



Bernardo Maria Colombo



Olginate (Lecco), Italy, 24 Feb. 1919 - Padua, Italy, 26 Apr. 2012

Nomination 18 September 1992

Field Demography

Title Professor

Commemoration – Bernardo Maria Colombo died earlier this year on 26 April 2012. Born in Olginate (Italy) on 24 February 1919, he had been a member of this Pontifical Academy for 20 years, since 18 September 1992. The scope of his scientific research is evident by his long list of publications visible in his Curriculum vitae in the Academy's Yearbook and on its website. His career began with an Economics Degree from the Catholic University of Milan, followed by an assistant position to the Chair of Statistics at the University of Venice. He then became Visiting Fellow at Princeton, Statistics Professor at the University of Venice and Chair of Demography at the University of Padua where he finished as Professor Emeritus. The mere mention of these disciplines indicates the breadth of interests that characterized Bernardo Colombo's research, from economics to statistics and demographics. It was in this latter area that he gave his greatest contribution as a scholar and teacher. Indeed, the Faculty of Statistical, Demographical and Actuarial Sciences at the University of Padua, the first faculty of its kind in Italy, was established thanks to him.

But despite reaching the highest levels internationally, made evident by his numerous awards from Italy and abroad, scientific research was only one aspect of his job and merits. He was also an expert consultant to major public institutions, at both the national and international level, in the field of population policy. Convinced that demographic studies, while having to meet the most rigorous scientific criteria, are not ends in themselves, but should contribute to social utility, highlighting issues of public interest and suggesting solutions of a political nature, Bernardo Colombo never hesitated to strengthen his commitment towards institutional organizations devoted to the implementation of social policies. For this reason the volume published by the University of Padua on his 90th birthday, titled *Bernardo Colombo. Una vita per la scienza (A Life in Science)* (Padua, 2009), while including a valuable interview with him by two of his students, does not do justice to his work, because Colombo's life was not solely devoted to science, or rather it was devoted to science in view of the services that it can render to life.

The first important evidence of his social commitment was his participation in the School Survey Commission, established in 1962 by the Italian government, which produced the School Development Plan of 1962. His reputation as an expert in statistics and demography first and foremost at the national level, led Bernardo Colombo to be part of several ISTAT (National Statistics Institute) committees on various subjects such as the Italian population censuses, the revision of the Statistics Yearbook, the respect for the confidentiality of statistics and the sampling distribution of data. Thanks to his reputation, which soon became international, he was included in Committees belonging to the UNESCO, UIESP (International Union for the Scientific Study of Population), and the United Nations, as well as in associations such as the International Statistical Institute and the International Association for Official Statistics.

However, the most remarkable testimony of his human commitment was certainly his involvement as an "expert" in the works of the Second Vatican Council, which later led him to join the Pontifical Commission for the Study of Population, Family and Births. In this capacity, Bernardo Colombo contributed to the drafting of paragraphs 47-52 and 87 of *Gaudium et Spes*, devoted to "Fostering the Nobility of Marriage and the Family" and "International cooperation in the field of population growth". He then published an extremely interesting account of this experience, titled *Discussioni sulla regolazione della sterilità* (Discussions on the regulation of infertility), in the journal *Teologia* of the Theological Faculty of Northern Italy (2003/1).

Having thus achieved an international reputation, both in the relations between States and in the life of the Catholic Church, Colombo continued and expanded his commitment to social institutions as an expert on population issues. Further evidence of this was the report he wrote for the closing session of the plenary of the International Population Conference, organized by the International Union for the Scientific Study of Population in Mexico City in August 1977, on the theme "Human rights, ideology and population policies" (the other rapporteur was Simone Veil, the French Minister at the time). The topic demonstrates the breadth and diversity of Colombo's interests, ranging from the concept of ideology to the meaning of human rights, the need for population policies on international migration, internal migration, mortality, marriage, fertility and related problems. He also stressed the importance of demography for the development of these policies in his inaugural speech for the 1977-1978 academic year of the University of Padua.

Another significant milestone in Bernardo Colombo's social commitment was his coordination of the 1992 study week organized by the Pontifical Academy of Sciences on *Resources and Population*. The work ended with a Report prepared by Colombo himself in collaboration with Georges M.M. Cottier, theologian of the Pontifical Household, Ugo Farinelli, scientific adviser of ENEA, Antonio Golini, demography professor, and Alberto Quadrio Curzio, a professor of political economy. The proceedings of that study week were published in 1996 by Clarendon Press, Oxford under the title *Resources and Population. Natural, Institutional, and Demographic Dimensions of Development*, edited by Colombo, P. Demeny and M.E. Perutz, with an Address by His Holiness, Pope John Paul II. The Final Report emphasizes the urgency of the problems created by the enormous increase in world population and provides information and guidance to political and religious authorities to solve these problems in compliance with human dignity and mutual solidarity.

Throughout the course of his life Bernardo Colombo took part in both Italian and Vatican delegations at international conferences, such as UNESCO's International Conference on Education (Paris 1968), the Council of Europe's European Demographic Conference (Strasbourg 1968), the World Population Conference (Bucharest 1974), the World Conference on Population and Development (Cairo 1994), and the World Commission on the Ethics of Scientific Knowledge and Technology (Oslo 1999). The President of the Italian Republic appointed him as member and later chairman of the Commission for the Protection of Statistical Information of the Presidency of the Council of Ministers (1990-1996).

Bernardo Colombo never included any of these roles in his Curriculum Vitae for our Yearbook, because his modest, shy, sober nature, far from any form of exhibitionism, prevented him from doing so. His nature dictated his lifestyle, as witnessed by those who knew him personally, in the outside world and even in our Academy. He would generously offer scientific guidance to all who came to him, first of all his students, for whom he created a school of demographic sciences in Padua that was appreciated everywhere. At the same time, in terms of moral guidance he was reserved and respectful of the autonomy of others, and largely limited himself to setting a good example, as one of his pupils said in a speech during the funeral ceremony that was held at the university in his honour. As a scientist and as a man he also demanded scientific rigour in his own research and in that of others, and was critical and at times scathing in the face of undeserved merit. He was also ironic about himself and with those who deserved it, but also extraordinarily willing and kind when it came to listening to what others had to say, trying to understand their reasons and helping them find a common solution to their various problems. Last but not least, he was sincere, quiet and open in testifying to his Christian faith every day. His very long and extraordinarily intense career is an honour for his university, for his country's culture and also for the international prestige of this Academy.

Enrico Berti

Most important awards, prizes and academies

Awards: Gold medal for merit in education, culture and arts. *Academies:* Società Italiana di Statistica; International Union for the Scientific Study of Population; International Statistical Institute; International Association for Official Statistics; Socio effettivo, Accademia Patavina di Scienze, Lettere ed Arti; Socio effettivo, Istituto Veneto di Scienze, Lettere ed Arti; Pontifical Academy of Sciences.

Summary of scientific research

Starting from a basic preparation in statistics, Prof. Colombo, during a long career, has pursued several lines of research. After early work on the theory of hypothesis testing and original contributions to the techniques of sequential analysis, he became interested in demographic problems. In this field he has been involved both in the methodology of measurements of fertility and nuptiality, and in factual analysis, with particular reference to the startling phenomenon of the recovery of the birth rate in several countries during the last world war and to the incidence of illegal abortion in Italy. This kind of research work has gone hand in hand with his continuous attention to fundamental aspects of demographic policies in order to find reasonable lines of intervention which respect basic human rights and lead to acceptable solutions through a balance between free individual decisions and collective needs and targets. Strongly engaged in consulting work for civil authorities,

his main contribution has been suggestions about the organization of the school system and the methodology of production of good official statistics. He has also carried out biometrical research, starting with a thorough study on the primary and secondary sex ratio in man. His most recent and engaging work, with responsibility for the coordination of large undertakings at the international and national levels, centers on a subject - the biometry of the menstrual cycle and especially of fecundability - which is at the heart of the interaction of the biological and behavioural components of reproduction, that is to say the history of individuals as well as of human populations.

Main publications

Colombo, B., *La recente inversione nella tendenza della natalità*, CEDAM, Padova (1951); Colombo, B., Sulla misura della fertilità matrimoniale e sulla determinazione della sua dinamica, *Riv. Intern. di Scienze Soc.*, 61, pp. 40-58 (1953); Colombo, B., Intorno all'estrapolazione della dinamica della nuzialità, *Statistica*, 14, pp. 747-75 (1954); Colombo, B., On the sex ratio in man, *Cold Spring Harbor Symposia on Quantitative Biology*, 22, pp. 193-202 (1957); Colombo, B., Appunti di metodologia sequenziale, *Mem. Acc. Patav. di Sc., Lett. ed Arti*, 71, pp. 113-40 (1959); Colombo, B., *Prospettive per la scuola dopo l'obbligo*, Il Mulino, Bologna (1971); Colombo, B., *La diffusione degli aborti illegali in Italia*, Vita e Pensiero, Milano (1977); Colombo, B., Droits de l'homme, idéologies et politiques démographiques, *Actes, Congrès International de la Population*, Mexico 1977, Union Intern. pour l'Et. Scient. de la Pop., Liège, pp. 541-90 (1978); Colombo, B., Le statistiche demografiche, ISTAT, *Annali di Stat.*, Serie IX, 1, pp. 19-53 (1981); Colombo, B., Riflessioni sullo sfruttamento intensivo dei risultati censuari, *Statistica*, 42, 4, pp. 455-76 (1982); Colombo, B., La qualità dei dati statistici, *Atti del convegno di Trieste*, Vol. I, Soc. Ital. di Stat., pp. 25-65 (1983); Colombo, B., Politiche demografiche e politiche sociali: possibilità e opportunità d'intervento, *Secondo rapporto sulla situazione demografica italiana*, Ist. di Ric. sulla Popol., CNR, Roma, pp. 327-47 (1988); Colombo, B., Biometrical research on some parameters of the menstrual cycle, *Intern. Jl. of Gynec. and Obst.*, Suppl. 1, pp. 13-18 (1989); Colombo, B., *Resources and Population: Natural, Institutional and Demographic Dimensions of Development* (a cura di Bernardo Colombo, Paul Demeny e Max Perutz), Clarendon Press, Oxford (1996); Colombo, B. and Scarpa, B., Calendar Methods of Fertility Regulation: a rule of thumb, *Statistica*, 56, 1, pp. 3-14 (1996); Colombo, B., Evaluation of fertility predictors and comparison of different rules, *Genus*, 54, 3-4, pp. 153-67 (1998); Colombo, B. and Masarotto, G., *Daily Fecundability: First Results from a New Data Base*, www.demographic-research.org/Volumes/Vol3/5/ (2000); Dunson, D.B., Baird, D.D. and Colombo, B., Changes with age in the level and duration of fertility in the menstrual cycle, *Human Reproduction*, 17, 5, pp. 1399-403 (2002); Dunson, D.B. and Colombo, B., Bayesian Modelling of Markers of Day-Specific Fertility, *Jl. of the Amer. Stat. Ass.*, 98, 461, pp. 28-37 (2003); Colombo, B., Mion, A., Passarin, K. and Scarpa, B., Cervical mucus symptom and daily fecundability: first results from a new database, *Stat. Meth. in Medical Research*, 15, 2, pp. 161-80 (2006).