CAV. DEL LAV. ING. R. RAOUL CHIODELLI
VICE-PRESIDENTE MARCONI ITALIANA S. P. A.

AMM.RE DELEGATO SOCIETÀ ITALIANA RADIO MARITTIMA

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Business card of Rodolfo Raoul Chiodelli with handwritten notes. ASMUST, Archivio del Museo, Allestimento sezioni museali.

Telecomunicazioni, b. 5 Cimeli marconiani e Sala Marconi, signed business card 27 February 1956

This document, preserved in the MUST historical archive, although seemingly marginal at first glance, should be interpreted within the context of the intense correspondence between Chiodelli and the founder Guido Ucelli regarding the acquisition of Marconian 'artefacts' from the Marconi companies. The historical archive, in fact, preserves the documentation related to the institutional history of the Museum and therefore also anything connected to the acquisitions and gallery installations during its 70 years of operation. Information and perspectives on Italian industrial history often emerge from this material, viewed from the particular perspective of its relationship with culture and education. The document is interesting because it reveals that Rodolfo Raoul Chiodelli (Rome, 1896-1982), one of the most important figures on the Italian radio scene in the period between the 1930s and 1960s – first as Director General of the URI – Unione radiofonica italiana (Italian Radiophonic Union) (1924) and later of the Ente italiano audizione radiofoniche (Italian Body for Radio Broadcasting) (1928-43) – undertook in the 1950s both the positions of Vice President of Marconi Italiana S.p.A. and Managing Director of the Società italiana radio marittima (SIRM) from 1954 to 1966. It should also be noted that the locations of both the Società italiana Marconi and SIRM were at the same address, in via Condotti 11 in Rome. This seemingly secondary detail reveals important aspects about the industrial history of the Marconi Company in Italy, a topic that has not been studied in detail. Although Chiodelli's relationship with Marconi began rather late (from 1929 on) and was certainly not as close as that with his official biographer Luigi Solari (Balbi, *infra*), his role was fundamental in the post-war period, to consolidating in Italy the activities of a commercial enterprise that had already been operating around the world for decades.

The Business Card of Raoul Chiodelli

Marconi Italiana: Industry and Public Memory (1921-60)

Giovanni Pietrangeli

Museo Nazionale Scienza e Tecnologia Leonardo da Vinci

One of the many 'legacies' of Guglielmo Marconi concerns the organisation of the business network which bears his name. In the following pages, we will focus on the Italian branch of the inventor's eponymous holding company, from strictly industrial business dealings to the management of the Marconi 'brand', carried out through relations with cultural and educational institutions, including what was then the Museo Nazionale della Scienza e della Tecnica di Milano (now the Museo Nazionale Scienza e Tecnologia). This relationship with the Museum is documented by the intense correspondence in the 1950s between the founder Guido Ucelli, and one of the most prominent figures in Italian radio during the transition from fascism to the early years of the Republic: Rodolfo Raoul Chiodelli (Monteleone 1995, 33).¹ Today this correspondence is stored in the MUST historical archive: therefore to rebuild the history of the objects collected by MUST – including those related to Marconi presented in this collection of essays – the archive should be the first port of call to carry out research.² Even documents that seem irrelevant or residual can provide us with important information, if evaluated correctly: this is the case with the business card pictured here.

What does this seemingly insignificant document tell us? First of all, it tells us about Chiodelli and his role in the Marconi companies. During the twenty years of fascism, Chiodelli was the Director General of the URI – Unione radiofonica italiana (Italian Radiophonic Union), later becoming managing director of the EIAR, and he had certainly developed ties

¹ As he himself states in his volume, Monteleone is also the author of the entry dedicated to Chiodelli in https://www.treccani.it/enciclopedia/rodolfo-raoul-chiodelli_(Dizionario-Biografico)/.

² See the contributions of Casonato, Guagnini and Spada, infra.

to Luigi Solari, Marconi's close collaborator and vice president of the same URI. From 1929 Chiodelli had also forged a relationship with Marconi, whom he met in London that same year.³ After World War II he remained a very important public figure for Italian radio and held numerous managerial positions.

As stated on his business card, he was the managing director of Marconi Italiana S.p.A., supervising the reconstruction of systems damaged by the war, and he performed the same role at Società italiana radio marittima (SIRM). This too had been established within the Marconi business network, and was the only official provider of the Ministero delle comunicazioni italiano for the purchase and rental of mandatory equipment required for merchant ships weighing more than 1,500 tonnes. In relation to the history of Marconi's business dealings, of particular interest is the role that these companies and prominent figures like Chiodelli played after Marconi's death, not only in carrying on the business activities, but also in managing the symbolic legacy linked to the inventor's name.

Now we come to the second set of reflections which - according to the author - are motivated by the business card displayed here: how was the galaxy of Marconi enterprises structured in Italy? Which companies were a part of it? How were they positioned within the post-war ecosystem of Italian industry?

In the following pages we will attempt to outline the historical contribution made by the Marconi businesses in Italy. The company documentation, preserved in the historical archive of MUST, the Archivio Centrale dello Stato (ACS) and the Bodleian Libraries in Oxford (OBL) will act as our guide. Writing a preliminary, partial draft about the history of the numerous 'Marconi' companies proved to be anything but easy, mainly because of the extreme fragmentary nature of the documentation, scattered in Italy and the United Kingdom, and because, as we will see at a later stage, the history of these enterprises is not linear, due to changes in business names, composition of shareholdings and the influence of politics on company strategies.

1 Marconian Enterprises in Italy (1921-60)

As clearly described by William J. Baker and Anna Guagnini in their studies, the research, commercial, and technical application activities soon took on converging trajectories in the biography of Guglielmo Marconi (Baker 2002; Guagnini 1995, 355-418; 2006, 175-212). Supported by his family's business know-how, Marconi founded the first of a network of enterprises in July 1897 which, operating in the international market, provided hardware and

software for setting up wireless technologies to communication and navigation companies.

By 1913, approximately ten subsidiaries and affiliated companies had been established under the umbrella name of the Marconi Wireless Telegraph Co. (MWTC), with locations in the United Kingdom, United States, Canada, Argentina, France, Russia, Spain and Belgium. The absence of a true Italian subsidiary, 16 years after the

³ https://www.treccani.it/enciclopedia/rodolfo-raoul-chiodelli_(Dizionario-Biografico)/.

⁴ ACS, Istituto per la Ricostruzione Industriale (IRI), Serie rossa, Pratiche societarie, Marconi italiana, b. R1261, report Compagnia italiana Marconi spa-'Marconi' Società industriale per azioni, 1949.

⁵ ACS, Presidenza del Consiglio dei ministri, Gabinetto, 1913, fasc. 6, Promemoria circa le convenzioni tra il Governo italiano e il comm. Marconi, June 1913.

founding of the first Wireless Telegraph Co, stands out.

'Ufficio Marconi' had already existed in Rome since 1904, just as the Officine Radiotelegrafiche Marconi had been opened in Genoa in 1912. However, it was not until June 1921 that an Italian company was set up within the Marconi network. Defined 'authentically Italian' due to its investment capital, business address and staff, its establishment was most likely due to the opening up of the state radiocommunications systems to private company tenders, rather than to a renewed patriotic enthusiasm on the part of Marconi. He had nevertheless been the supplier of the Italian Navy since 1902, and had signed a well-known convention in 1904 allowing the Italian government to use his devices (Paoloni, Simili 1996, 83, 113; Balbi, *infra*).

Despite its late arrival, the Società italiana Marconi immediately took on a significant role in the history of Italian communications, including those for civil use. It participated as a majority shareholder in the establishment of the URI, which became EIAR in 1927 (Paoloni, Simili 1996, 114).

The 1930s, and especially the years 1934-35, were crucial for the fascist regime, with two events standing out in particular. The first was the plebiscite on 25 March 1934, in which Italian voters – only male – were asked to vote yes or no to a closed list of names for the Chamber of Deputies, and the second was the invasion of Ethiopia with the resulting international sanctions. These incidents on the one hand consolidated Mussolini's power on an

internal level and on the other caused Italian international relations to become more tense (Del Boca 1979; Labanca 2005). During the same years Marconi, already a senator and president of the CNR, saw the deterioration of his relationship with the United Kingdom, and above all of his business relations across the English Channel, with subsequent effects on both political and economic matters (Raboy 2016, 614-16).

Within Italy, instead, thanks to support from public suppliers, business seemed to proceed as normal. Sestri, the Genoa plant, employed more than a thousand people until 1942, with an 'absolutely dominant' production of equipment for the Italian Navy, including radio transmitters and receivers, telephones and telegraphs, radiogoniometers, ecometers, nautical instruments, and transmitter and receiver valves.8 In 1943, in the middle of World War II - although with a certain delay due to the beginning of hostilities - San Giorgio, a large mechanical and metallurgical engineering company in Genoa, acquired their assets, which had been seriously damaged in bombings the previous year, along with the Italian business of the MWTC, at a total value of 24 million lire.9 This operation therefore led to the establishment of a Compagnia italiana Marconi (CIM), with plants relocated for post-war reasons to Pistoia and Cambiano in the province of Turin. At the end of the war the plants returned to Sestri, where San Giorgio also had its headquarters and from there, despite having a halved workforce,

⁶ OBL MS Marconi 1707, Le Officine Radiotelegrafiche Marconi di Genova. Cenno storico e descrittivo, 1922.

⁷ https://patrimonio.archivioluce.com/luce-web/detail/IL5000011984/2/il-plebiscito-anno-xii-nella-giornata-elettorale-tut-ti-i-cittadini-italiani-hanno-compiuto-loro-dovere.html&jsonVal=. Significant propaganda document on the 1934 plebiscite, won with almost 100% of yes votes.

⁸ ACS, IRI, Serie rossa, Pratiche societarie, Marconi italiana, b. R1261, report Compagnia italiana Marconi spa-'Marconi' Società industriale per azioni, 1949.

⁹ ACS, IRI, Serie rossa, Pratiche societarie, Marconi italiana, b. R1261, report Compagnia italiana Marconi spa-'Marconi' Società industriale per azioni, 1949.

recommenced business activities in some fields, although it failed in returning to pre-war capacity.¹⁰

A lot changed in the years 1947-48, but in reality, very little or nothing changed regarding the structure and operation of the Società italiana Marconi, at least in the short term.

On 28 January 1948, at the Rome CIM offices in via Condotti 11 (the same address as that of the Italian office of the MWTC), the Marconi società industriale (MSI) was established, with the participation of both the former CIM, represented by Aldo Terenziani, and the Società italiana Marconi represented by Giulio Marconi [fig. 1], son of Guglielmo, although with a 4% stake that was mostly symbolic. 11 The presence of Giulio Marconi, along with the location at which the founding deed was drawn up and where the MSI would later have its headquarters, represent two important elements of continuity – symbolic rather than industrial – in the business activities of Guglielmo Marconi and those which were set up after his death in 1937.

The new company, still partially owned by San Giorgio through CIM shares, therefore became part of the founding core of the newly formed Finmeccanica, the public conglomerate that would manage the mechanical enterprises within the IRI framework for the entire post World War II period.

The MWTC finally joined CIM and the Società italiana Marconi, entering with a share capital of 48%, on an equal

standing to San Giorgio, due to reparative agreements. 12

The first years of business after the restructuring did not seem particularly encouraging, rather they highlighted important contradictions within the general organisation of the Finmeccanica universe. Firstly, the contracts that Marconi had brought to San Giorgio were deemed to be "negligible". In the meantime Microlambda had been founded, a trailblazing company in Italian radar technology (Bricco 2023, 109-17), thus Finmeccanica found itself in the uncomfortable position of developing an industrial strategy to avoid redundancies and inefficiencies in the naval communications sector. Moreover, CIM finances were not exactly flourishing, and between losses and other pre-existing debts, San Giorgio found itself in the position of having to manage about 280 million lire in losses, just as the MSI chapter began. In the position of the process of the pro

However, prospects seemed more promising with the founding of the MSI: first of all, production had returned to focus on the original Marconi enterprises, namely components and instruments for naval communication. Due to the war, and its entry into the radio gramophone market, CIM, had in fact lost market share and found itself in a highly competitive sector. Although it was a difficult legacy to manage – more than 50 million lire in losses in the first year of business and plants operating at 85% of their potential – the prerequisites for a recovery seemed to be in place. Is In 1956, Pasquale Saraceno devoted

¹⁰ ACS, IRI, Serie rossa, Pratiche societarie, Marconi italiana, b. R1261, report Compagnia italiana Marconi spa-'Marconi' Società industriale per azioni, 1949.

¹¹ ACS, IRI, Serie rossa, Pratiche societarie, Marconi italiana, b. R1261, Founding deed and articles of association, 28 January 1948.

¹² ACS, IRI, Serie rossa, Pratiche societarie, Marconi italiana, b. R1261, Founding deed and articles of association, 28 January 1948.

¹³ ACS, IRI, Serie nera, Affari generali e organi deliberanti, Comitato di presidenza, meeting of 16 May 1951.

¹⁴ ACS, IRI, Serie rossa, Pratiche societarie, Marconi italiana, b. R1261, report Compagnia italiana Marconi spa-'Marconi' Società industriale per azioni, 1949.

¹⁵ ACS, IRI, Serie rossa, Pratiche societarie, Marconi italiana, b. R1261, report Compagnia italiana Marconi spa-'Marconi' Società industriale per azioni, 1949.



Figure 1 The Marquis Giulio Marconi (son of Senator Marquis Guglielmo Marconi) speaking with Captain Willett, Director General of Marconi Company at the opening ceremony.

Photo taken in London in 1947 for the jubilee of MWTC, OBL MS Marconi d73







Figure 2 Giulio Marconi, Minister of Defense Randolfo Pacciardi and Raoul Rodolfo Chiodelli at the inauguration of the valve manufacturing plant in L'Aquila. 1952. OBL MSS photograph c 322-3

Figures 3-4 Operators at work at the valve manufacturing plant in L'Aquila, OBL MSS photograph c258-9

some sections of his study on the IRI – its origins, order and business from its setup to the year of writing – to MSI. Within the broader framework of reconversion – to some extent problematic as highlighted by Saraceno – the Marconi company represented a somewhat strategic investment. Not only because of the type of production required for radio transmitter instrumentation, thermionic valves and electronic devices, but also because the Marconi company was responsible for the construction of the valve manufacturing plant in L'Aquila: one of the few areas of post-war industrial development in Southern Italy outside of Naples (Saraceno 1956, 92) [figs 2-4].

Nevertheless, this positive evaluation was not shared in the United Kingdom, where, in December 1956, the MWTC was not only having to account for the financial losses of the Italian subsidiary, but also for some questionable managerial decisions that were conspiring to make the relationship between the parent company and MSI unsustainable. Although 1957 and 1958 seemed to generate positive results, in March 1959, a report originating in Italy and addressed to the English Electric Company (EE) – which had controlled the MWTC since 1945 – signalled the ongoing difficulties being experienced by the Marconi italiana branch in efficiently navigating the Italian public electronic system. ¹⁷

In March 1958 the chief auditor for the MWTC had already highlighted redundancies at the Ligurian plant and the need to reduce investments and liquidate reserves

of precious metals such as silver, tungsten and copper. In L'Aquila, on the contrary, a new production line was being completed thanks to a loan granted by the Istituto Mobiliare Italiano and forecasts were clearly more positive. ¹⁸

In May of the same year, it was Finmeccanica itself that proposed a thorough restructuring of the Marconi interests in Italy, starting with the sale of the plant in L'Aguila, which was therefore transferred to the company ATES - set up ad hoc and still a part of Finmeccanica. 19 The plant in Genoa, which with its array of inefficiencies and debt, remained the only industrial site in Italy available to the MWTC (and therefore to the EE), found itself the subject of an external audit carried out from 1959 to 1960 which drew attention to the serious financial situation towards which the company was headed.²⁰ The history of the Marconi italiana - simplifying with this designation the complex web of businesses that carried the inventor's name - carried on for another two decades. Regarding the scope of this article, the description of company affairs will stop in 1960.

The last documents preserved in Oxford are the transfer deeds for the assets of the Italian Marconi company to yet another 'Marconian' company, the Marconi italiana industrie spa, established in May 1980, but whose link with the business network originating from the MWTC was little more than nominal.²¹

On 4 July 1980, at the end of a long and difficult business period, Douglas Graham Smee, the director of the

¹⁶ OBL The Marconi Archives, MS Marconi 609, Italian companies 1956-65, MWT report on the progress of MSI, 10 December 1956.

¹⁷ OBL The Marconi Archives, MS Marconi 609, Italian companies 1956-65, letter to John Woods from EE, 16 March 1959.

¹⁸ OBL The Marconi Archives, MS Marconi 609, Italian companies 1956-65, report for Neil Sutherland, 4 March 1958.

¹⁹ OBL The Marconi Archives, MS Marconi 609, Italian companies 1956-65, letter from Finmeccanica (illegible signature) to John Woods of the EE, 12 May 1959; property valuation report on the plant in L'Aquila, 24 July 1959.

²⁰ OBL The Marconi Archives, MS Marconi 610, Italian companies 1960-80, report on Marconi italiana, undated (1970).

²¹ OBL The Marconi Archives, MS Marconi 610, Italian companies 1960-80, founding deed of Marconi italiana industrie spa, registry 14285, 27 May 1980.

Milan branch of Marconi Italiana, wrote a note entitled Marconi Italiana reconstruction:

For better, for worse, the deed is now done. The transfer agreement is as copy attached hereto, signed by myself as transferring the assets to Piccini [managing director of Marconi italiana industrie spa] and

by Piccini paying for them with the new company's shares, the signature duly notarised [...]. Thus the only notification to be made to customers, suppliers, etc. is to draw their attention to the fact that the registered number and registered address of Marconi Italiana have been changed to... There will be no other comment, publicity, etc.²²

2 The Marconi Brand and Its Public Memory

In an article dated 2017, Greg Elmer presented an interesting and original interpretation of the Marconi enterprises as catalysts for financial resources, in their clear ability to represent themselves as innovative companies and highlight the effectiveness of their own products (Elmer 2017).

This is probably even more accurate when discussing the Italian organisations within the Marconi universe.

These companies suffered the consequences of the transformation of the competitive landscape, the persistence of structural flaws, wartime damage and some complex changes in company set-up.

Within this scenario, during the 1950s the relationship between the Marconi companies and the then Museo Nazionale della Scienza e della Tecnica began to take shape, in particular between the Museum founder Guido Ucelli and Rodolfo Raoul Chiodelli.

In the mid-1950s the two engaged in intense correspondence, in relation to the destination of the so-called 'Marconi relics': objects produced by the MWT and by other businesses largely for promotional and demonstrative purposes, as is confirmed by both technical elements and documentation. The issue of the artefacts, which is rather more complex than described in this

brief summary [fig. 5], and explored in more depth in the other essays in this catalogue, introduces us to this archipelago of companies, all – or nearly all – of which had a business brand that echoed the name of Marconi, evocative enough to almost turn it into an asset, an intangible heritage which carried a tangible value in the network of relations interwoven between the worlds of industry, culture and technical-scientific education.

In conclusion, there are perhaps more questions than answers when trying to outline the history of the Marconi business activities in Italy, and even more so when attempting to consider it in relation to the dissemination of Guglielmo Marconi's public memory in Italy.

The first question is: which companies can effectively be defined as Marconi organisations in post-war Italy? It has been shown that Marconi only 'embarked' on his Italian business ventures in the 1920s, within a context of institutional and economic conditions which had become more favourable at the time than during the initial stages of his business network. However, the war, the restructuring of Italian capitalism after fascism, and the repositioning of Italy on the global market had redefined these conditions. In the meantime, Marconi had passed away, and his industrial legacy had been passed down to his

²² OBL The Marconi Archives, MS Marconi 610, Italian companies 1960-80, letter from Douglas Graham Smee to Robert Telford, president of the MWT, 4 July 1980. It should be noted that within Leonardo spa, the successor to Finmeccanica, there are still activities under the Marconi name.



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VIA BARBERINI, 66

MILANO

GENOVA 17 Novembre 1955

2423/DG

Fisnasta

On.le Presidenza del Museo della Scienza e della Tecnica Piazza San Vittore Milano

e p.c. S.I.R.M. Via Condotti, 11 Roma

Oggetto: Cimeli Marconiani all'attenzione del dr.ing.Guido Ucelli

La spett.le Società Radio Marittima di Roma. ci ha reso nota la proposta di Codesta On.le Presidenza di custodire nel Museo delle Scienze di Milano i cimeli Marconiani di nostra proprietà di cui all'oggetto.

Vi preghiamo a questo proposito di volerci auto rizzare a far transitare i cimeli stessi da Roma, Istituto Superiore PP.TT., essendoci stato da questo Ente richiesto tale transito onde avere la possibilità di eseguire modelli in legno a copia degli originali.

Siamo poi senz'altro disposti a cederVi tutte le fotografie che comparivano alla Mostra Marconiana a Genova. e della cui totalità siamo proprietari.

Per le teche di proprietà del Civico Istituto Colombiano di Genova, riteniamo sarebbe opportuno che Code sta On.le Presidenza contattasse il costruttore delle medesime residente a Milano, onde farsene eseguire una secon da edizione.

In attesa di gradite comunicazioni, e riservandoci di sottoporre all'esame di Codesta On. Presidenza un ns. preventivo per la cessione di tutto il materiale dimostrativo di cui siamo proprietari, inviamo distinti ossequi. "MAROOM ITALIANA "

Figure 5

Letter from Marconi Italiana S.p.A. regarding the storage of Marconi relics at the Museo Nazionale della Scienza e della Tecnica di Milano and supplies of other materials. 17 November 1955. ASMUST, Archivio del Museo, Allestimento sezioni museali, Telecomunicazioni, b. 5, Cimeli marconiani e Sala Marconi

son Giulio and some other trusted individuals, who apparently had marginal roles compared to the main players in the group, including the MWTC which, as we have seen, held a distorted view of its business activities in Italy. It can perhaps be claimed that by the 1940s and 1950s the Marconi brand had become more of a label, whose credibility was based on the name itself rather than on the technological and industrial results, and that its use was strictly tied to the fame of the inventor, which became a cult of sorts in Italy.

In relation to this cult, another question arises: once the strictly industrial enterprises had been reorganised in the period between 1955 and 1956, to what extent did Chiodelli's management of the public use of Marconi's name and the care invested in the exhibition of the artefacts fulfil the exclusively promotional needs of the brand, as happened in the early stages of the MWTC, according to the analysis by Elmer. The similar types of artefact would seem to confirm this theory. Some of them were in fact produced for promotional and demonstrative activities and were exhibited with particular diligence by the industrial organisation, as in Milan and Genoa during the Colombus celebrations in 1955 [fig. 4].²³

Moreover, other questions emerge regarding Chiodelli's role: which needs was he addressing in his commitment to overseeing the fate of the Marconi relics, dealing with the Museum-related requests from institutions all over the country? Was he playing his role of trusted associate – yet his relationship with Guglielmo Marconi was a later development and certainly not comparable to that

of Luigi Solari or George Kemp – or was it rather the role of the director of two companies within the Marconi universe struggling with its brand crises, which shortly afterwards would have its industrial assets reappraised, with the conversion of the Aquila plant to Aquila Tubi Elettronici e Semiconduttori (ATES)?

A figure such as Chiodelli, with expertise in the fields of commerce, politics, and culture – capable of simultaneously holding important positions in different companies, as indicated by the job titles on his business card – could well understand the value of Guido Ucelli's proposal to include Marconi and the Marconi company in the exhibitions at the Museo Nazionale della Scienza e della Tecnica. If the CNR was inevitably the custodian of the most precious 'relics' (Casonato, Spada, *infra*), the newly established museum was planning to become a 'pantheon' of science that was more accessible to the public, offering the chance to consolidate a strategic asset in a large, industrial city like Milan, as much intangible as precious: the memory surrounding the name of the inventor.

Beginning with the figure of Chiodelli, these pages have endeavoured to give a clear outline – up to now it has been somewhat vague – of the industrial enterprises that bore Marconi's name in Italy, within the framework of a comprehensive reflection on his scientific and entrepreneurial heritage 150 years after his birth (and it should be remembered also 100 years after the first broadcast of the URI). This is little more than an overview, to which it would be useful to return in more detail.

²³ Casonato, Spada, *infra*. ASMUST, Archivio del Museo, Allestimento sezioni museali. Telecomunicazioni, b. 5 Cimeli marconiani e Sala Marconi, List of the material for the Sala Marconi received from Roma (07/04/1956), typescript of Franco Soresini, s.d. Interesting annotations by Soresini on the status of the replicas and the 'originals', which are however often identified as copies.

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