

## Public Health History Corner

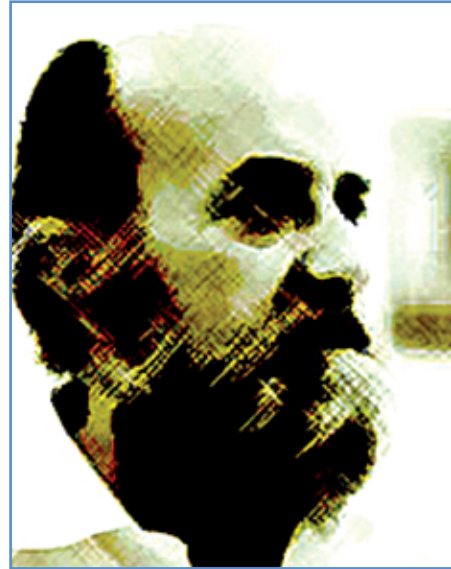
### Giulio Alfredo Maccacaro

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**DOI:** 10.2427/8675



**G**iulio Alfredo Maccacaro was a biometrist, a scientist using statistical methods to calculate the laws and phenomena of the biological system. Well known in the international arena, he taught in Cambridge. He was a forward-looking spirit and didn't put up with academic dogma, probably the reason why he's undeservedly a perfect stranger in the modern scientific landscape. His fields of study were not only statistics but also genetic, taxonomic and pharmacological biometry. Probably his greatness and his lack of fame have the same cause: a noble sacrifice.

Born in Codogno, near Pavia, on January 1924 he graduated in medicine and surgery at Parma University in 1948. One year later Maccacaro went to Cambridge where he collaborated with Luigi Luca Cavalli Sforza at the Genetics Department directed by Ronald Fisher, a geneticist and evolution expert and father of modern biometrics. Maccacaro started studying experimental genetics of microorganism and theoretical statistics applied to biology. Together with Cavalli Sforza he wrote his first article, published in *Nature*, about the genetics of bacterial resistance to chloramphenicol. This study was about a phenomenon which in its slow development seemed to be either the result of a physiological adaptation or a multigenic arrangement. The study proved valid the second hypothesis.

Maccacaro remained in Cambridge for two years achieving good results. He worked in many fields among which were research and medical application of electronic computers and problem solving in epidemiology by using mathematical and statistical methods. His interest was also drawn by the possibilities of the application of basic research methods in clinical research: he believed that the use of a rigorous experimental design would allow appropriate analysis and statistical interpretation of the results in the field of clinical trials too. Maccacaro might have stayed in the laboratory to become a director one day; he might have stayed abroad (in England or in the USA) to devote himself to high level research in the best conditions, as other Italian researchers as Luigi Cavalli

Sforza and Renato Dulbecco did. Instead he made a brave decision: go back to Italy. Through his work in Cambridge he had acquired a better preparation than his Italian professors and colleagues, but his return was full of uncertainties. His character was disinclined to compromise and mediation especially in matters of scientific rigour and met many obstacles in the Italian academic context. That was the reason why he wandered from one seat to the other (Milan, Modena, Sassari) before returning to Milan as Director of the Institute of biometrics and medical statistics of the local University. This was his point of no return and he decided to abandon the aseptic world of the biology laboratory in favour of clinical and medical practice (1).

He had come back to Italy for a noble reason: social commitment. He had already showed it during his time in England: at that time he wrote some articles on *Critica Sociale*, a fortnightly magazine founded by Filippo Turati, displaying his social interest and acute critical capacity. According to Maccacaro Ethics is a cornerstone of scientific research, therefore the latter must focus on human needs. He believed that science is influenced by social structure but in order to make his ideas come true he needed new methods.

Those were years full of excitement both in medical fields where new technologies were entering daily medical practice and outside universities where Marxism was bringing to light a desire for change long felt. In this climate Maccacaro proved himself a wise man, not prone to hasty judgement.

Maccacaro saw the future of Preventive Medicine as a combination of medical science and technology: a push to improve health, with emphasis on disease prevention rather than its care. This new method, born in England after the second world war, struggled to take hold in Italy. Maccacaro used to say: "clinical medicine is in crisis, its most impressive achievements are also the least relevant to the community, their clamor fills the silences of a covert impotence" (2).

Medicine could overcome degenerative diseases only paying attention to social-environmental aspects. However for this to happen a change in the attitude of the physician was required. The physician must dedicate him/herself to diagnosis and treatment, but also need to get to know the personal history of the patient: "true preventive medicine is a medicine that seeks the pathogenic causes of illnesses and eliminates them instead of focusing on the effects of illnesses and pretend that their early recognition is its main goal" (3). Maccacaro pointed his finger at the capitalist organization of society of his time and at the collusion between Medicine and Capital. In a famous letter to the President of the Milan Medical Association he wrote: "to talk about capitalistic medicine is not only to give an historical or social indication, it's to propose the result of a political analysis according to which the capitalist command tends to manage all parties and relationships of the medical system, because of the need for affirmation and control of its contradictions" (4). The political commitment of Maccacaro had began during second world war with the Italian Resistance movement, and continued when he joined the student movement and the workers' struggles in the 60s. His was an attitude that grew out of a nature hostile to injustice but ready to challenge the knowledge without betraying or selling out his beliefs.

Medicine had to analyse contemporary historical processes because "the causes of diseases are in the way of producing, in the way of managing social life that Capital has imposed and enforces. If capital is pathogenic, how can medicine fight for man against Capital, if medicine itself has been an instrument for capitalist command over man?" (3). This was Maccacaro revolutionary insight: the belief that a change in medicine was possible only after a social change, only freeing medicine from capitalistic exploitation. He promoted the Marxist idea according to which there is no distinction between nature and history, between science and ideology. Thus science is only a particular form of human activity,

linked to the others, without which you cannot understand the purpose of scientific research. Science is a tool in the hands of the bourgeoisie in order to ensure its domination of the working class. The latter will recover its role only after having repossessed science. Maccacaro promoted the idea of versatility in scientific development, and did not consider bourgeois science the only kind of science available. He wanted to create a science different from the one taught by universities, a science focused on man. Moreover, he denounced medicine as a tool in the hands of Capitalism, in order to maintain a healthy workforce. According to Maccacaro all areas of medicine showed to consider human beings as inanimate objects, their only goal being to maintain the efficiency of the employee, not to protect his health (3). Capital exploited Medicine to control Labour, and physicians' attention focused on acute illnesses neglecting degenerative diseases. Similarly the universities gave students only abstract notions and did not prepare them to put concepts into practice. With such an approach to life and clinical practice Giulio Maccacaro was bound to fight against this setting. He agreed with the students on the need for new curricula; he believed that a doctor should start by clinical experience rather than theory. Unfortunately the academic world did not share his ideas. Nonetheless he gave impetus for a successful renewal in the clinical field and we still perceive his legacy. Not only a good scientist but also an acute observer and tireless promoter of change, Maccacaro biggest legacy to posterity were the editorials he wrote, a true synthesis of his thought. He directed *Salute e Società* (Health and Society) by Etas/Kompass, *Medicina e Potere* (Medicine and Power) by Feltrinelli, and *Epidemiologia e prevenzione* (Epidemiology and Prevention) the journal of the Italian Association of Epidemiology. Together with Giovanni Cesareo he founded the monthly scientific publication *Sapere* (Knowledge). Maccacaro made known in Italy the ideas of Archiblad Cochrane, Richard Doll, Thomas McKeown and Ivan Illich, all scientists involved in the critique of capitalist society. He also cooperated with Franco Basaglia, Agostino Pirella and Giovanni Jervis to define the research on mental illness.

In those years he contributed to the workers' rights movement, and engaged himself to promote the respect of ethics in medical research and the defense of health in factories. He collaborated with Lorenzo Tomatis in a "self-managed" research workforce about carcinogens and was the founder of *Medicina Democratica*. He wanted to create a collaboration between researchers and scientists, to provide civil society with a revolutionary analysis capacity. All of Maccacaro writings testify his social commitment. He passionately criticized medicine, clinical research and universities: as a result, he supported the demands of students and workers to become historical subjects of their future. To make the patient the informed and consensual center of clinical research, to make the worker the center of research and change in workplaces and to give people a share in planning and supervising health Services were his goals. Maccacaro's project refused charity and providence, but demanded from the State recognition of rights and respect for fairness. Maccacaro commitment concerned many areas: clinical trials, university education, social care organization, promotion of cooperation. Maccacaro did not propose himself as a politician or a know-it-all and he never refused transparency and scientific rigor. As a scientist he refused to defend the interests of Capitalism, a force that incorporates the result of ancient human activities. He chose to defend man.

His writings marked the beginning of the renewal of medicine teaching, health organization and scientific methodology. In his ambitious program he gathered together those who shared his belief in social participation and was always ready to argue with those who wanted to subjugate the interest of patients, children, students and workers to the benefit of production and higher social classes. Maccacaro left his signature on public health history,

even if he did not obtain fame. He died prematurely on January 16, 1977. He collapsed while giving a lecture saying "I'm sorry, it's just a youthful heart attack." He was only 53 years old (1). His plan was only outlined, but no one can dispute its relevance and effectiveness in a country that is in a deplorable state of perpetual transition. Maccacaro bequeathed writings, initiatives and ideas are still alive but many young researchers do not know his name. Unfair as this might seem, it must not be forgotten that his work has contributed to shape a powerful movement for change.

*ACKNOWLEDGEMENTS: we thank Maria Luisa Clementi, author of "L'impegno di Giulio A. Maccacaro per una nuova medicina" (Medicina Democratica), for inspiring this article.*

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