in promoting political goals through close ties with carefully chosen representatives of the top echelons, especially the British elite. He preferred influencing decision-makers by enlisting their advisors to the cause or talking to them privately, and he was deeply opposed to Ben-Gurion’s notion of ‘going to the public’ and leveraging public opinion to create political pressure (Segev, 2016: 460, 484). He used this approach with British leaders around 1917 when trying to secure British support for Jewish national claims, as well as with President Harry Truman in the late 1940s, meeting him privately three times to secure his political support for the establishment of the state (Cohen-Levinovsky, 2016: 495–6).

A ‘Jewish Atom Bomb’: The Zionist sociotechnical imaginary

Weizmann’s attempts to construct a scientific diaspora around the issue of nuclear technology did not take place in an empty void; rather, they were embedded within a
particular national sociotechnical imaginary that was dominant in the *Yishuv*. This imaginary ties together the legitimacy of the Zionist cause, modern notions of progress, and the practical needs of state-making and nation-building. Through scientific and technological developments, the Zionist movement saw itself as bringing the promise of Western progress to Palestine, as well as transforming religious Eastern European Jews into modern members of the nation (Efron, 2014: 64–93; Penslar, 1991). Furthermore, scientific expertise and measurement tools actively contributed to the constitution of epistemological social realities, such as ethnic and racial classification as well as territorial construction and engineering (Hart, 2000; Leibler, 2014; Leuenberger and Schnell, 2010; Penslar, 1991).

Regarding the atom bomb, this Zionist sociotechnical imaginary manifested itself in two ways. First, the involvement of Jewish scientists in the Manhattan project reinforced the idea of a unique ‘Jewish genius’, linking the achievements of Jews abroad with the Zionist movement (Efron, 2014: 87; Funkenstein, 1993: 342). The *Yishuv*’s newspapers commented with pride on the notable participation of Jewish scientists in the Manhattan Project. When reporting on the bombing of Hiroshima, the headline of the daily newspaper *Yedioth Ahronoth* read: ‘2 Jews assisted in the development of atom bomb’ (Reuters, 1945). The article itself opens with a quote from Rudolf Peierls and Franz Eugen Simon, two Jewish scientists involved in the Manhattan Project, who expressed their satisfaction with their role in developing the bomb: ‘Dr Simon told Reuter that they were delighted about helping the Allies win the race for the bomb which will shorten wars’ (Reuters, 1945). A later report published in the same newspaper in 1948 proudly reported: ‘Jews among aircrews of both bombers which dropped the atomic bomb’ (Yedioth Aharonot, 1948).

Second, Zionist intellectuals in the *Yishuv* began to ponder, in the context of Jewish scientists’ contributions to the Manhattan project, what role an ‘Atomic Bomb from Palestine’ (YCW, 1945a) could potentially play in forcing the world powers to prioritize the resolution of what was termed ‘our question’ (Adam, 1945). In this sense, the atomic bomb was seen as a powerful tool, potent enough to potentially ‘buy’ the Zionist movement and its leadership a seat at the table and force the world powers to take Zionist leaders seriously. Natan Adam, a publicist for the socialist *Mishmar* paper, reflected this perspective in his column from November 1945:

> If the secret of atomic energy were in our hands, we would be able to talk with those responsible for the resolution of our question in this world. (Adam, 1945, authors’ translation)

Archival evidence demonstrates that Weizmann himself was not only a part of this sociotechnical imaginary but actively shaped it. On 12 December 1945, Arthur K Epstein, a Zionist activist affiliated with Weizmann, sent a fund-raising solicitation letter to a potential donor as part of a campaign to expand the existing Sieff Research Institute (est. 1934, Rehovot) (Katz, 2017: 94–106). Epstein opened the letter by quoting a communication he had sent earlier to Weizmann, indicating, significantly, that Weizmann was aware of this line of thinking. Reflecting on the tragic state of world Jewry in 1945, Epstein lamented that ‘at present we are looked upon as “nobodies” whom governments and Presidents do not hesitate to betray’ (YCW, 1945a). In the context of the atomic
bomb, he posed the following open-ended query: ‘I wonder what our political situation would have been if Drs Meitner, Frisch, Oppenheimer and James Frank would have made their contributions of atomic energy in Rehovot, and their contribution to the Atomic Bomb from Palestine’ (YCW, 1945a, emphasis added). Significantly, the scientists listed here were Jewish scientists, and Epstein was referring to their scientific contribution and to the question of how this contribution could be harnessed to promote the Zionist cause.

Foreshadowing later Cold War era writing on the status and prestige associated with nuclear weapons, Epstein went on to answer his own question: ‘The world would think of us differently today if all the great Jewish scientists would have made their contributions from Palestine, rather than from Germany, France, Italy, USA and Great Britain. The world would have to recognize our force and power not based upon armies, fleets, etc., [sic] but upon intellectual achievements which are meant for humanity at large’ (YCW, 1945a). Further evidence for Weizmann’s line of thinking on Jewish participation in the Manhattan project appears in an unpublished draft of his autobiography, written between 1946 and 1948:

Very few people … have any notion of the role which Jews have played in modern science, and particularly of their astounding share in the development of nuclear physics. … I have heard Einstein speak of ninety percent …. I am continuously struck by the utter disproportion of the Jewish contribution. (Kedar, 2017: 278)

In sum, Weizmann’s personal characteristics and experience, his socio-spatial positionality, and the Zionist sociotechnical imaginary significantly enabled his attempts to cultivate and mobilize a scientific diaspora. In line with his discreet diplomatic approach, Weizmann consistently leveraged his scientific success to advance the Zionist national cause as early as the beginning of the First World War (Reinharz, 1985). His socio-spatial positionality – marginalized from leadership positions but still possessing deep transnational connections in both the scientific community and the Zionist ‘para-statal institutions’ (Migdal, 1989: 10) – afforded him great ability to engage in transnational action. Finally, his vision for the Yishuv was based on the concept of harnessing science for state-making (Weizmann, 1949: 545), embedded in a broader sociotechnical imaginary dominant within Zionist circles. As Hannah Arendt wrote about Weizmann: ‘For him science is not the eternal search for truth but the urge ‘to make something practical’, an instrument for a well-defined task: the building of Palestine most of all, but also the possibility of that financial independence to which he owes so much of his political success, and, last not least, his unsurpassable entrance ticket to the international world’ (Arendt, 2007; cited in Efron, 2014: 76). Thus, when Hiroshima and Nagasaki were bombed, Weizmann was already perfectly situated to utilize his brand of personal and targeted scientific diplomacy.

**Constructing a scientific diaspora for political leverage**

Weizmann’s attempt to construct a ‘nuclear’ scientific diaspora was first geared toward convincing foreign governments, especially the British, to allow the migration of
Holocaust survivors from Europe to British-controlled Palestine. On 24 August 1945, mere weeks after the bombing of Hiroshima and Nagasaki, Weizmann received a letter from Selig Brodetsky, a Zionist activist, a mathematician, and one of his close associates (Mestel, 2004). This letter represents the first indication that Weizmann considered using Jewish participation in the Manhattan project for political purposes. In his letter, Brodetsky updated Weizmann on his conversation with two unnamed ‘French (Polish-Jewish) scientists’ regarding ‘the atom bomb and the Jews’. Brodetsky noted that as opposed to the ‘Radar business in which practically no Jews took any serious part at all’, the ‘Jewish part’ in the development of the atom bomb ‘is indeed remarkable’ (YCW, 1945b, parenthesis original).

Brodetsky expressed to Weizmann his doubts on ‘the advisability of pushing publicity about the Jews’ part in the atom bomb’. In his eyes, the public was not yet sure whether the atom bomb ‘isn’t after all a great curse’. He advised Weizmann to ‘talk it over’ with ‘a number of Jewish scientists’ (YCW, 1945b). Despite Brodetsky’s warning, Weizmann decided to move ahead with the attempt to utilize Jewish participation in the development of the atom bomb for political purposes.

In October 1945, Weizmann began mapping the relevant targets. He asked a scientist confidant in London to create a list of the known Jewish scientists who participated in the project, based on a statement by the British government (YCW, 1945d). The list contained twelve names, as well as short remarks on their nuclear expertise. It included Otto Frisch, Lise Meitner, Hans Halban, Leo Szilard, Rudolf Peierls, and Joseph Rotblat. Klaus Fuchs, the son of a Lutheran pastor and an infamous Soviet nuclear spy, also appears on the list because his name sounds Jewish, although the remarks section notes, ‘No details known’ (YCW, 1945d). In late 1945, Weizmann took the initiative a step further, attempting to enlist the world’s most renowned Jewish scientist, Albert Einstein.

Einstein and Weizmann first met in 1921, when Weizmann solicited Einstein’s help for a campaign in America to raise funds for a new university in Palestine. Einstein was already well aware of Weizmann’s strategy, writing to a friend: ‘Naturally they don’t need me for my abilities but because of my name, whose luster they hope will attract quite a bit of success with the rich kinsmen of Dollar-land. In spite of my emphatic internationalism, I believe that I am always under an obligation insofar as it is in my power to advocate on behalf of my persecuted and morally oppressed kinsmen’ (Rowe and Schulmann, 2013: 148).

By 1945, Weizmann had become well aware of Einstein’s ambivalent relationship with Zionism (Rowe and Schulmann, 2013: 174, 302, 428–429). On the one hand, Einstein persistently expressed skepticism on the advisability of the establishment of a Jewish state in Palestine, voicing concerns regarding the clash with the local Arabs and his support of a One World ideology (Goldstein, 2018: 11–17, 164; Isaacson, 2008: 487–507, 520). On 11 January 1946, he voiced his objection to the establishment of a Jewish state in Palestine when testifying at a hearing of the Anglo-American Committee of Inquiry, much to the disappointment of the people of the Yishuv, who saw this as a form of betrayal (Goldstein, 2018: 150–152). On the other hand, at the end of the war, as revelations of the scope and enormity of the loss of life in the Holocaust emerged, Einstein’s position was congruent with the Zionist movement supporting Jewish immigration to Palestine, especially as an answer to the plight of Holocaust survivors (Goldstein, 2018:...
Upon the establishment of the state in 1948, he publicly declared his support of it (Goldstein, 2018; Isaacson, 2008: 520–521).

Based on his knowledge and perception of Einstein, Weizmann’s efforts focused on recruiting Einstein to the cause of Jewish immigration to Palestine by utilizing his scientific-celebrity status. Weizmann wrote to Einstein stating that he had been giving ‘a great deal of thought to a certain matter’, though he refrained from explicitly stating what the matter concerned (YCW, 1945c). He added, ‘Our good friend Alex [Alexander Sachs] has kindly consented to act as the intermediary in conveying to you in greater detail some of the thoughts that have passed through my mind’ (YCW, 1945c). Alexander Sachs was the natural choice: an American-Jewish banker and economist, he was a wartime informal advisor to President Roosevelt and was instrumental in the initiation of the Manhattan Project (Finney, 1950; Reed, 2014). He was the person who delivered the now-famous Einstein-Szilard letter to Roosevelt on 11 October 1939 (Isaacson, 2008: 474–475).

In a letter sent to Einstein in December 1945, Weizmann referred to an undated draft of a speech, which bears the handwritten heading ‘Draft sent to Dr Einstein’ and was probably delivered by Alexander Sachs around that time. This was a proposed draft for a speech that Einstein had been invited to give at the Nobel Anniversary Dinner on 10 December 1945; the text does not note who composed it. This proposed draft starts with an appeal ‘to the victorious nations, above all Great Britain and the United States, to bethink themselves of their moral obligations – to the end that the nearly vanished remnant of European Jewry, through transference to its recognized homeland in Palestine, may become a “saving remnant”’ (AEA, 1945; YCW, 1945e).

Significantly, it goes on to highlight ‘the notable role’ that Jews played in first ‘perceiving the danger of a Nazi exploitation of nuclear energy for purposes of war’ and later in devising ‘the atomic weapon’ and placing it ‘in the hands of the democracies’. This was accomplished, according to the draft, ‘by good fortune’ and ‘against the teeth of time’. The draft concludes with the following statement, which the author apparently wanted Einstein to make: ‘It is therefore my conviction that the free immigration of Jews into Palestine and the opportunity for them to create there a commonwealth … is the immediate practical step to be taken toward the restoration of this people to a normal status’ (AEA, 1945, emphasis added; YCW, 1945e).

The speech that Einstein eventually gave at the 1945 Nobel Dinner underlined his mixed feelings on the subject. Despite his qualms about Zionism, he strongly felt that Holocaust survivors and refugees should be allowed to settle in Palestine. In the speech, he did not mention the contribution of Jewish scientists, as proposed in the draft, but rather referred to ‘we’, the ‘physicists’, who participated in the development of the bomb in general, touching on some of the concepts suggested in the draft:

Today, physicists who participated in forging the most formidable and dangerous weapon of all times are harassed by an equal feeling of responsibility, not to say guilt. … We helped in creating this new weapon in order to prevent the enemies of mankind from achieving it ahead of us, which, given the mentality of the Nazis, would have meant inconceivable destruction. …We delivered this into the hands of the American and the British. (Einstein, 1950)

Separately, he referred to the plight of the Jews, mentioning ‘the case of my own people, the Jewish people’ and lamenting the fact that ‘the remainders of European Jewry,
one-fifth of its pre-war population, are again denied access to their haven in Palestine and left to hunger and cold and persisting hostility…’ (Einstein, 1950).

**Constructing a scientific diaspora as a scientific resource**

Weizmann sought to construct a scientific diaspora to achieve a second goal: to facilitate scientific contributions to the development of a nuclear reactor in the *Yishuv*. Weizmann was preoccupied with the *Yishuv’s* energy needs from a scientific perspective for decades (Weizmann, 1949: 545). In the 1930s and 1940s, he studied the question of energy supply, exploring the fermentation process as a possible energy source (Jensen et al., 2011: 157).

Under the auspices of the Sieff Institute, Weizmann took initial steps toward bringing nuclear knowledge to Palestine. This was accomplished together with Ernst David Bergmann, who joined the institute in 1934, becoming ‘Weizmann’s faithful right-hand man and scientific collaborator’ (Jensen et al., 2011: 68–92). The two formed an intimate bond, growing yet closer after Weizmann lost his son, Michael, an RAF pilot, in 1942 (Golani and Reinharz, 2019: 405–406, 457; Weisgal, 1971: 274–5). Bergmann’s biographers believe it is likely that Bergmann first became interested in nuclear technology in August 1945, though they explain that it is impossible to pin down the exact moment because most of the relevant documents are still classified (Jensen et al., 2014).

In the spring of 1946, Bergmann and Weizmann jointly invited Chaim Pekeris, a renowned Jewish-American scientist, to give a guest lecture at the Sieff Institute entitled ‘Fear of the Atomic Bomb’ (Jensen et al., 2011: 187). Although the content of the lecture was never published, Bergmann’s biographers estimate that the talk likely dealt with early thoughts on nuclear deterrence (Jensen et al., 2011: 292, fn. 6). A year later, Weizmann took his interest in nuclear development a step further. At his suggestion, Bergmann arranged for a chemist from the Sieff Institute to visit the Paris lab of Frédéric Joliot-Curie, France’s leading nuclear physicist (Jensen et al., 2011: 188). In 1946, Joliot-Curie had become the first French High Commissioner for Atomic Energy, and in 1947 he was working on the construction of the first French atomic reactor, which was inaugurated in 1948 (Kowarski, 1948: 139–40).

On 11 August 1947, Bergmann wrote to Weizmann expressing doubts regarding whether the chemist selected for the visit to Paris, Frieda Goldschmidt, was the right choice, writing: ‘I am not sure whether she would be the right person to work with Joliot as you suggest’, and tellingly adding that ‘it will be very important for us to work in that line for reasons which it is better not put on paper’ (Jensen et al., 2011: 188). Two weeks later, in a second letter to Weizmann, Bergmann added: ‘I would hesitate to send her to work with Joliot as the work which she could do there requires a better understanding of modern physics and chemistry than Miss Goldschmidt has. If there is a serious possibility that Joliot would take someone from here and show him some of his important work, we will certainly find a person who would be better suited to that purpose’ (Jensen et al., 2011: 189).

Weizmann’s next step was to directly promote the construction of a nuclear reactor in Palestine. Indeed, he did so in the days leading up to the critical UN vote on the partition plan, which was set to take place on 29 November 1947. On 11 November 1947, Weizmann visited Princeton, New Jersey, where he met with Einstein and Oppenheimer,
crowned at the time as the father of the American atom bomb. The Weizmann archive does not contain a record of the meeting, but Oppenheimer himself disclosed what took place a decade later. When Oppenheimer visited Israel in the summer of 1958, he told Prime Minister Ben-Gurion that at this meeting Weizmann had discussed with him the construction of a nuclear reactor in the *Yishuv*; at the time, Oppenheimer informed Weizmann that he thought it was a bad idea (BGA, 1958; Segev, 2019: 572).

A day after the meeting, Weizmann wrote a letter to American-Jewish Zionist Felix Frankfurter, Associate Justice of the Supreme Court, noting that he was ‘anxious to see one or two people in Washington, particularly … Mr. Lilienthal’. This was David E Lilienthal, who served at the time as chairman of the US Atomic Energy Commission, (AEC), a position he held from 1946 to 1950 (YCW, 1947).

Weizmann saw Lilienthal as a key figure in the world of nuclear research and placed a premium on his role within the AEC. A hint of this is found in Weizmann’s unpublished memoir: ‘With the exception of a few anti-Semites, no one thought of Lilienthal, who became the head of what is probably the greatest atom research station in the world, as a Jew’ (Kedar, 2017: 278–9). Weizmann also offered the following explanation in his letter to Frankfurter: ‘Yesterday I spent some time in Princeton seeing Professor Einstein and Professor Oppenheimer and the projected meeting with Lilienthal is a sequel to my interview with Professor Oppenheimer’ (YCW, 1947). The combined narrative of the documents indicates that Weizmann was seeking a meeting with Lilienthal, the head of the American AEC, specifically to promote the construction of a nuclear reactor in the *Yishuv*, following his discussion with Oppenheimer regarding the matter.

Weizmann and Lilienthal had previously met in 1943 during Lilienthal’s term at the Tennessee Valley Authority (TVA), when Weizmann was involved in the promotion of the Jordan Valley Authority project, an infrastructure scheme modeled on the TVA and designed to allow large-scale irrigation in Palestine using water from the Jordan River. Based on that meeting, Weizmann recounted in a report to the Jewish Agency that Lilienthal, ‘who was himself a Jew … knew nothing about Zionism, but expressed himself as willing to do what he could’ (YCW, 1943a: 10). Though Lilienthal was indeed impressed by Weizmann at this meeting, he noted in his journal that ‘somehow Zionism still seems a strange notion to me’ (Lilienthal, 1964: 595).

In a letter to Lilienthal following the 1943 meeting, Weizmann wrote that ‘it is heartening to know that in you, the cause has an understanding friend’ (YCW, 1943b). It seems that Weizmann hoped in November 1945 to awaken similar sympathies in Lilienthal vis-à-vis a nuclear reactor for Palestine. However, the Weizmann archive in Rehovot and the David E Lilienthal Papers collection at Princeton University Library, as well as Lilienthal’s journals, hold no record of such a meeting or any other direct communication between the two in 1947. Further evidence for Weizmann’s interest in a reactor in this period comes from an interview given by engineer Meir Rabinowitz, ‘Batz’, a former official of the Hagana, the *Yishuv*’s armed resistance, which was aired on Israeli television in 1972. According to the firsthand account detailed in the interview, Weizmann expressed his interest in what he termed ‘atomic energy’ to a group of *Yishuv* scientists on an unspecified date during the pre-1948 period, most likely during 1947.

In the interview, Batz detailed a meeting that Weizmann held with some of the top scientists in the *Yishuv*, including Batz himself, discussing what Weizmann referred to as
‘the Atomic Energy of tomorrow’ in the context of ‘winning the war’ with the Arabs. Significantly, this segment ends when the interviewer interjects and states, ‘Now let’s talk about small bombs’, framing the previous answer as one which refers to ‘big bombs’, at which point the crowd bursts out laughing. It is clear to everyone in the studio that the story they had just heard specifically concerned these implied ‘big bombs’ in the context of ‘atomic energy’, which would be harnessed to win a war rather than to light the streets.

There is not enough information in the existing documents to assess conclusively whether Weizmann’s interest in ‘atomic energy’ and the establishment of a nuclear reactor in this period also extended to a clear interest in an atomic bomb. It is possible that Weizmann was interested in building a nuclear reactor exclusively for civilian uses. However, the secrecy with which he and Bergmann referred to the issue in their August 1947 correspondence lends credibility to the assumption that they were considering the military implications of such a development. At the time, ‘atomic energy’ was an umbrella term for nuclear technology in general, used to describe the new possibilities offered by it, including – but not limited to – nuclear weapons, and this was also evident in the publications relating to the Manhattan Project (Wellerstein, 2021). Natan Adam and AK Epstein both referred to the ‘atomic bomb’ and ‘atomic energy’ interchangeably (Adam, 1945; YCW, 1945a). Weizmann also used the term ‘atomic energy’ in a dual manner when writing his memoir (Kedar, 2017: 278).

From Weizmann to Bergmann to Ben-Gurion

The early interest in a nuclear reactor, which originated with Weizmann’s appeals to Oppenheimer, passed from Weizmann to Ben-Gurion via Bergmann. It seems that at some point during 1948, Weizmann’s views on nuclear technology began to change: he moved away from ideas of practical science to ‘pure science’ (Golani and Reinharz, 2019: 762). The existing sources do not directly outline how Weizmann’s thinking evolved, leaving room for some speculation. It is possible that Weizmann felt compelled to join the community of scientists, like Einstein, who by now publicly rejected the development of an atomic arsenal and its handling by the US government, which in their view was not making the required progress toward nuclear disarmament (Goldstein, 2018: 53). Another explanation relates to Weizmann’s political decline and his sense of betrayal by his former close confidante, Bergmann.

During 1947, Bergmann drew closer to Ben-Gurion, both personally and professionally. According to his biographers, as of the fall of 1947 Bergmann became ‘completely absorbed in the task of meeting the immediate wartime needs of Israel, and any plans which he might have been formulating with regard to nuclear energy had to be put on the back burner’ (Jensen et al., 2011: 189). As the academic director of the Weizmann Institute of Science, Bergmann championed the institute’s participation in the Yishuv’s war effort. During the War of Independence, in 1948, Bergman and other scientists persuaded Ben-Gurion that ‘a national nuclear project was within Israel’s scientific abilities’ (Cohen, 1998: 25). Weizmann’s declining interest in atomic energy took place in parallel with Ben-Gurion’s increasing interest in the matter and the close cooperation between Ben-Gurion and Bergman. It is possible that growing resentment toward Bergmann, who
crossed the line into Ben-Gurion’s camp, in some part motivated Weizmann’s rejection of Bergmann’s nuclear activism (Golani and Reinharz, 2019: 762–767; Jensen et al., 2011: 148, 160, 166–175; Segev, 2019: 213–334; Shapira, 2016: 448–452; Weisgal, 1971: 274–5). In 1951, Bergmann would become Ben-Gurion’s personal scientific advisor and later the chair of the Israel Atomic Energy Commission (1952–1966).

Ben-Gurion first publicly mentioned his fascination with the atom on 11 September 1948, citing the ‘miraculous make-up’ of the atom and the ‘enormous capacity hidden in its dismantlement’ (Segev, 2019: 568, fn. 61). In March 1949, Ben-Gurion held a meeting with Moshe Moris Sordin, a French nuclear scientist raised in the Yishuv. Sordin, who in 1945 took part in the establishment of the French Atomic Energy Commission, was secretly brought to Israel to meet with Ben-Gurion and discuss ‘the future of nuclear reactors’ (Cohen, 1998: 25). In a 1986 interview, Sordin recalled that at their meeting Ben-Gurion demonstrated deep understanding of and interest in nuclear technology (Doron, 2010). Around that time, Bergmann also convinced Ben-Gurion to send six promising Israeli graduate students to study nuclear physics abroad (Cohen, 1998: 26).

It was Ben-Gurion, together with Bergmann and the young Shimon Peres, who pushed forward the Israeli nuclear program during the 1950s, bringing about the establishment of two research reactors in Soreq and Dimona (Cohen, 1998: 9). Of the three, it was Peres, the political operator, who cemented the nuclear relationship between France and Israel, paving the way for the French agreement to build the Dimona reactor in the days leading up to the 1956 Suez crisis (Bar-Zohar, 2006: 210–222; Cohen, 1998: 19, 57–78).

On 14 February 1949, a fragile and almost blind Weizmann inaugurated the opening session of the Constituent Assembly of the new State of Israel. No longer enthusiastic about the role of the Jewish scientists in the Manhattan project, a more cautious, weary Weizmann took the stand. Though his speech was short and concise, he included in it, remarkably, a warning against the dangers of the atomic bomb. He framed this as the result of scientific development lacking any moral vision:

> Yet, for all the decisive importance of science, it is not by science alone that we shall we win through. Let us build a new bridge between science and the spirit of man. ‘Where there is no vision the people perish.’[^11] We have seen what scientific progress leads to when it is not inspired by moral vision – the atomic bomb threatening to destroy the entire planet (Knesset, 1949; Litvinoff, 1984: 708–709).

Unpublished memoir passages shed light on Weizmann’s views regarding nuclear technology and its benefits, and how these relate to its so-called Jewish heritage:

> If human folly reaches such a stage that atomic energy will be used extensively in the next war about which one hears so much talk, it will be said that the Jews have conspired to destroy the world. If, however, as I hope and believe is the case, atomic energy will be guided into constructive channels, and humanity will enjoy the benefits of unlimited sources of energy…. I doubt whether people will remember the great number of Jews who will have helped to bring these results about. (Kedar, 2017: 278)
Conclusion

We have presented a thick account of Chaim Weizmann’s attempts to utilize the Jewish involvement in the American atomic effort to promote the goals of the Zionist national movement. By appealing to the Jewish connections of world-famous scientists and leading figures, Weizmann tried to construct a ‘scientific diaspora’, seeking to achieve two aims. First, he sought to use Einstein’s prestige to enhance the diplomatic status of the Zionist movement and recruit international support for Jewish immigration to Palestine. Second, between 1946 and 1947, he explored the possibility of developing ‘atomic energy’ in the Yishuv with the help of Jewish-American figures such as Oppenheimer and Lilienthal.

Rather than beginning with a pre-existing and already-mobilized ‘scientific diaspora’, we have traced the attempts to cultivate and construct such a diaspora. The process was initiated and implemented by Weizmann – a political entrepreneur who was embedded in a certain sociotechnical imaginary and situated at a unique socio-spatial position. Further, his attempts to animate specific individuals were based on his perceptions regarding the targets’ scientific and professional positions, their ethnoreligious identity, and their personal values.

In addition to uncovering Weizmann’s hitherto unknown efforts to acquire atomic energy for the ‘state-in-the-making’, this article suggests three theoretical contributions. First, students of ‘diaspora knowledge networks’ typically examine the diaspora’s impact, assuming that these networks have already been mobilized to further the homeland’s goals. In contrast, we draw on concepts from STS scholarship and the literature on diaspora mobilization to unpack the process of constructing and mobilizing a scientific diaspora. Second, the article introduces a transnational perspective into the literature on ‘science diplomacy’, which focuses on state-led international cooperation (Fedoroff, 2009; Flink and Schreiterer, 2010; Ruffini, 2020; The Royal Society, 2010; Turekian et al., 2017). Weizmann used his scientific contacts and diplomatic skills for policy-persuasion and national security (see Smith FL, 2014). Third, in contrast to much research regarding diaspora politics in Political Science and International Relations, this study has examined selective and personalized transnational mobilization, rather than collective and mass mobilization.

Some scholars consider certain aspects of the Zionist national movement’s diasporic experience unique or unusual (Dieckhoff, 2017; Sheffer, 2005; Smith, 1995; Yakobson, 2008). While we agree in some respects with this claim, we find that insights from the Israeli/Zionist case regarding attempts to cultivate a ‘scientific diaspora’ may apply to other instances of nuclear proliferation, such as in China and Pakistan. The latter two cases demonstrate that efforts to cultivate a ‘scientific diaspora’ were not unique to the Zionist movement. Both China and Pakistan actively sought to appeal to patriotic attachments among relatively loose networks of scientists and professionals involved in atomic affairs abroad.

In the Chinese case, upon making the political decision to acquire nuclear capabilities in 1955, Mao simultaneously pursued two paths – Soviet assistance and the national mobilization of scientists (Hymans, 2012: 130; Lewis and Xue, 1991: 41–42). Premier Zhou Enlai and Marshall Nie Rongzhen made use of well-connected Chinese returnees
as well as identifying key Chinese scientists still abroad. In the spring of 1949, the Chinese government instructed Qian Sanqiang, a former physics doctoral student who was supervised by Frédéric and Irène Joliot-Curie, to use his connections with the Joliot-Curies to facilitate the purchase of China’s first nuclear instruments (Lewis and Xue, 1991: 36). In October 1951, Irène Joliot-Curie, who was supportive of the Chinese nuclear program, equipped the Chinese government with ‘ten grams of radium salt standardized for radioactive emissions’; this was arranged through Yang Chengzong, a Chinese returnee who had studied in Paris (Lewis and Xue, 1991: 36).

In addition to these two prominent scientific returnees, China made noticeable efforts to animate patriotic attachments among overseas Chinese trained in Western countries. Marshall Nie, who assumed responsibility for China’s strategic weapons program, approached Chinese ambassadors in Europe with a nationalist plea that the country needed returnees to contribute to its scientific development (Li, 2019: 166). Further, Premier Zhou Enlai publicly called for patriotic Chinese intellectuals to repatriate and help build the ‘New China’.

More specifically, China sought to animate patriotic feelings among those overseas Chinese who faced discrimination in the United States or were prohibited from leaving that country. Zhou instructed Wang Bingnan, Director General of the General Office of Ministry of Foreign Affairs, to use the 1954 Geneva Convention to negotiate with the Americans regarding the return of a select group of Chinese students and scholars. Following multiple rounds of talks, an agreement between China and the US was reached, and about one hundred Chinese students returned to China (Li, 2019: 167). These diasporic scientists and professionals were ‘absolutely critical to the research and development of China’s nuclear and missile technology’ (Li, 2019: 167).

Among those returnees was Qian Xuesen, often considered the ‘father of the Chinese missile program’ (Hymans, 2012: 132). A graduate of MIT and the co-founder of the Jet Propulsion Lab at Caltech, Qian Xuesen was a renowned rocket scientist who was even selected to participate in an American delegation to study the German wartime missile program (Peterson, 2013: 105). During the McCarthy era, Qian became an object of suspicion due to his scientific activities and close acquaintance with Oppenheimer. He was under house arrest for five years, until his return to China in November 1955 following the Geneva Convention (Chang, 2008: 149–190; Peterson, 2013: 105). His was the only name mentioned specifically during the negotiations between China and the US (Chang, 2008: 188).

The Pakistani efforts to develop an atom bomb also included attempts to cultivate a ‘scientific diaspora’. In the early 1970s, Pakistan embarked on the path toward nuclear weapons development.12 Munir Ahmad Khan, a nuclear reactor physicist who held various positions at the IAEA in Vienna, was recruited for the task. In the mid-1960s, Munir Khan established close personal ties with Zulfikar Ali Bhutto, a Pakistani politician whose star was on the rise, often hosting him during his visits to Vienna (Abbas, 2018: 58; Khan, 2012: 88). Following Bhutto’s ascent to the Presidency in December 1971, he asked Khan ‘to return to the country and serve the nation’ in its quest to build a nuclear bomb (Khan, 2012: 106–108). Khan left Vienna and returned to Pakistan, serving as the chairman of the Pakistani Atomic Energy Commission (PAEC) until 1991.

The establishment of the Pakistani Theoretical Physics Group within the Pakistani nuclear establishment in 1972 further underlines the process of mobilizing a diasporic
knowledge network. In October 1972, Mohammad Abdus Salam, a Pakistani theoretical physicist who headed the International Centre for Theoretical Physics in Trieste, Italy, summoned two Pakistani theoretical physicists working at the center, Dr Riazuddin and Dr Masud Ahmad, and appraised them of the leadership’s decision to develop a nuclear bomb (Rehman, 1999: location 219). He told them that ‘in the tradition of the Manhattan project’ a theoretical group would be set up to work on the bomb design (Rehman, 1999: location 881). The two traveled to Pakistan and joined the nuclear program. In a 2006 interview, Riazuddin explained that the ‘financial crunch was so severe’ that he and the other scientist recruited for the project had to ‘spend from our own pockets’ to buy the necessary literature (Khan, 2012: 178).

Another scientist with similar patriotic sentiments was Abdul Qadeer Khan (Corera, 2006). Living in Holland with his wife and two daughters and working in the field of uranium enrichment, Khan’s diasporic sentiment was triggered by the Indian nuclear test of May 1974 (Abbas, 2018: 71). He wrote two letters to Bhutto, in August and September 1974 (the first one was ignored), offering his assistance to Pakistan’s efforts (Khan, 2012: 140). Within the Pakistani community, Khan’s letter to Bhutto ‘is considered analogous to Albert Einstein’s famous first letter to President Franklin Roosevelt’, which led to the initiation of the Manhattan project (Khan, 2012: 140).

While the examples differ from the Zionist case in that they relied primarily on facilitating the repatriation of scientists, these short descriptions of the Chinese and Pakistani cases demonstrate the significant security role that scientific diasporas can play and the different practices used to cultivate such diasporas based on the relevant contexts. Like to the Zionist case, Chinese and Pakistani political entrepreneurs also used practices of mapping the selected experts and engaged in tailored mobilization based on what they knew regarding these individuals – their biographies, their ideological views, their unique contacts, and their scientific positions.

With the intensification and expansion of state-diaspora engagement across the international system (Gamlen, 2019) and the increasing opportunities for technological diffusion, we might witness further attempts by non-state actors to activate diasporic loyalties among scientists, professionals and experts. However, as we learn from Weizmann’s efforts, these attempts are not always successful. The differences between the Zionist case and the Chinese and Pakistani ones raise an important question regarding what affects success or failure in the animation of scientific diasporic attachments. Indeed, future research may identify the conditions under which the construction of a scientific diaspora is successful.

Acknowledgements

We are grateful to the anonymous referees and the journal editors for their thoughtful engagement with the article. We also thank Oren Barak, Arie M Kacowicz, Galia Press-Barnathan, and Rebecca Wolpe for their comments on previous drafts.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.
Funding
The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Israel Science Foundation [grants no. 599/16 and 479/20].

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Notes
1. Oppenheimer and Lilienthal both served during 1946 as members of the Secretary of State’s Committee on Atomic Energy. Lilienthal acted as chairman of the consulting board, and Oppenheimer was one of the consultants (Acheson et al., 1946).
2. Yishuv is the Hebrew term for the Jewish community living in Palestine during the period of the British mandate.
3. Following Adamson and Demetriou (2007: 497), we define a diaspora as: a ‘social collectivity that exists across state borders and that has succeeded over time to (1) sustain a collective national, cultural or religious identity through a sense of internal cohesion and sustained ties with a real or imagined homeland and (2) display an ability to address the collective interests of members of the social collectivity through a developed internal organizational framework and transnational links’. This definition is particularly useful as it offers an opportunity to explore the process of constituting, animating and constructing a diaspora (see also Abramson, 2017; Adamson, 2013; Betts and Jones, 2016).
4. The terminology surrounding the concept of a diaspora is highly contested. For the sake of clarity, we consistently use the term ‘country of residence’ to refer to the place in which the diaspora community lives and ‘homeland’ to refer to the country of origin, kin-state, or national territory in which the diaspora does not reside. On the ambiguity, see Brubaker (2005) and Ragazzi (2012).
5. Yad Chaim Weizmann, Rehovot, Israel [YCW]; the David Ben-Gurion Archive, Sde Boker, Israel [BGA]; the Albert Einstein Archive, The Hebrew University of Jerusalem, Israel [AEA]; The National Archives of the UK [TNA]; and the Alexander Sachs Papers at the Franklin D Roosevelt Presidential Library, Hyde Park, New York.
6. Epstein refers to leading Jewish figures in nuclear physics: Lise Meitner, Otto Robert Frisch, J Robert Oppenheimer, and James Frank.
7. The date of the letter, 28 December 1945, is possibly erroneous as it indicates that it was received three weeks after the event itself, which was held on 10 December 1945.
8. A recording of the speech is available at: https://www.americanrhetoric.com/speeches/alberteinsteinpostwarworld.htm (accessed 13 January 2022).
9. On the association of Frankfurter with the Manhattan Project, see Sherwin (1975: 99–114).
10. A copy of the interview (in Hebrew) is available from the authors upon request.
11. Here Weizmann quotes a biblical verse: Proverbs 29:18.
12. Concerning Pakistan’s nuclear program in the 1970s, see Akhtar (2018) and Braut-Hegghammer (2018).

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