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# The ingredients of a successful atomic exhibition in Cold War Italy

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## ABSTRACT

The organization of the mobile atomic exhibition, *Mostra Atomica*, designed by the United States Information Service to travel through Italy in 1954–55, had to meet technical, scientific, artistic, and political challenges. The head of the group in charge of the exhibition was architect Peter G. Harnden whose pedigree in the intelligence and training in architecture were an ideal match for leading the unit dedicated to exhibitions. The political sensitivity of the *Mostra Atomica* also required the intervention of the Italian Ministry of the Interior to guarantee safe mobility and secure shows. In every major town, American and British diplomats attended the local opening ceremony, while the very symbol of science diplomacy was Enrico Fermi, whose recorded message praised international cooperation. All in all, the USIS campaign promoting peaceful applications of nuclear physics was successful in reaching and involving Italian society. Visual and spatial aesthetics were particularly relevant: the geometrical design of the exposition rooms conveyed a strong sense of modernity that contrasted with the artistic heritage of Italian cities. The present article is based on archival files, newspaper reports, and photographs that document who was responsible for planning, setting up, and reporting this Cold War propaganda event.

## ARTICLE HISTORY

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## KEYWORDS

Mobile atomic exhibition; nuclear energy; Cold War; Italy; United States; Enrico Fermi; Rosalyn Yalow

## 1. Introduction

‘For the First Time in the World the Atomic Exhibition on the Applications of Atomic Energy’<sup>1</sup> – with these words the United States Information Service (USIS) announced in June 1954 the launch in Rome of the US international exhibitions’ campaign in support of President Eisenhower’s Atoms for Peace

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<sup>1</sup>Per la prima volta nel mondo la mostra atomica sugli impieghi dell’energia nucleare’ (USIS 1954: 1). In the following quoted as: USIS bulletin. A copy of the publication is in: Archivio Centrale dello Stato (ACS), Ministero dell’Interno, 7501/99, *Mostra Atomica*. Unless otherwise stated, all translations are my own.

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initiative.<sup>2</sup> On 8 December 1953, Eisenhower had given an acclaimed speech in front of the United Nations General Assembly starting a diplomatic push towards nuclear armament limitation and international cooperation on the peaceful uses of nuclear energy – even though the United States remained fully engaged in the development, testing, and production of atomic weapons as a deterrent.<sup>3</sup> After losing ‘what might have been called a monopoly of atomic power’ (Eisenhower 1953), the U.S. government felt the need for adjustments of its policy. The Soviet Union had caught up in this field surprisingly quickly by developing nuclear weapons (A-bomb and H-bomb); other nations would sooner or later follow suit. Eisenhower proposed diverting some resources from the military to civilian uses under the aegis of a new U.N. agency, namely, what would become the International Atomic Energy Agency (IAEA):

The United States knows that if the fearful trend of atomic military build-up can be reversed, this greatest of destructive forces can be developed into a great boon, for the benefit of all mankind. The United States knows that peaceful power from atomic energy is no dream of the future. [...]

The more important responsibility of this atomic energy agency would be to devise methods whereby this fissionable material would be allocated to serve the peaceful pursuits of mankind. Experts would be mobilized to apply atomic energy to the needs of agriculture, medicine and other peaceful activities. A special purpose would be to provide abundant electrical energy in the power-starved areas of the world. (Eisenhower 1953)

Indeed, with the enactment of the new Atomic Energy Act in August 1954, the Atoms for Peace initiative led to the sharing of thousands of U.S. technical reports for use by the private industry in the U.S. and abroad, and thus to the spreading of new procedures and products for civilian purposes. Eisenhower’s initiative also prompted the U.N. to organize two international conferences ‘on the peaceful uses of atomic energy’ in Geneva, in 1955 and 1958, which greatly increased the worldwide exchange of scientific and technical knowledge on nuclear matters, aroused the attention of governments, and were positively received by the public.

Such was the case with Italy as well. The country could rely on a network of nuclear research centres laboriously built up after World War II with private and public support (Paoloni 2017). While in the 1930s Enrico Fermi had forged a group of scientists able to perform ground-breaking studies in nuclear physics, after his and other members’ exile from Fascist Italy, it was his disciple Edoardo Amaldi who continued this line of research in post-war

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<sup>2</sup>On Atoms for Peace see Krige 2006; Medhurst 1997. On the opening in Rome see Osgood 2006: 176; Manning 2004: 19. On USIS branches in Italy see Tobia 2008; Bruti Liberati 2004; Ellwood 2001.

<sup>3</sup>See Krige 2006. Text, audio, and video of Eisenhower’s speech can be retrieved here: <https://www.iaea.org/about/history/atoms-for-peace-speech>. On the far-reaching activities for nuclear disarmament inception by the so-called Russell-Einstein Manifesto of 1955 see Kraft and Sachse 2020.

Italy, shifting the focus from militarily sensitive nuclear fission to particle physics and cosmic rays, and engaging in research and the establishment of new institutions (CERN 2020; Ferroni 2010). Despite the know-how and manpower available in the country, the nuclear energy topic got trapped into the dispute between state-owned and private companies, with the ‘major political issue in the background [being] the nationalization of the electricity industry’ (Paoloni 2017: 239–40), as possible legal regulations of nuclear energy were regarded as a Trojan horse for the nationalization of the electricity industry. Further complicating the scene was the intervention of the U.S. government, which opposed a nuclear law establishing a state monopoly on uranium mining, linking this issue to the stationing of NATO nuclear-armed missiles in Italy (Bini 2017; Nuti 2016). In such a context, it would take until the end of 1962 for the law on the peaceful use of nuclear energy to pass, just a few days after the electricity industry was nationalized.<sup>4</sup>

## 2. Exhibitions as political weapon

Back to 1954, when a stand-alone mobile atomic exhibition promoting Atoms for Peace travelled through Italy and beyond, with no need for being hosted in a building since the five special vans that transported equipment and objects served as showrooms as well. [Figure 1](#) Giving priority to Italy was part of the political warfare the U.S. was still waging in the country. Since 1947, Italy had been one of the major concerns of U.S. Cold War diplomacy in Western Europe due to its strong Communist party, a fate it shared with France (Turchetti 2014; Mistry 2014; Brogi 2011; Hecht 1998). In November 1953, the newly appointed U.S. ambassador to Italy, Clare Boothe Luce, monitored the situation with apprehension, reporting to President Eisenhower that ‘*if rigorous political action is not taken by the non-Communist opposition, within two years Italy will be the first Western Democratic nation, by legal democratic procedures, to get a Communist government [emphasis in the original]*’ (United States Department of State 1952–1954, doc. 753).<sup>5</sup>

Three months before the launch of the *Mostra Atomica* – as the mobile atomic exhibition was called in Italy – the U.S. military issued an alarming memorandum: ‘The psychological impact which the fall of Italy to Communism would have on the Free World would be incalculable in terms of the effect upon the will of the anti-Soviet countries, notably France, and of the so-called neutrals to resist Communism’ (United States Department of State 1952–1954, doc. 772). For the Italian general election campaigns in 1948 and

<sup>4</sup>Legge 31 dicembre 1962, n. 1860. Impiego pacifico dell’energia nucleare (G.U. 30 gennaio 1963, n. 27) [www.gazzettaufficiale.it/eli/gu/1963/01/30/27/sg/pdf](http://www.gazzettaufficiale.it/eli/gu/1963/01/30/27/sg/pdf); Legge 6 dicembre 1962, n. 1643. Istituzione dell’Ente nazionale per l’energia elettrica (G.U. 12 dicembre 1962, n. 316) [www.gazzettaufficiale.it/eli/gu/1962/12/12/316/sg/pdf](http://www.gazzettaufficiale.it/eli/gu/1962/12/12/316/sg/pdf) [both accessed 13 October 2022].

<sup>5</sup>Luce served as ambassador to Italy from May 1953 until December 1956.

# VISITATE LA MOSTRA ATOMICA

SI TRATTA DELLA PRIMA INIZIATIVA DEL GENERE CHE SIA STATA REALIZZATA NEL MONDO PER FORNIRE UNA BREVE RASSEGNA DEL PROGRESSO ATOMICO E DELLE APPLICAZIONI PACIFICHE DELL'ENERGIA NUCLEARE

## ITINERARIO

Depo aver sostato a:  
ROMA  
MILANO  
GENOVA  
VERONA  
VICENZA

La Mostra Atomica sarà aperta al pubblico a:

**TORINO**  
Sett. 14 - Sett. 23

**REGGIO EMILIA**  
Sett. 28 - Ott. 3

**MODENA**  
Ott. 7 - Ott. 12

**BOLOGNA**  
Ott. 16 - Ott. 25

**FIRENZE**  
Ott. 30 - Nov. 8

**LIVORNO**  
Nov. 13 - Nov. 20

**NAPOLI**  
Dic. 4 - Dic. 19

**BARI**  
Dic. 27 - Genn. 6 (1955)

**BRINDISI**  
Genn. 11 - Genn. 16

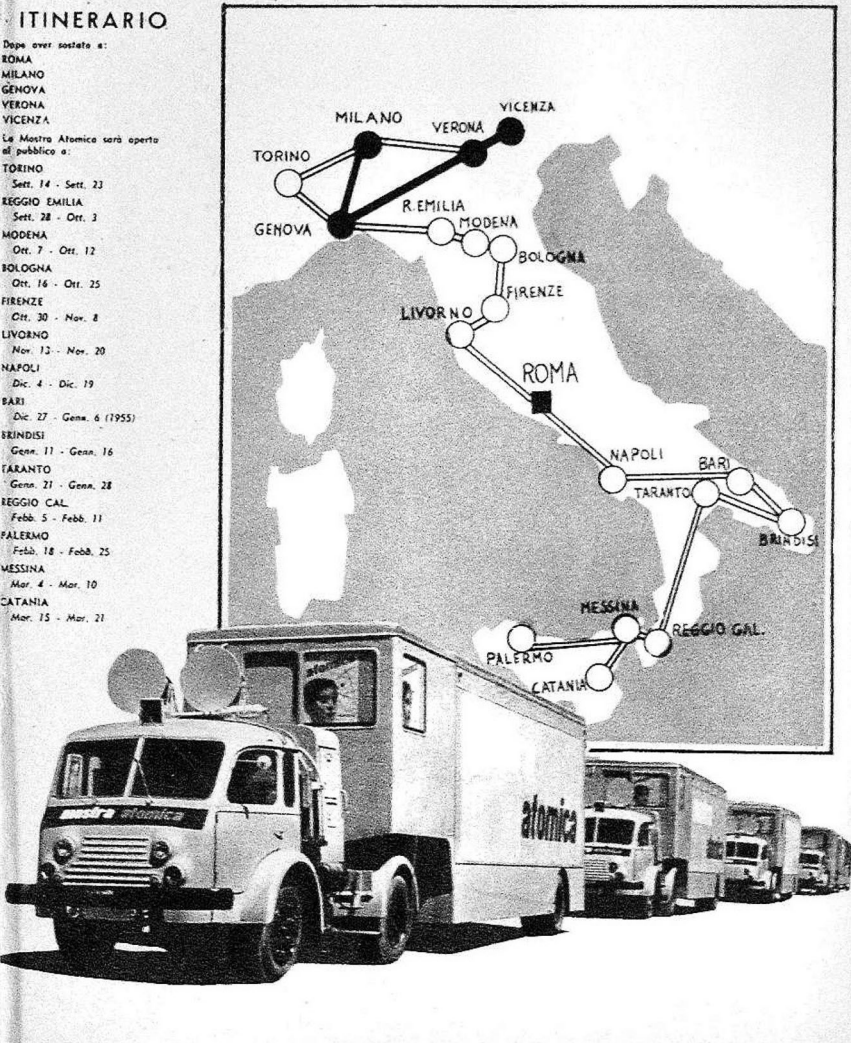
**TARANTO**  
Genn. 21 - Genn. 28

**REGGIO CAL.**  
Febb. 5 - Febb. 11

**PALERMO**  
Febb. 18 - Febb. 25

**MESSINA**  
Mar. 4 - Mar. 10

**CATANIA**  
Mar. 15 - Mar. 21



**Figure 1.** *Mondo Occidentale*, 1(2-3), August-September 1954, inside back cover.

1953 the leading party, Christian Democracy (DC), had received full endorsement by the U.S., including covert funds (Mistry 2011; Del Pero 2001; Ellwood 1993; Miller 1983). In the spring of 1953, just before the general elections, the DC had covertly organized a travelling propaganda exhibition addressing the living conditions in the countries beyond the Iron Curtain. The exhibition



was called *Mostra dell'Aldilà*, a pun, with 'aldilà' meaning both 'beyond' and 'afterlife' (Venuti 2019).<sup>6</sup> It was designed by Peter G. Harnden's group working at the USIS branch in Paris, the same architects and designers who would create the atomic exhibition (as I was able to find out when consulting documents from Harnden's archive).<sup>7</sup> In the *Mostra dell'Aldilà*, poverty and exploitation were explained with figures and slogans, recorded refugees' witness accounts could be listened to through special telephones, and large panels showed photographs of children and adults behind barbed wire. The travelling exhibition encountered sabotage attempts by groups of young Communists in towns such as Perugia, Piacenza, and Ancona (Venuti 2019: 334–36). In addition, visitors in Rome noticed that some photographs were fake: they had been shot in Rome and not in the Eastern Bloc. On 14 May 1953, the Communist newspaper *L'Unità* started a high-pressure campaign unmasking the allegedly fact-based nature of the exhibition, a hard blow to DC in the midst of the election campaign (Venuti 2019: 342–47). While the general election in 1948 had resulted in a majority of seats for the Christian Democrats, in 1953 the DC and its centrist coalition failed to reach the goal of an absolute parliamentary majority, disconcerting Italian conservative circles and alarming the U.S., as the Communists still enjoyed strong popular support (Ginsborg 1990: 143).<sup>8</sup> The U.S. government changed its strategy. If the *Mostra dell'Aldilà* as covert operation had backfired, the *Mostra Atomica* was meant to make an open and strong statement for the U.S.

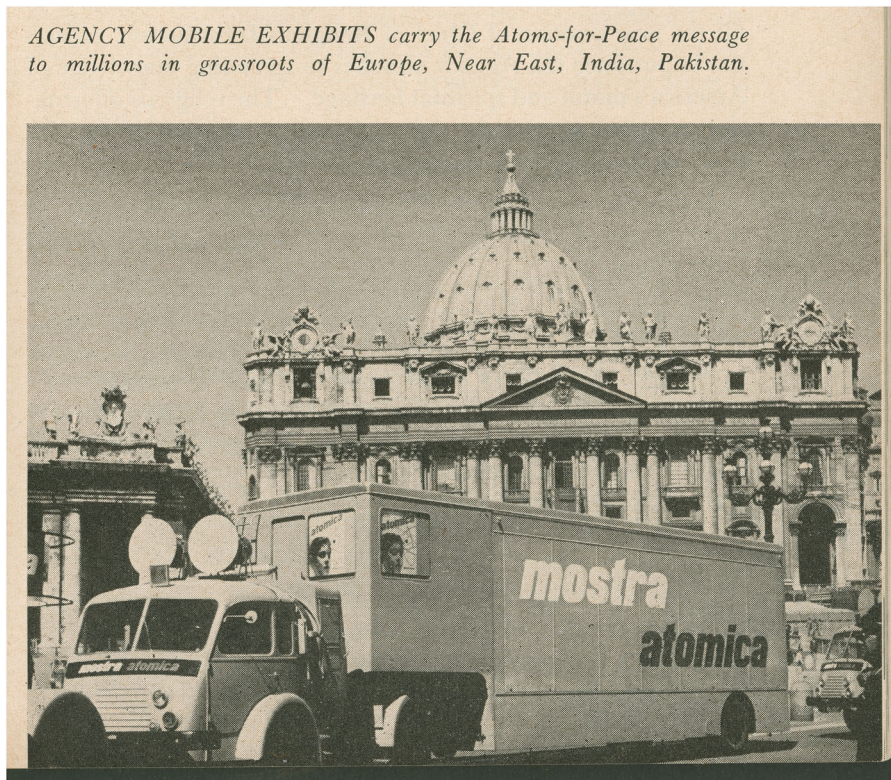
Despite this different approach, the exhibition's mobility was maintained as a key feature, and even strengthened through the use of trailers for the *Mostra Atomica*. The Italian territory is characterized by hilly and mountainous terrain with only 23,2% flat land, and by a lower-middle level of urbanization (ISTAT 2014); in 1961, the population density per km<sup>2</sup> was 160 (ISTAT 2011: 1). As private motorization was then not yet widespread, the message had to be brought directly to the people, emulating a strategy that had already been successful in promoting the Marshall Plan (Rossi 2019: 31–32; Bonifazio 2014: 28; Ellwood 2001: 35).<sup>9</sup> In its 1954 half-year report, the United States Information Agency (USIA) captioned a photograph of the *Mostra Atomica*'s caravan arriving in Rome with the words: 'AGENCY MOBILE EXHIBITS carry the Atoms-for-Peace message to millions in

<sup>6</sup>See also: [https://www.europeana.eu/de/item/2058606/object\\_FRS\\_11331452](https://www.europeana.eu/de/item/2058606/object_FRS_11331452); the newsreels *La settimana Incom* n. 00944, 15 May 1953: [https://www.youtube.com/watch?v=tdEU\\_150q9U&list=RDCMUUCK5nqdvIhtjGCSR\\_eN4fQ&index=1](https://www.youtube.com/watch?v=tdEU_150q9U&list=RDCMUUCK5nqdvIhtjGCSR_eN4fQ&index=1), accessed 21 January 2022.

<sup>7</sup>*Exposició itinerant per Itàlia en unitat mòbil 'Mostra dell'Aldilà'*, 1953, C 1801 / 134; P 2 / 100–125, Inventari Harnden & Bombelli, COAC Historical Archive, Harnden and Bombelli Collection, Barcelona.

<sup>8</sup>DC got 40.1% of the vote, the Communist party PCI 22.6%, and the Socialist party PSI 12.7%. <https://elezionistorico.interno.gov.it/index.php?tpel=C&dtel=07/06/1953&tpa=l&tpa=A&lev0=0&levsut0=0&es0=S&ms=S>. During the preparation and exposition of the *Mostra Atomica*, Italy was governed by a centrist coalition led by Mario Scelba (DC) and including the Social Democrats (PSDI) and the Liberals (PLI). <https://www.governo.it/it/i-governi-dal-1943-ad-oggi/ii-legislatura-25-giugno-1953-14-marzo-1958/governo-scelba/3221>. See also Nuti 2002.

<sup>9</sup>In 1951, for example, only 9 of 1,000 inhabitants of Italy owned a private car (ISTAT 2011: 2).



**Figure 2.** United States Information Agency, *2nd Review of Operations: January-June 1954*, [Washington DC]: U.S. Government Printing Office, 1954, p. 7, detail.

grassroots of Europe, Near East, India, Pakistan' (USIA 1954: 7). Mobility, then, was considered a key factor in the propaganda efforts. In addition, the clash of images of modernity with the presence of ancient statues and buildings brought the aesthetic experience to the fore, as perfectly exemplified by the photograph reproduced in the USIA report. **Figure 2** The atomic exhibition was one of the many tools that USIA used to promote the peaceful atom around the world through its USIS branches (Cull 2008). Compared to other forms of popularization such as pamphlets, cartoons, radio broadcasts, and movies, the exposition indeed provided a collective 'grassroots' experience.

### 3. Crafting the atomic exhibition with expertise

The travelling atomic exhibition was the product of a perfectly geared operation involving people acting all over the world. In the weeks after Eisenhower's speech to the General Assembly of the United Nations on 8 December 1953, USIA had delivered visual and textual materials to public affairs officers overseas to substantiate its Atoms for Peace initiative (Cull 2008: 105). A journalist, Filippo Raffaelli, was hired as director of Italy's

atomic exhibit in Rome.<sup>10</sup> He would act as contact between the USIS branch in Rome, the Italian government, and local city councils. The expertise in exhibition design and organization was concentrated at the U.S. embassy in Paris, where architect and U.S. Army Intelligence veteran Peter G. Harnden directed a dedicated team of designers and architects. During World War II, Harnden had served in Germany; after the end of the war, he had worked for the Office of Military Government for Bavaria as a member of the Information Control Division that in 1947 launched an exhibition programme for re-education purposes (Pizza 2002; Vassiltchikov 1985: 300–01).<sup>11</sup> His Presentations Branch had already set up many exhibitions for the European Recovery Program (ERP), NATO, and OEEC (Villarías and Rodríguez 2019; Masey and Morgan 2008). In April 1953, Harnden's team had presented its most creative realizations in the British magazine *The Architectural Review*: '[f]our Mobile Exhibitions' that 'constituted its major efforts' thus far (Presentations Branch 1953: 216; van den Berk 2021; Rossi 2019). Mobility represented a challenge in countries still undergoing a process of reconstruction after the devastations of WWII, but the train, caravans, and barges chosen as the exhibits' venues demonstrated that all obstacles could be overcome in the effort 'to spread information throughout western Europe, by all visual means, about the various movements for the closer integration of European economy, administration and defence' (Presentations Branch 1953: 216). The article in *The Architectural Review* explained technical aspects as well as the psychological rationale of the travelling exhibitions:

All designs are made for reuse – so as to spread the initial cost – and for maximum speed of erection on the exhibition site. This is required not only in order that each exhibition shall be open to the public during as large a part of its touring time as possible, but because of the *psychological value of the overnight transformation of a convoy of vehicles into a spectacular exhibition* [emphasis added], after the manner of the old-fashioned travelling circus. Another problem peculiar to the travelling exhibitions is that the display material has to be specially designed, because of the language problem, to be intelligible without recourse to words. Such texts as there are *translated into the language of each country visited* [emphasis added], and the layout has therefore to be designed so that the change can be made without causing delay. (Presentations Branch 1953: 216)

One year later, these criteria and solutions were applied to the *Mostra Atomica*.

#### 4. The USIS bulletin and the displays of the atomic exhibition

On 5 June 1954, the USIS branch in Rome published a press release, an 11-page bulletin entitled *Mostra Atomica: Notiziario per la stampa*, that was handed out

<sup>10</sup>Press officer Paolo Masetti to the chief of staff at the Ministry of the Interior, 7 June 1954, ACS, Ministero dell'Interno, 7501/99, *Mostra Atomica*. Raffaelli contributed regularly to *Radiocorriere*, the magazine of the public broadcaster RAI.

<sup>11</sup>Pizza quotes a document on file in the Peter Graham Harnden Archive, Cadaqués: War Department Appropriation, Military Government Project 510, Educational Activities, Item 07 and AG 001(10) dated 6 March 1947.



to the press and the Italian government and is now preserved in the Italian State Archives together with other documents concerning the atomic exhibition.<sup>12</sup> Headlined ‘For the First Time in the World the Atomic Exhibition on the Applications of Atomic Energy’ (USIS 1954: 1),<sup>13</sup> the bulletin delivered information about the campaign in neatly organized sections:

What is the *Mostra Atomica* about?

What can the atom do?

What will we do twenty years from now?

Radioisotopes arrive by plane

New plants are born

*Nautilus* is only the first one

A science fiction view

A strange patient

What is Italy doing in the atomic field?

Itinerary of the *Mostra Atomica*.

The Italian newspapers largely relied on this press release when they announced and reported about the opening in Rome and the upcoming arrival of the exhibition in the next town, but they also added their own considerations.

Mentioning Eisenhower’s statement to the U.N. General Assembly, the USIS bulletin pointed to the exhibition’s aim of explaining and popularizing the international pool of fissionable materials and the applications of ‘the new energy no longer to the dreadful weapons of destruction but to industry, medicine, and agriculture’ (USIS 1954: 2). It was of particular importance to USIS to firmly place the U.S. initiative in an international context: the bulletin referred to the contributions to the exhibition by U.S. atomic energy institutions, by the British Department of Atomic Energy, and by French and Italian research units, pointing out that the experiments cited in the exhibition had been carried out in different places around the world (without mentioning the Soviet Union), such as Canada, Switzerland, Belgium, Germany, Italy, The Netherlands, Norway, Sweden, Argentina, Brazil, Australia, India, and Mexico. The Communist press in Italy, on the contrary, used the *Mostra Atomica* for highlighting the Soviet achievements in the industrial use of atomic energy (Cortini 1954; *Lavoro* 1954). The internationality of the designer team was highlighted as well: ‘American Peter G. Harnden, Italian Lanfranco Bombelli Tiravanti, French Pierre Boucher, British Geoffrey Coop-Phane’ (USIS 1954: 2). Three

<sup>12</sup>USIS 1954, in ACS, Ministero dell’Interno, 7501/99, *Mostra Atomica*.

<sup>13</sup>Per la prima volta nel mondo la mostra atomica sugli impieghi dell’energia nucleare’.

of them, Harnden, Bombelli Tiravanti, and Boucher, had been part of the group that had curated the previous mobile exhibits featured in *The Architectural Review*. The clear emphasis put here on international collaboration promoted by the United States can be interpreted as a further sign of the desire of the U.S. ‘to establish a global footprint’ (Krige 2016: 10), which entailed important commercial aspects – but also the desire to share atomic *responsibility*. If nuclear research was already widespread, the leading role of the U.S. consisted in strengthening collaboration, peace, and progress – instead of being remembered as the only nation guilty of using atomic weapons. In addition, the Atoms for Peace campaign tried to divert public attention from the new series of U.S. H-bomb tests that had started on 1 March 1954 (Krige 2006; Medhurst 1997; Galison and Bernstein 1989). Nevertheless, in Italy the public followed the news about nuclear and thermonuclear weapons with concern: Rome’s daily newspaper *Il Tempo*, for instance, announced the upcoming opening of the *Mostra Atomica* while also reporting in the same issue about a civil defence drill in the U.S. and Canada in light of a hypothetical H-bomb attack, as well as an alarming study by British expert B. H. Liddell Hart about the ‘pocket atomic bomb’ that could be easily used by terrorists (I.C. 1954; Trandafilo 1954; W.F. 1954).<sup>14</sup> The travelling atomic exhibition thus had a challenging task in convincing the people, but interest and curiosity would drive millions of Italian citizens to the exposition vans parked in the main square of their cities.<sup>15</sup>

Quotations from Eisenhower’s speech in Italian translation greeted the visitors outside and inside the first showroom. One of Eisenhower’s sentences put on a panel read: ‘So my country’s purpose is to help us to move out of the dark chamber of horrors into the light, to find a way by which the minds of men, the hopes of men, the souls of men everywhere, can move forward toward peace and happiness and well-being’ (Eisenhower 1953).<sup>16</sup> A photograph taken at the *Mostra Atomica* shows another panel with the following quote:

The atomic age has moved forward at such a pace that every citizen of the world should have some comprehension, at least in comparative terms, of the extent of this development, of the utmost significance to every one of us. Clearly, if the peoples of the world are to conduct an intelligent search for peace, they must be armed with the significant facts of today’s existence. (Eisenhower 1953)<sup>17</sup>

The main facts around the atom, from an energy point of view, were told by means of practical examples, such as that one kg of uranium 235 could serve

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<sup>14</sup>For an overview of early movements against nuclear weapons in different countries see Moro 2014; Wittner 1993–2003.

<sup>15</sup>After six months, almost two million visitors were reported. See United States Department of State 1955–1957, doc. 185.

<sup>16</sup>The Italian translation used at the atomic exhibition is partly visible on two photographs: FV00010745 and FV00010750, 15 June 1954, Fondo Vedo, Mostra Atomica a Piazza del Popolo a Roma, Archivio Storico Istituto Luce-Cinecittà.

<sup>17</sup>Quotation in Italian visible on photograph FV00000008, 15 June 1954, Fondo Vedo, Mostra Atomica a Piazza del Popolo a Roma, Archivio Storico Istituto Luce-Cinecittà.

to illuminate a 60-watt bulb for 12,000 years, or could provide a city of 100,000 inhabitants with electricity and heating for one and half months, or make a train move for a distance as long as three times around the Earth. Further panels provided figures connecting the rapid growth of the world population to the need for new sources of energy, as for example oil reserves were expected to be exhausted in a couple of decades.

The USIS bulletin also revealed some technicalities about the five expandable, fourteen-meter-long trucks that covered forty-nine square metres each (when they were open); it highlighted the trucks' capability to drive for thousands of kilometres and visit countless towns during the planned period of nine months, from 15 June 1954 until March 1955. According to the bulletin, an analogous mobile exhibition was meant to tour France (USIS 1954: 3), but there are no documents on the actual event. Most of the arrangements and displays can be reconstructed on the basis of archival visual material matched with the bulletin's description. The mentioned photograph (Figure 2) taken during the caravan's arrival in Rome shows one of the impressive trailers passing by the front of Saint Peter's Basilica. On the vehicle's long sides, 'mostra' is painted in white letters and 'atomica' in black, both in lower case, and the exhibition logo displays the close-up of a child's face with an atomic symbol in the background. Other photographs show that the vans were parked forming a rectangle with a courtyard at the western side of the Piazza del Popolo, Rome's large downtown square where Neptune towers over a marble fountain. Ornamental plants, free-standing panels, and a magic lantern decorated the courtyard. The magic lantern, reminiscent of funfairs and early industrial expositions but in a polyhedron shape, was called 'Atomic Lantern' and contained a rotating platform with different ore specimen lighted up by ultraviolet lamps. Two Geiger counters signalled the presence of radiation when radioactive ore passed by (USIS 1954: 10). The panels outside the vans provided up-to-date information on nuclear research around the world, again with exception of the Soviet Bloc. Visitors – and the readers of the USIS bulletin – could also get information about the multi-faceted landscape of Italian nuclear research, including the governmental *Comitato Nazionale per le Ricerche Nucleari* (CNRN) responsible for distributing funds and coordinating research, the public *Istituto Nazionale di Fisica Nucleare* (INFN) connected with the principal Italian universities, and the private *Centro Informazioni Studi Esperienze* (CISE) which was operating a Cockcroft-Walton generator, an 80-channel neutron spectrometer, a 99-channel pulsation amplitude analyser, a pilot plant for producing heavy water, and another pilot plant for producing metallic uranium (USIS 1954: 10).<sup>18</sup>

While the first showroom presented panels with quotes from President Eisenhower's speech and some illustrative examples of the concentrated

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<sup>18</sup>On the difficulties of nuclear research in post-war Italy see Bini 2017; Turchetti 2014.

power of atomic energy, the second showroom was focused on the metal uranium as its main source: deposits of uranium worldwide were pinpointed on a large map, graphs showed its calculated contribution to energy supply and costs in comparison with coal and petroleum. On another large panel, visitors could see the image of an atomic pile. Part of this showroom was dedicated to a film screening with special value for the Italian public: Physicist and Nobel laureate Enrico Fermi explaining the ‘atomic age’ (see below). In the third showroom, the focus was on agriculture: panels described how it could be improved through the use of radioisotopes, while a documentary film showed experiments with the irradiation of plants and fodder for cattle detected by a Geiger counter. The exhibition also presented the U.S. experimental site of Brookhaven that produced radioisotopes on a large scale and conducted experiments in agriculture, such as breeding new kind of plants (e.g. seedless grapes, pest resistant oats) by using irradiation of different intensities. In addition, a tabletop Van de Graaff generator from the stock of the Atomic Energy Research Establishment in Harwell in the UK was on display, a device mainly used for educational purposes: visitors were allowed to come close and feel their hair stand out from their head. It is worth noting that both the ‘Atomic Lantern’ and hair standing on end most strikingly epitomize what has been called the ‘banalization of nuclear technologies’ (Sastre-Juan and Valentines-Álvarez 2019).

The fourth showroom was dedicated to applications of atomic energy in industry. A large panel described the structure of the nuclear engine and the functioning of the first nuclear-driven submarine, *Nautilus*, launched on 21 January 1954 – an example of the peaceful atom (!) according to the bulletin, as similar atomic engines were being conceived for airplanes, ships, and trains. Parts of machines and stand-alone equipment were on display on shelves and on a moving conveyor belt. They presented various – and partly curious – ideas for using rays in checking the quality of industrial products (e.g. soap), detecting the density of petroleum in pipes, signalling defects in cast parts, etc. The showroom also presented images of a nuclear power station, explaining its functioning in simple terms. Photographs of technicians at work in different labs were displayed on a wall, with the ionizing radiation symbol prominently placed. **Figure 3** The bulletin commented: ‘Photographs showing the employment of protective clothing for handling material resulting from atomic fission foreshadow a science-fiction scenario. These men clothed in thick spacesuits, protected by masks, goggles, and lead shields, operate automatic pliers and devices of which Fritz Lang merely gave us a vague hint in *Metropolis*’ (USIS 1954: 8–9). In fact, a fully dressed dummy was on display, confirming that the Atoms for Peace exhibitions also had the aim to stimulate the ‘public imagination’, as Kenneth Osgood (2006: 174–75) has noted. Although the bulletin referred only to male workers, pictures on display in this showroom depict at least two female technicians operating with radioisotopes:





**Figure 3.** Rome, 15 June 1954, FV00000127, Fondo Vedo, 'Mostra Atomica a Piazza del Popolo a Roma', Archivio Storico Istituto Luce-Cinecittà. Footage supplied by Cinecittà Istituto Luce Historical Archive.

one at a glove box and the other using protective rubber gloves and pliers.<sup>19</sup> The latter, large image is posted in the central part of the panel at the top, showing a young woman facing the camera in a concentrated and dynamic move. Her right, gloved hand holds pliers and cautiously takes a small glass bottle out of a (lead) container labelled 'Danger RadioActive Isotopes'. That person is Rosalyn Yalow, the nuclear physicist who had established the Radioisotope Service at the Veterans Administration Hospital in New York together with the clinician Solomon Berson (Creager 2013: 298–310; Straus 1998). Yalow would be awarded the Nobel Prize in Medicine in 1977. The photograph displayed at the *Mostra Atomica* stems from the U.S. Atomic Energy Commission's holdings and is reprinted in Angela Creager's book *Life Atomic* with the caption: 'Rosalyn Yalow preparing an 'atomic cocktail,' 1948' (2013: 300).

A variety of packages and boxes for isotopes that could be shipped by air, mail, and rail were placed on a shelf in the same room. The bulletin stated

<sup>19</sup>On glove boxes see Rentetzi 2017. For a contemporary account on the debate about 'radiation hazards' see L. Fermi 1957: 171–88.

that 35,000 radioisotopes' deliveries had been made until then.<sup>20</sup> Underneath the shelf, original boxes for delivery by plane were displayed, for example coming from the Radiochemical Centre at Amersham, England. Visitors were explicitly forbidden to touch the packages, probably for safety reasons.

The fifth showroom was dedicated to medicine. New diagnostic methods and cures were based on radioisotopes ingested orally or administered by injection. Small showcases exhibited specimen of radioactive gold in ampules, as well as sodium and radioiodine. For demonstration, a dummy patient was lying on a hospital bed in a corner of the showroom. Visitors could observe an employee in a white coat slowly passing over the dummy's abdomen a diagnostic instrument connected to a Geiger counter that reacted when the instrument touched radioactive spots placed in the head, throat, and other spots of the imaginary circulatory system. Photos shot at the opening in Rome show that visitors were very much impressed by such new methods.<sup>21</sup> In Italy, cancer treatment with the help of the so called 'cobalt bomb' was already practiced at the *Centro Studi Tumori* in Borgo Valsugana, as panels explained.<sup>22</sup>

All in all, this was an accessible and entertaining exhibition welcomed by the mainstream press in the major Italian cities of Rome, Milan, and Turin as a 'lovely village made of canvas, stands, and pavilions' (Maffii 1954), a 'very instructive exhibition for everybody, of high human and social relevance' (*Illustrato Fiat* 1954). As one newspaper article concluded, 'it is necessary and desirable that all Italians can see with their own eyes the benefits and wondrous beauties unknown so far, now revealed thanks the travel of the "atomic caravan"' (Lomazzi 1954).<sup>23</sup>

## 5. The role of the Italian government

At the exhibition opening on the night of 15 June 1954 in Rome, spotlights created a light show over the Piazza del Popolo, and visitors crowded the exposition's area. In his speech, the British ambassador, Sir Ashley Clarke, underlined the serious dangers of nuclear fission as well as the opportunities opened up by atomic energy, while U.S. ambassador Claire Booth Luce and Italian deputy prime minister Giuseppe Saragat emphasized the spirit of collaboration that had made the exhibition possible, expressing their commitment to collaboration as a guiding principle for future actions involving all nations, towards peaceful progress. Saragat repeatedly assured the audience of the

<sup>20</sup>On the trade of radioisotopes see Creager 2002.

<sup>21</sup>FV00000034, 15 June 1954, Fondo Vedo, Mostra Atomica a Piazza del Popolo a Roma, Archivio Storico Istituto Luce-Cinecittà.

<sup>22</sup>The centre was established in 1953, near Trento. John Krige (2005) refers to tumour treatment with radioisotopes in Trieste in the late 1940s.

<sup>23</sup>'... cinque giganteschi automezzi che si trasformano in un incantevole villaggio di tende, stands e padiglioni'; 'Mostra molto istruttiva per tutti e di alto significato umano e sociale'; 'È quindi necessario e auspicabile, che tutti gli italiani possano rendersi conto *de visu* dei vantaggi e le bellezze mirabolanti finora sconosciute, ed ora rivelate grazie al giro della "carovana atomica".'

Italian government's engagement in international collaboration: 'The hope of achieving a robust system of international collaboration is shared by the Italian government, which aims to work towards this goal' (*Il Popolo* 1954).<sup>24</sup> Saragat was the leader of the Social Democrats (PSDI), a minor partner in the ruling centrist coalition under DC's leadership. His party had been supported with conspicuous funds by the U.S. trade unions at the U.S. Foreign Office's behest (Mistry 2014: 45–46; Romero 1992: 74). In the context of the Cold War, the U.S. government wanted to promote a reformist leftist party able to address the workers' needs, but loyal to the West and clearly distant from the positions of the Communist (PCI) and Socialist (PSI) parties. While, with ca. 5% of the votes, Saragat's PSDI remained small over the following years, it nevertheless played a role in ruling coalitions. At the opening of the *Mostra Atomica* in Rome, the camera of the weekly newsreel focused on the three mentioned speakers, but among the crowd it zoomed in on Pietro Campilli (DC) who had participated in several post-war cabinets as an expert in economics and business and who was a strong promoter of nuclear energy in Italy (Paoloni 1994: 387).<sup>25</sup>

The Italian government had been directly involved in the preparatory stages of the atomic exhibition and in its implementation. In particular, executive press officers and state representatives in charge of public security were responsible for its proper course. The earliest document preserved in the 'Mostra Atomica' folder in the Italian national archives is a letter, dated 13 May 1954, by Raimondo Manzini, Undersecretary of State in the Prime Minister's office for press and information, to Carlo Russo, Undersecretary of State to the Ministry of the Interior, both from the DC.<sup>26</sup> To his letter Manzini attached USIS' detailed preliminary itinerary for the atomic exhibition, explaining that its five motor vehicles were to travel all over Europe and tour Italy from 10 June 1954 until 24 February 1955.<sup>27</sup> Manzini himself took a positive view of the proposal and asked Russo for his opinion:

I have carefully examined the proposal for the exhibition which will be fully carried out with American funds, but also with our collaboration and our advice so as to ensure the best outcome of this initiative. The prospects of success are good, especially as the exhibition will be entirely dedicated to the peaceful uses of atomic energy in the fields of agriculture, industry, and medicine, and to progress in civil society at large.

The exhibition will document the efforts currently made by various countries around the world, including Italy, to ensure that atomic energy is employed for constructive and not destructive purposes, for the benefit of mankind. *Indirectly, however,*

<sup>24</sup>[http://digital.sturzo.it/periodico/ilpopolo/1954/19540616/11\\_166/5](http://digital.sturzo.it/periodico/ilpopolo/1954/19540616/11_166/5). *Il Popolo* was the official organ of the Christian Democratic party. On Ashley Clarke's role in Italian politics see Favretto 1996.

<sup>25</sup>*La Settimana Incom* n. 01113, 25 June 1954: <<https://patrimonio.archivioluice.com/luce-web/detail/IL5000031812/2/inaugurata-mostra-atomica.html>>, accessed 6 October 2022.

<sup>26</sup>At the time the Christian Democrat Mario Scelba was Prime Minister *and* Minister of the Interior; therefore we can infer that Scelba supported the atomic exhibition.

<sup>27</sup>Some weeks later, USIS proposed to slightly change the dates: 15 June 1954–4 March 1955.

*knowledge of the developments in this field will very much contribute to reducing the impact of the long-running campaign by extremist forces against nuclear weapons* [emphasis added].

For these reasons, I believe it will be useful if the government assists, as much as possible, in making the exhibition successful. In particular, it will be necessary to give instructions to the district and police offices of the towns visited by the exhibition to grant it their *central squares* [emphasis in the original], and take appropriate measures relating to public order (escorts, police measures, etc.).<sup>28</sup>

On 18 May, Russo responded briefly, assuring Manzini that the district offices involved had already received instructions to guarantee the best outcome of the *Mostra Atomica*.<sup>29</sup> Indeed, on the same day, the office of the Ministry of the Interior prepared a circular related to Manzini's request which it sent out on 20 May.<sup>30</sup> The district offices in Rome, Milano, Bergamo, Verona, Reggio Emilia, Modena, Bologna, Livorno, Napoli, Bari, Brindisi, Taranto, Palermo, and Messina wrote back ensuring proper execution of the instructions.<sup>31</sup> As the exhibit's opening was approaching, on 4 June 1954, the USIS branch in Rome again contacted the Ministry of the Interior, asking for collaboration and support by the cities where the exhibition would be mounted. The letter was sent on behalf of the exhibition's director, Dr. Filippo Raffaelli; it enclosed a fact sheet and an updated itinerary, now including Catania, for a total of 19 towns to be visited from 15 June 1954 until 4 March 1955. According to the fact sheet, each of the five trailers was 13.98 m long, 3.6 m high, max. 2.5 m wide; 50 km/h was the maximum speed of the trucks. Once mounted, the exhibition made up a square of 40×40 m. Personnel involved in the exhibition consisted of the director, Raffaelli, vice director Giorgio Nunes, 'head of caravan' Alberto Coscera, head of personnel Ferdinando Petrilli, as well as five drivers, two electricians, and one set designer (the latter all not named). Contacts and technical data were crucial for logistical reasons, as they helped local authorities to plan the caravan's route in a country with mostly hilly and mountainous terrain, calculate the time of arrival, and choose the right place in town for the public show. The USIS fact sheet pointed out that 'under particularly difficult conditions the exhibition can be installed on 38×35 metres'.

An internal note of 7 June 1954 by Paolo Masetti, a press officer at the Ministry of the Interior, reported that an official of the U.S. embassy had introduced him to Raffaelli. In the conversation that followed, Masetti had pointed out that

<sup>28</sup>Original of the highlighted sentence: 'Indirettamente però, la conoscenza di quanto si sta facendo in tale settore, contribuirà a smontare notevolmente la campagna da tempo in atto per opera delle forze estremiste nei confronti delle armi nucleari.' Raimondo Manzini to Carlo Russo, Rome, 13 May 1954, ACS, Ministero dell'Interno, 7501/99, *Mostra Atomica*.

<sup>29</sup>Carlo Russo to Raimondo Manzini, Rome, 18 May 1954, ACS, Ministero dell'Interno, 7501/99, *Mostra Atomica*. The district offices, *prefetture*, are headed by prefects, who are appointed by the President of the Republic upon proposal of the Minister of the Interior.

<sup>30</sup>Document's number: 16880/7501. ACS, Ministero dell'Interno, 7501/99, *Mostra Atomica*.

<sup>31</sup>ACS, Ministero dell'Interno, 7501/99, *Mostra Atomica*. Answers from Genoa, Turin, Florence, and Reggio Calabria are missing.



the Ministry had contacted the different local districts and the Directorate-General for Public Security in a timely fashion, as desired. As for Raffaelli's new concerns, Masetti wrote:

Dr. Raffaelli – who will personally accompany the aforementioned exhibition in the various towns – would appreciate letters of introduction for the prefects of the areas involved, in order to obtain benefits and collaboration for the best outcome of the initiative. *Furthermore, he considers it advisable to include plainclothes agents in the group of public order officers while the exhibition is carried out, to avoid any possible political incident* [emphasis added].<sup>32</sup>

Raffaelli was conscious of Italian Socialist and Communist activists eager to bring discredit on the initiatives of their political adversaries, as the recent, sensational case of the *Mostra dell'Aldilà* had demonstrated. A few days after Raffaelli's warning intervention, telegrams on behalf of Undersecretary of State Russo were sent to the district offices on the atomic exhibition's route, drawing their attention to 'the need to arrange for suitable measures to prevent or at least quell possible disturbance attempts. It may be in some cases advisable to provide escort on the way to the designated locations.'<sup>33</sup> A further telegram was sent on 18 June 1954, inviting the local district offices to authorize the use of loudspeakers placed on the vans for advertising the exhibition, alternating information with classical music tracks, 'pre-recorded on magnetic tape for pleasant entertainment'. In most cases the local police's feedback, formulated in the common bureaucratic jargon, briefly reported the zealous implementation of orders and 'no incidents', proving that Raffaelli's concerns about the atomic exhibition had been unfounded. In some cases, however, the local report is more detailed and gives better insight into the context of the Atoms for Peace campaign in Italy.<sup>34</sup> Livorno, for example, pointed out that according to the 'special instrument installed on the first van, 83,000 persons of both sexes visited the exhibition. The *Mostra* has proved to be very interesting both due to the excellent organization and the many devices for harnessing atomic energy.' In Reggio Emilia, the square assigned to the exhibit was 'the most beautiful of this county seat'; here, the opening had taken place with the participation of the U.S. Consul, the British Consul, as well as civil, military, and religious dignitaries of the county (*provincia*), with a significant turnout (ca. 63,000 visitors).

Modena's prefect imbedded his feedback on the atomic exhibition in a general bulletin of the week: on 7 October, the U.S. and British Consuls had attended the inauguration of the *Mostra Atomica*, placed in front of the

<sup>32</sup>Original of the highlighted sentence: 'Ha rappresentato, inoltre, l'opportunità che, fra gli agenti adibiti al servizio dell'ordine pubblico in occasione dello svolgimento della Mostra, siano compresi alcuni agenti in borghese per evitare qualsiasi possibile incidente di natura politica.' Paolo Masetti, Note for the Chief of Staff of the Ministry of the Interior, Rome, 7 June 1954, ACS, Ministero dell'Interno, 7501/99, *Mostra Atomica*.

<sup>33</sup>Telegram written on 8 June and sent out on 9 June 1954. ACS, Ministero dell'Interno, 7501/99, *Mostra Atomica*.

<sup>34</sup>All quoted reports in the following are in ACS, Ministero dell'Interno, 7501/99, *Mostra Atomica*.

sports hall – the exhibit was drawing ‘a significant number of visitors’.<sup>35</sup> Three days later, Modena had commemorated ‘the martyrdom of nine partisans of the Italia Brigade whom in 1944 had been hanged by the Germans’. These partisans had belonged to Catholic groups actively participating in the liberation movement in the name of Christian Democracy.<sup>36</sup> The main speaker at the commemoration, but not present at the opening of the atomic exhibition, was the same Undersecretary of State in the Prime Minister’s office, Raimondo Manzini, who had been the first contact of USIS for the *Mostra Atomica*. According to Modena’s district office report, Manzini gave his talk in front of more than 300 guests, the prefect being among them.<sup>37</sup> On the afternoon of the same day, ‘ca. 1,000 female athletes of far-left organizations coming from various Italian counties’ took part in the ‘4th Female Sport Games’ in Modena, attended by (Communist) ‘Member of Parliament Maria Maddalena Rossi and major local Socialist and Communist figures’.<sup>38</sup> The prefect continued his bulletin reporting that near Modena ‘a patriotic public event’ had celebrated the return of Trieste to Italy, while in another town nearby, the Minister for Agriculture had inaugurated a new DC office and a Member of Parliament for the same party had inaugurated a new school. In several other towns and villages of the county, ‘far-left parties’ had organized conferences and meetings; finally, further sporting events and religious processions had taken place on the same day, 10 October.

This colourful report of a week full of public gatherings in a town in the Emilia Romagna region spotlights the strenuous cultural fight between the DC and the Communist party (PCI) in the 1950s, emulating the Cold War in a provincial Italian setting. Since 1947, DC-led governments had gained more or less open financial and political support by the U.S. administration, which was permanently worried about the popular support of the PCI (Forsyth 1998; Collotti 1976). In the general elections of June 1953, the PCI had received more than 30% of the votes in ‘red’ Emilia Romagna (Compagna and De Caprariis 1954: 39),<sup>39</sup> alarming the conservative parties and the U.S. Thus, for Manzini, who was popular in the region for having directed the Catholic newspaper *L’Avvenire d’Italia* for decades, it was certainly more

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<sup>35</sup>The atomic exhibition could be visited in Modena from 7 until 12 October 1954.

<sup>36</sup>A flyer by the Associazione Liberi Partigiani Italiani announced the commemoration of 10 October naming the six young men imprisoned, tortured, and hanged along the road to San Giacomo Roncole by the Black Brigades (of Italian Fascists), as well the three other partisans who had died near the Samone bridge in a shoot-out with German troops. Hence the report of Modena’s prefect was incorrect – not surprisingly given the general attitude in post-war Italy to ‘forget’ the crimes committed by Italian Fascists. See Focardi 2014. The flyer is held at Centro Culturale Francesco Luigi Ferrari, Modena.

<sup>37</sup>Archival material documenting this event is also preserved at Centro Culturale Francesco Luigi Ferrari.

<sup>38</sup>The Communist daily newspaper *L’Unità* dedicated to this particular sport event several articles before and after it took place, highlighting the educative and liberating role of sport for young women. According to the paper, 2,000 young women took part in the ‘Rassegna sportiva femminile’. See Cavaterra 1954; E. F. 1954; Gentili 1954; Gherpelli 1954a, 1954b; *L’Unità* 1954.

<sup>39</sup>Only in Tuscany did the PCI also gain more than 30%. On the historical reasons for the success of the PCI in Emilia Romagna see Ginsborg 1990: 200–04.

rewarding – also in political terms – to commemorate the sacrifice of Christian partisans than to attend the opening of the atomic exhibition (Carli 2007).<sup>40</sup>

The prefects' reports on the *Mostra Atomica* in Sicily highlighted the participation of Cardinal Ruffini and Archbishop Coadjutor Tonetti in the opening of the exhibitions in Palermo and Messina, respectively; in Messina the exhibition took place in the cathedral square (*Piazza Duomo*), and the Archbishop Coadjutor was the one who cut the traditional ribbon to inaugurate the event. Among the distinguished guests was Australian diplomat Dominic McGuire, while 'stump speeches' were held by the exhibition's director, the U.S. Consul, the British Vice-Consul, the mayor and the prefect of the city. Messina should have been the final destination of the exhibition's tour in Italy,<sup>41</sup> but on 4 April 1955 USIS asked the Italian government at short notice for an extension of the itinerary:

Following our notifications of last year, and related to the increasing public recognition of and interest in the travelling exhibition about the 'Peaceful Uses of Atomic Energy', this Office has resolved to extend the trip of the above-mentioned exhibition in Italy until next June, so that the following locations can also be added to the itinerary:

ANCONA 9–17 April

TERNI 22 –27 April

RIMINI 2–8 May

FERRARA 13–18 May

TRIESTE 24 May–2 June

Trusting in the friendly approval of your honourable Ministry, we expressly ask to alert in time the authorities of the different towns about the extension of the *Mostra Atomica's* itinerary in Italy, so that they can kindly take care of the *Mostra* in a similar way as it happened during the shows in previous towns, which very much contributed to the success thus far.

With best thanks,

DON R. TORREY

Information Officer<sup>42</sup>

<sup>40</sup>Raimondo Manzini (1901–88) was chief editor of *L'Avvenire d'Italia* from 1927 until 1960, with a brief interruption during his term as Undersecretary of State from February 1954 to July 1955. Manzini actively supported the anti-Fascist Resistance and helped found the regional DC in Emilia Romagna; after the war, he was member of the Constituent Assembly and of the governing council of the Italian press. From 1960 until 1977, he was editor in chief of *L'Osservatore Romano*, the main newspaper of the Vatican City State.

<sup>41</sup>The travel schedule for Sicily had already been slightly changed, as from Palermo the exhibition moved to Caltanissetta, then on to Catania, before it finally arrived in Messina on 24 March 1955.

<sup>42</sup>ACS, Ministero dell'Interno, 7501/99, *Mostra Atomica*.

The reason adduced for the extension – the exhibition’s success, also confirmed by the daily press (*Corriere della Sera* 1954b, 1954c) – was probably only one factor in USIS’ decision-making process. Difficulties in carrying out the mobile atomic exhibition in the next target country, France, might have played a role as well.

A curious episode in the relations between the exhibition’s organizers and official representatives consists in Raffaelli’s request to avoid payment of taxes for land-use rights amounting to LIT 3,700,000. Since the mayor of Rome, the Christian-democrat Salvatore Rebecchini, refused to grant tax exemption, Raffaelli asked the head of cabinet at the Ministry of the Interior to mediate. In his letter of 24 June 1954, Raffaelli explained that the exhibition was ‘free entry, developed scientific and instructive arguments of great public interest, and had no traits of propaganda’.<sup>43</sup> But some days later he received the response that both the Ministry of the Interior and the mayor of Rome were very sorry that they could not grant his request, as tax exemptions happened to be regulated by law.<sup>44</sup>

## 6. Enrico Fermi as scientific diplomat in the nick of time

At the exhibition’s opening in Rome, U.S. ambassador Luce acknowledged ‘the immense contribution made by the Italian genius in the field of nuclear studies’, as reported by a newspaper (*Il Popolo* 1954). No name was mentioned, but it must have been clear to everybody that Luce referred to nuclear physicist Enrico Fermi (1901–54) and his group.<sup>45</sup> Fermi had been awarded the Nobel Prize in 1938 and emigrated to the U.S. immediately after receiving the award to protect his family from racial persecution in Fascist Italy, as his wife was Jewish. In December 1942, Fermi’s lab in Chicago had produced the first self-sustaining nuclear chain reaction, an experiment that contributed decisively to the construction of the atomic bomb. Fermi had been part of the Manhattan Project, member of the General Advisory Committee of the Atomic Energy Commission (1947–50), and President of the American Physical Society (1953–54) (Bonolis 2004; Maltese 2003, XVII–XXII).

As mentioned above, the *Mostra Atomica* broadcast a speech by Fermi about the ‘Atomic Age’ in its second exposition van. This was also reported in the USIS bulletin that had been delivered to the press in early June 1954:

A map shows the visitors the worldwide locations where uranium is mined and processed, while a film projection with spoken commentary by nuclear physicist Enrico

<sup>43</sup>Filippo Raffaelli to the Chief of Staff of the Ministry of the Interior, Rome, 24 June 1954, ACS, Ministero dell’Interno, 7501/99, *Mostra Atomica*.

<sup>44</sup>Giovanni Palamara to Filippo Raffaelli, Rome, 3 July 1954, ACS, Ministero dell’Interno, 7501/99, *Mostra Atomica*.

<sup>45</sup>In 1950, Italian physicist Bruno Pontecorvo had changed sides by emigrating to the Soviet Union, still an embarrassing event that might have induced the speaker to omit names. See Close 2015; Turchetti 2012.



Fermi summarizes the aspects of international collaboration linked to the use and exploitation of nuclear energy. (USIS 1954: 5)<sup>46</sup>

In a report on the atomic exhibition, the newspaper *Corriere della Sera* pointed to ‘a documentary film not released before, in which famous Italian physicist Enrico Fermi takes stock of the progress of atomic science in the world’ (*Corriere della Sera*, 1954a: 2),<sup>47</sup> while a report about the stay of the atomic exhibition in Turin in September 1954 highlighted Fermi’s speech as well (*Illustrato Fiat* 1954).<sup>48</sup> It is possible that Fermi’s commentary was first recorded as a voice track in the U.S. and then as a video in Paris on 1 July 1954, during his last visit to Europe; he died on 28 November of the same year.<sup>49</sup> Fermi’s message, originally in Italian for the *Mostra Atomica*, stated:

Uranium is the raw material of the atomic age. It is believed that the uranium deposits found worldwide can provide us with enough energy for several thousands of years, energy available to all people on Earth, as the atom is international: No country or group of countries holds a monopoly on the uranium, neither a monopoly on atomic science, nor on nuclear plants.

The atomic age was born out of studies by many scientists in Italy, France, England, the United States, Denmark, Germany, and other countries. And the spirit of cooperation continues today, as is shown by the Oslo agreement for research on nuclear energy between Norway and the Netherlands, as well as the European Council for Nuclear Research in Geneva, which brings together the scientific knowledge of its member countries. They work together following a coordinated research plan, using equipment that no country alone would be able to provide.

The results of such investigations will be made available to everybody. For example, the radioactive isotopes produced in England, the United States, Canada and elsewhere are currently used worldwide in hospitals, in industry and agriculture, in countries such as Finland and New Zealand. The development of atomic power plants is becoming a reality in a growing number of countries. The delivery of isotopes is increasing day by day. For instance, only from Oak Ridge in the United States the number of shipments shot up from 1,900 in 1947 to more than 11,000 in 1953. The atomic age is only 12 years old, and we are just at the threshold of the benefits that will result from the work of hundreds of thousands of scientists and workers in the atomic field. This energy is like a bank from which we will be able to always make withdrawals

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<sup>46</sup>Una carta geografica mostra ai visitatori le località dove l’uranio viene estratto e trattato nel mondo, mentre una proiezione cinematografica con commento parlato del fisico nucleare Enrico Fermi sintetizza gli aspetti di collaborazione internazionale cui sono legati l’impiego e la valorizzazione dell’energia nucleare.’

<sup>47</sup>... un documentario inedito nel quale l’illustre fisico italiano Enrico Fermi fa il punto sui progressi della scienza atomica nel mondo’.

<sup>48</sup>In translation: ‘From a TV screen in the first showroom of the mobile exhibition, Prof. Enrico Fermi has explained to us the most recent history of nuclear energy and its current and future applications in a clear voice and with penetrating intelligence.’

<sup>49</sup>A 2.06-minutes long film uploaded on YouTube on 17 January 2010, without providing any source, with the title: ‘Discorso E. Fermi (1954)’ is most likely part of Fermi’s speech for the *Mostra Atomica*. Fermi speaks there from what seems to be a hotel room: <https://www.youtube.com/watch?v=zVo1m6LlaZ8> [accessed 11 October 2022]. A sound track preserved in the archive of the Italian national broadcast RAI also contains the last part of Fermi’s speech: <http://www.teche.rai.it/2016/09/29-settembre-1901-nasce-enrico-fermi-il-padre-della-fisica-italiana-contemporanea> [accessed 11 October 2022].

once we will succeed in directing the prodigious inventive spirit of humans not to their death but to their life.<sup>50</sup>

The most striking part of Fermi's brief message for the atomic exhibition is the utopian character of the opening paragraph: no monopoly whatsoever, full availability of resources and scientific advancement for all people on Earth.<sup>51</sup> After this strong statement, Fermi emphasizes internationalism and cooperation, with a particular focus on Europe, which had just founded the European Council for Nuclear Research (CERN), to explain how to achieve this dream.

In summer 1954, Fermi also published an informative but rather technical article, 'Peace Needs the Atom', in USIS' monthly magazine *Mondo Occidentale* (Western World), in which he expanded on the progress and the challenges still encountered on the path to the production of atomic energy for industrial purposes (E. Fermi 1954).<sup>52</sup> This issue of the magazine was largely devoted to Eisenhower's Atoms for Peace initiative. It also featured the *Mostra Atomica*, including a map of Italy with the itinerary, and invited visitors to visit the exhibition with the words: 'The first initiative of this kind in the world that has been carried out to provide a brief review of atomic progress and the peaceful applications of nuclear energy' (see Figure 1).

Within the framework of the *Mostra Atomica*, then, Fermi left a spiritual testament to his career as a nuclear physicist, pursuing the utopian perspective of nobody's monopoly on resources and science.

## 7. Uranium between utopia, colonial exploitation, and U.S. Interests

In Italy, as in other countries, scientists and industrialists involved in strengthening nuclear research in the 1950s were looking for inland uranium deposits, in an effort towards autonomy (Adamson, Camprubí, and Turchetti 2014). Geological prospecting campaigns had been organized by the *Comitato Nazionale per le Ricerche Nucleari* (CNRN) since its early days. In 1959, CNRN's general secretary, the geologist Felice Ippolito, published a report on the geological surveys, highlighting the discovery of uranium deposits in the Alps. Ippolito was optimistic about the prospects for the Italian mining and nuclear industry:

At the end of 1962, Italy would therefore have at its disposal at least 450 tons of uranium metal. The cost of this uranium, which could reach the amount of over 15 billion lire, would no longer burden the balance of payments in hard currency, and its production would also give work directly to over 2,000 people in the mines and in the chemical and metallurgical plants. (Ippolito 1959: 421)

<sup>50</sup>Ibid.

<sup>51</sup>For disillusioning historical accounts see Adamson, Camprubí and Turchetti 2014; Hecht 2012.

<sup>52</sup>The article featured a photograph of Fermi with the caption explaining that he had recently taken part in the 2nd *Corso Internazionale di Fisica* in Varenna. *Mondo Occidentale* was directed by the poet Giovanni Giudici and produced in Rome.

For several reasons, all this did not come true, and the Atoms for Peace initiative did not live up to expectations. Italian politicians, scientists, and industrialists were bitterly divided on the question which legal framework was needed to provide for the peaceful applications of atomic energy (Paoloni 1992). In addition, the U.S. deemed an independent nuclear industry in Italy threatening its own national security and economic interests, and defended these with covert operations and open offers of commercial collaboration. In December 1953, for example, Ambassador Luce personally submitted an offer for uranium trade to the Prime Minister in office at that time, Giuseppe Pella, with the provision that any uranium mined in Italy should be sold to the U.S., with some quantities left for internal research use.<sup>53</sup> The direct reference to the mutual defence agreement in this context provided the due pressure on the Italian government (Turchetti 2014: 479). Italy would not finalize a comprehensive law on nuclear energy until December 1962 (Paoloni 1992: 36).

At the *Mostra Atomica*, the map of worldwide uranium deposits suggested great availability of the precious ore. Italian journalists reporting about the exposition took the news home; for example Ferdinando Chiarelli who wrote: 'It is estimated that, using the uranium reserves known so far, the world will be able to live safely, work its industries, move its machines and its transport for sixty centuries' (Chiarelli 1954). Even though Chiarelli seemingly was just summarizing the information provided by USIS, it is critical to emphasize another aspect of his comment related to precious ores, namely colonial exploitation. Already in the 1930s, the reporter, then working as correspondent from Ethiopia for the Fascist regime's newspaper *Il Giornale d'Italia*, had demonstrated a noticeable interest in resources from the colonies. In a gruesome war of aggression that also employed chemical weapons, Fascist Italy had conquered Ethiopia in May 1936, prompting Mussolini to proclaim the Italian Empire (Spagnolo 2012; Labanca 2002; Del Boca 1979). Just two weeks later, Chiarelli mailed home from Addis Ababa a long article about the 'Large Economic Resources for the Empire' (Chiarelli 1936). The journalist had interviewed Europeans who had been living in Ethiopia for thirty or forty years trying to establish big business there. They reported the delaying tactics of the Ethiopian emperor Haile Selassie I (born Tafari Makonnen) in the following terms:

Some of them specify that they had been down here for decades to set up a so-called company of imperial mines and that they had not been bothered as long as it was only a matter of bringing to the Tafari's presence those samples of mica, gold, and saltpetre whose sight pleased the Tafari very much and made him inclined to agree to a concession of mining land. But then began the tortuous discussions about the application of the exploitation contract, which, like all Abyssinian contracts, maintained an impeccable agreement between the two parties up to the moment of signing, when that diabolic Amharic monosyllable appeared that means 'but' and that leaves

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<sup>53</sup>Memorandum, 23 December 1953, NARA, Secret, Box 502, RG59 quoted from Turchetti 2014: 479.

suspended and often invalidates what has been written above for pages and pages.  
(Chiarelli 1936)

If such accounts are reliable, they testify to the tactics of resistance used by a country leader and his administration vis-à-vis the opportunities and risks of partnering with foreign capitalists. At the same time, such narratives served the invaders in legitimizing their actions.

## 8. Conclusion

The history of the *Mostra Atomica* reveals the complexity of the Cold War by spotlighting local and micro-local politics in its interactions with the international operations of a superpower. The Italian government was aware of the political nature of the atomic exhibition, both in relation to domestic politics – Christian Democracy vs. the Communist Party – and in diverting attention from the United States’ nuclear armaments at the international level. Both issues were of great importance for the U.S. The collaboration between USIS and the Italian centralistic administration resulted in a successful exhibition that – due to its mobility – allowed a large number of citizens to experience the atomic ‘marvels’ even in remote regions. A particular aspect of the Italian travelling exhibition lies in the clash of its imagined atomic ultra-modernity with the omnipresent traces of the country’s artistic past. The *Mostra Atomica* offers an occasion to consider connections between different historical periods, utopic futures, and present situations, in particular with regard to the procurement of rare ores and its implications.

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