

Corrado GINI

b. 23 May 1884 - d. 13 March 1965

Summary. From a strictly statistical point of view, Gini's contributions pertain mainly to mean values and variability and association between statistical variates, with original contributions also to economics, sociology, demography and biology. The historical context of his life and his personality helped make him the doyen of Italian statistics.

Corrado Gini was born in Motta di Livenza (in the Province of Treviso in the North East of Italy). He was the son of rich landowners. He died in Rome in 1965.

In 1905 he graduated in law from the University of Bologna. His degree thesis *Il sesso dal punto di vista statistico* (Gender from a Statistical Point of View), which was published in 1908, soon showed that his interests were not of a juridical nature even if "his study of the law, however, gave him a taste and a capacity for subtle arguments tending to submit the facts to logic and so to organise and dominate them" [3, p.3]. During university he attended additionally some mathematics and biology courses.

His university career advanced rapidly. In fact in 1909 he was already temporary professor of Statistics at the University of Cagliari and in 1910, at only 26, he acceded to the Chair of Statistics at the same University. In 1913 he moved to the University of Padua and from 1927 he held the Chair of Statistics at the University of Rome.

Between 1926 and 1932 he was President of the Central Institute of Statistics (ISTAT) and during this period he organised and co-ordinated the national statistical services, bringing them to a good and efficient technical level despite various difficulties. His work concerning the centralisation of statistical information was met with obstacles placed by bureaucrats holding high positions in the various ministries and passive resistance from the majority of public bodies. In fact the battle was so hard that Mussolini, who at that time was Prime Minister, had to intervene to settle the controversy. That ruined the good relationship which had initially been established between Mussolini and Gini. Furthermore, the ever more frequent interference of fascism were a clear signal that "the times were changing and Gini's independent and impatient spirit would brook no interference with his work" [3, p.7]. Therefore in 1932, he resigned.

With regard to the period in which Gini was President of ISTAT, it should

be noted that although he respected political power he never submitted to it. On the contrary, it could be said that he used it to improve the organisation and reliability of the official statistical service (cf. [8]). However, being President of ISTAT did not distract Gini from his activity of scientific research. In fact during that period “he stayed there until 8 p.m. and after he went to the University until midnight and all of the staff had to stay there with him” [7, pp.13-14]. His collaborators remember that Gini’s working day began very early; he used to phone his assistants from home at 6.30 a.m.

He had a considerable interest in editorial activity and in 1920 he founded *Metron* an international journal of statistics and in 1934 *Genus* as journal of the Italian Committee for the Study of Population Problems.

In 1936 he founded the Faculty of Statistical, Demographic and Actuarial Sciences at the University of Rome of which he was Dean until 1954. In 1955 he was nominated Professor Emeritus.

During his long academic life he was a member of numerous national and international scientific societies. In particular he was Honorary Fellow of the Royal Statistical Society (1920), Vice President of the International Sociological Institute (1933), President of the Italian Genetics and Eugenics Society (1934), President of the International Federation of Eugenics Societies in Latin-Language Countries (1935), President of the Italian Sociological Society (1937), elected to the International Statistical Institute in 1923 and Honorary Member (1939), President of the Italian Statistical Society (1941), and national member of the Accademia dei Lincei (1962).

Gini was married and had two daughters but his frenetic scientific and academic activity (he had over 800 publications (cf. [3]) including articles, conference papers, books) probably did not allow him to dedicate much time to his family.

From a scientific point of view Gini had many interests apart from statistics, for example economics, sociology, demography and biology which he considered to be closely related subjects. In particular, he conceived the population as the body of society towards which the contributions of all other disciplines belonging to the so-called human sciences should converge. This way of thinking allowed him to lay the theoretical foundations of positive sociology which departs from demography and considers society as an organism with a number of basic properties in common with biological organisms.

He was awarded *honoris causa* degrees from various Universities in Italy and abroad (in Economics at the Catholic University of Milan, 1932, in sociology at the University of Geneva, 1934, in sciences at the Harvard University,

1936, and in social sciences at the University of Cordoba in Argentina, 1963). This confirms his wide variety of scientific interest and the originality of his research. From a strictly statistical point of view Gini's main contributions concern three large areas of study, that is mean values, variability and association between statistical variates. It should be noted that although he became famous for his concentration ratio (cf. [6]) he also made other important scientific contributions which unfortunately did not always receive the deserved recognition. Among these for example is his "identity" in the field of index numbers (cf. [2]). However, according to some, "his most remarkable work was the criticism he made in *The Dangers of Statistics* (Gini, 1939) of R. A. Fisher's (q.v.) fiducial methods and of the Neyman-Pearson framework for testing hypotheses. This made him unpopular but it contributed considerably to acceptance of Bayesian reasoning" (cf. [7], p.13).

With such criticism Gini "with penetrating logic" showed, according to Castellano [3, p.30], "how important and unavoidable are prior probabilities in any judgement on the measures deriving from a sample; he restored to induction its essential character of a conclusion based upon an experience (the facts) and an independent and preliminary *a priori* assumption by which the facts can be interpreted". From the beginning of his academic career the Italian scholar paid particular attention to the concept of probability, on which de Finetti [4, p.85] points out how "on certain specific and significant points complete agreement is reached between the different attitudes (even if promoting to different points of view) of Gini and subjectivists".

From Gini's work we can see that he never formal aspects before substance. The majority of his methodological work arises from the need to resolve practical problems. In particular, "he was not at all bothered by complex mathematical formalism and high-sounding names of some foreign scholars. He often succeeded in demolishing a very elaborate construction by just making one remark. . . . Apart from rare exceptions he considered mathematicians as extravagant people who had to be watched closely when dealing with a concrete problem" (cf. [7], p.14). On many occasions he showed that he was not prepared to sacrifice substance for exaggerated mathematical formalism. In the field of economics for example his paper in 1956 *Delusioni dell'econometria (Delusions in Econometrics)* created a great fuss amongst econometricians who tended to exaggerate formal aspects "because of the well-known difficulties of getting down to empirical brass tacks in economics", and for this reason "many a student has found it more comfortable to continue the formalism of mathematics or, as this is often put, to substitute

mathematical exercises for economics” (cf. [5], p.266).

As far as human relationships were concerned, for Gini they were reduced to a minimum and compliments were almost non-existent. In particular “his assistants were considered like those of Karl Pearson (q.v.) who R. A. Fisher . . . described “as an army of industrious robots responsive to a magic wand””. For university students, Gini was practically unapproachable and on this point Benedetti remembers one student, who asked to do his thesis with Gini, “had to forgo the idea because he was completely discouraged by all the preparatory studies that were asked of him” (cf. [7], pp.9-10).

From this description it would seem that Gini was a man who lived for study and work. It would seem that he was a cold person, almost off-hand with others and completely aware of his considerable intellectual capabilities. As often happens, appearances do not always coincide with reality. Benedetti, for example who was close to him in the last years of his life realised that “his strict discipline as organiser and head of a team, his inflexibility which at times appeared inhuman as far as relationships with others were concerned, was only a way, the shortest way, to reach important results which often only he could see. Once this need had been satisfied, he showed his true face in human contact with everybody: young and old, scholars at all stages of their careers forcing himself to adapt to various intellectual level and to the various needs of the day which were ever different to his own, particularly those of young scholars who “instead of buying a calculator” as he did when he was young, “bought a car” [1, p.8].

References

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