Carmine Melino and the Institute of Hygiene

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Abstract

Throughout his 94 years of life, Carmine Melino brilliantly pursued different professional paths, his life being a constant stimulus for students, colleagues, friends and the family. Following the early formative years of study, here, we briefly list his scientific achievements in Occupational Medicine and Hygiene as well as his broad literary interests. Carmine was an inspiration to his generation not only because of his professional achievements, but also for his warm personality, exemplary hard-playing life and unbounded enthusiasm. A polymath, post-enlightenment ethos flowed to all his friends and colleagues, creating an ambience where intellectual excellence was highly appreciated and avidly pursued.

Carmine Melino was born in Anzano di Puglia (Foggia) on October 1, 1920, a mixture of Campania and Puglia in the Dauno-Irpinia sub-Apennines, where the Trevico mountain forms the boundary between the two regions. It is a country of poor villages, mountains and vast landscapes that are gradually becoming depopulated making their future existence uncertain.

Following classical studies at the National College Pietro Colletta in Avellino, supervised and mentored by his uncle priest Don Mariano, a distinguished scholar of Greek and Latin, he completed his university studies in Naples with a degree in Medicine and Surgery in July 1945 with the top grade of 110/110. Don Mariano inspired him with classical culture, a lifelong passion that he was able to explore in depth during his long professional and personal life. He then attended the Paediatric Clinic of the University as a resident and “volunteer assistant” for 5 years, obtaining the specialization and accreditation in Paediatrics. During this period he published several clinical and statistical scientific papers and became proficient in laboratory medicine.

In 1949 he participated in a competition for the position of medical assistant of Hygiene and Prophylaxis at the Province of Avellino and won it, becoming Director of the provincial laboratory of Public Health. However, he stayed there for only a couple of years, since in 1951 he won a second competition as a doctor inspector of the State Railways (F.S.) and, as the national winner, he took over the office in Bologna. Here, he served until 1956, when the office was moved, according to service requirements, to the central office of the State Railways Health Service in Rome, as Laboratory...
Head at the Central Hygiene Laboratory. In this capacity, he developed his career as a medical inspector of the State Railways Health Service up to the appointment of director general of the service in May 1975. In these years he first completed the specialization in Hygiene and, later, that in Occupational Medicine.

Next he found himself facing two distinct but equally prestigious scientific pathways, one which promised a rather comfortable and bureaucratic career, the other to enter the Academy career at the University. He chose the latter, the more uncertain, and made even more difficult by the untimely and sudden death of the Director of the Institute of Hygiene, Professor Vittorio Del Vecchio. He then resigned from F.S. and devoted himself exclusively to the University, where he took on several new scientific interests having, among other things, held frequent lectures in Social Medicine, in 1967, in Hygiene in 1968, and in Occupational Medicine in 1970.

In 1971/72 he was appointed professor of Hygiene and subsequently of Occupational Medicine at the Faculty of Sciences at the University of L’Aquila, which he held until 1978, when he was appointed at the Faculty of Medicine and Surgery of “La Sapienza” University of Rome, at the chairs of Hygiene and of Occupational Medicine. In the ‘80s he participated successfully in the competition for associate professor and in this capacity he remained until his retirement in 1990 (Figure 1). He was appointed an Honorary Member of the Italian Society of Hygiene and continued to work as Medical Hospital Director.

From the early days of his transfer to Rome in 1956 with the State Railways, he attended the Institute of Hygiene, “La Sapienza” University of Rome, then directed by Professor Vittorio Puntoni, who mentored and supported him not only for their common cultural interests, but also for Hygiene consulting reports and general collaborations that the Institute had with the State Railways Health Service. This interaction was of great benefit to both parties but especially for the access by the University to the State Railways laboratories and research programmes that could be performed there.

An important aspect consisted of a collaboration between the Institute of Hygiene and the University Service of Occupational Medicine, which Professor Del Vecchio maintained, as he had already established an efficient and super-equipped laboratory of Environmental Health for investigation of air pollution and of water supply at the State Railways. The University had already approved the plan of raising the north wing of the old Institute, and also set up a laboratory for the control of radioactivity. Professor Del Vecchio appointed professor Granati as associate professor in the Institute with the commitment to work alongside with Professor Melino as a direct collaborator,
given his specific skills in Industrial Hygiene. Sadly, however, Professor Del Vecchio succumbed to a sudden serious illness from which he died prematurely, as we already wrote, and this resulted both in the abandonment of all these projects, and, more importantly, since the chair of Hygiene was now empty, the future of the Institute was also seriously jeopardized.

Nevertheless, Professor Melino was able to produce more than 400 scientific publications, including several of them published in international journals (Figure 2). Moreover, we also need to add to this list around 30 very profound volumes and textbooks on Hygiene, Occupational Health and Industrial Hygiene, as well as textbooks for students and medical specialists, including: “Guidelines of Occupational Hygiene” (1) with its 5 editions, “The Hospital Hygiene and Hospital security” (2), now in its third edition, and “The Professional Cancers” (3). Finally, we must add a fourth book “The Art of becoming old” (4), which was followed by “The style of life in the art of becoming old” (5), as well as numerous other scientific books (6-21).

Carmine was indeed a keen ‘child of the Renaissance’, immersed in literature and the humanities, and displaying extraordinary literary talents. Working hard and keeping his moral and religious points of reference were, indeed, his rules of life.

Although his scientific production encompasses all aspects of Hygiene, a more detailed examination of his output allows us to identify several major areas.

**Influenza vaccination and the diseases of the railroad**

One early and major contribution was the dissemination of anti-influenza vaccination within the State Railways from 1956, a development of prophylactic significance not just for the Company, but for the Nation as a whole. In this regard he collected several serological samples for antibody assay in various vaccination periods and at different post-vaccination intervals. This experimental investigation, the first of its kind in Italy and indeed in Europe for its large scale, was endorsed by the Ministry of Health and discussed by the National Health Council with regard to the extension of mass vaccination among the whole civilian population. There were literally clinical and immunological analyses of several tens of thousands of people vaccinated throughout the national rail network (22-29) and, in 1975, he was able to summarize the results of twenty years of experience of influenza vaccination with very large numbers of subjects (24). This work can truly be considered pioneering and innovative, having helped to create the basis for today’s routine mass influenza vaccination.
In parallel with the influenza vaccination programme, he studied acute respiratory diseases, chronic and recurrent viral pathologies, so common in railway workers, and which were a major cause of high levels of absenteeism from work as a “small airway disease”.

Always linked to work in the Health Service of the State Railways, with an ever greater collaboration with the Institute of Hygiene “Giuseppe Sanarelli”, there were studies on tetanus vaccination (30-31) and which were combined with evaluation and monitoring of health workers (32-35). Specifically in relation to diseases associated with the rail industry, Professor Melino conducted numerous studies ranging from physical conditions, such as vibrations in locomotives (36), the local microclimate (37-38) in carriage compartments (39) and also the study of environmental pollution in areas near the railway lines (40). Of particular interest, and increasingly topical, is the study on pollution by asbestos and the related diseases, asbestosis and mesothelioma (41-42).

### Occupational Hygiene

The third line of research, the largest of all and perhaps the most interesting, concerns hygiene in the workplace, not only in the rail industry, but also in other public and private companies. This is a real trove both of data and also of practical solutions for hygiene related problems. This work helped establish the two treaties drawn up for years and published by the Società Editrice Universo, the first “Guidelines of Occupational Hygiene” (1), and the second “The Hospital: Health, Safety and Prevention” (2). These represent the first organic texts for consultation and study by generations of doctors and industrial-occupational hygienists.

Finally, Professor Melino made important contributions to the control of company canteens, from both the nutritional and dietary aspects, and from the hygienic and organizational side, including food storage and the possibility of contamination (46-53).

### Alcoholism and drugs

The second broad line of research concerned alcohol and drugs (43-45), both for the health of railway workers and for the safety on the railways, that were carried out in the State Railways laboratory. They were the first tests in Italy with portable breathalyzers, in collaboration with a renowned Swiss company; experiments that formed the basis for new regulations on the alcohol limit (then 0.8 per thousand), and determining alcohol levels from the driver’s exhaled air. Together with this vast and important work was the very large number of cases and analysis of diseases related to alcoholism on railway staff in northern Italy (Verona, Trento, Venice, etc) (7).

### The water supply and the environment

A fourth line of research includes several topics such as the water supply (a beautiful, successful, comprehensive monograph was published in the ‘70s) (6), disinfection and disinfestation (a study manual for students in training courses in the State Railways is still in widespread use today by pest control staff), several works of statistics, especially on road traffic accidents, and finally on the prevention of diabetes in railway staff (a survey carried out in all State Railways departments in collaboration with the Order of Malta) (47), on other diseases (including those from smoking and alcohol) and drugs in schools. In parallel are several environmental pollution studies (54-55).
The Art of becoming old

Finally, as he became older, Professor Melino developed the fifth line of study on aging, longevity, especially in relation to ecosystems. The last volume of “Capri as an ecosystem, health and longevity” (21) was published in 2007. Success also attended his book “The Art of becoming old” (4), which was followed by a more practical volume “The style of life in the art of becoming old” (5), a guide for old age for everyone, including his own.

I remember with great affection the last article we wrote together (56), the thrill of an encounter and friendship between two talented minds, but which lived in two different centuries. Working in Capri, Carmine had discovered the work and metaphorically met Vincenzo Cuomo, medical officer of the island, who lived in the late nineteenth century. We went together to his home in Anacapri, and it was difficult for him to climb up in the turret on the roof. I will never forget the light in his eyes when he saw the instruments with which Cuomo had meticulously recorded four times a day for forty years all data of the Island’s meteorology. We read together the handwritten letters and scientific articles on the microclimate of Cuomo, its relationship with health, and with chronic and infectious diseases of the island, and the development of a collaboration with the Royal National Weather Service in 1860-1900. We saw the faded photographs of Cuomo with his friends, Krupp and Cerio. There was a great affinity between two similar minds, lived at the end of the 1800s and the beginning of 2000. I also spoke in his place (Carmine could not speak anymore then) at the conference that my father wanted to do in Capri at the Quisisana theatre with the Mayor, the island’s authorities and the beloved priest Msgr. Don Vincenzo De Gregori, former director of the Conservatorio San Pietro a Majella, now head of the Pontifical Institute of Sacred Music at the Vatican. The art of becoming old involves continuous stimulation, excitement, curiosity and culture, as well as taking care of diet, body and environment.

The fantastic and the imaginary

The sixth and final strand of interest, but nothing to do with scientific research, is the poetry in which an old man feels pulsing inside himself as a new source of energy which had remained dormant for years. And that old age manifests itself as freedom of thought, interests and occupations. And often this is a kind of salvation, the best medicine for a better old age. Professor Melino published, over more than twenty years, many collections of poetic thoughts (and if it is then poetry, who knows!). These ideas have distracted him from the monotony and loneliness (the old man unfortunately is alone, always alone with himself in mulling over the distant past and wondering about the short uncertain future, and God help us were it not for his poetry to distract him!). God sees and provides! A “digression”, an “art of idleness,” as Hermann Hesse indicates, an artist’s spirit (the noble part of each of us, reserved, silent in the subconscious which then suddenly explodes).

Among the many books of poetry (58-77), many are dedicated to describing aspects of Capri, its crafts, life and culture. He shows a deep love of the history and art of the island. The book “New Year in Capri” (68) won the Emily Dickinson literature prize in 2003. With great pleasure I helped him, and even illustrated his books; beautiful moments of collaboration and synergy between father and son. He was awarded Honorary Citizenship of Capri on October 1, 2004.

The Museum of Hygiene

Finally, there is the small Museum of Hygiene, to which he has devoted a lot of
energy, time and money, and has edited a beautiful catalogue (57), as an artistic and symbolic offering to our great scientists of previous generations who created the “Institute” and progressively strengthened it. In order to allow these pioneers to speak to the present and indeed to the future, the Institute dedicated a plaque inaugurating the museum in the name of “Museo Carmine Melino” in the presence of the Rector, prof. L. Frati, the President of ‘National Institute of Health’, prof. E. Garaci, the Director of the Department of Public Health Sciences “G. Sanarelli “, prof. M. Del Piano, on 19 January 2009 (Figure 3).

Carmine was ‘one of a kind’ in the deepest and broadest sense of these words, very close to his family. Hard to imagine that this man of principle and hard-work—the ultimate in fine taste—carved his way in a difficult century with an incredible spirit, friendship and humanity. He will always live in our hearts. We will miss him sorely.

In love since his university times in Naples, kidnapped by her beauty, intelligence and dynamism, Carmine spent fifty years of family affection with my mother, Dr. Maria Frascino. Professor Melino’s happy marriage, celebrated on June 16, 1952 in Naples, produced two children, Gabriella and Gerry, two grandchildren Claudia-Sophie and Ludovico, of whom he has always been very proud, and very recently also a great grandchild, Luca Emanuele. He passed away on November 16, 2013 between the unanimous sadness (see “La Repubblica” online of November 20, 2013) and the affection of his loved ones. Now, he rests forever in his beloved Capri.

**Riassunto**

Lungo tutti i suoi 94 anni, Carmine Melino ha sperimentato diversi percorsi professionali, e l’esempio della sua vita è stato di costante stimolo per studenti, colleghi, amici e familiari.
Sono illustrati in questa Nota sia i risultati scientifici che, dopo gli anni della formazione, ha conseguito nel campo dell'Igiene e della Medicina del Lavoro, sia i suoi ampi interesse letterari. Carmine fu un ispiratore della sua generazione, non solo per i traguardi scientifici e letterari raggiunti, ma anche per la sua personalità affabile, per la sua vita impegnata allo spasimo e per il suo travolgente entusiasmo. Uno spirito poliedrico e illuminante fluiva continuamente verso i suoi amici e colleghi, realizzando un ambiente dove l’eccellenza intellettuale era perseguita avidamente ed altamente apprezzata.

References


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