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Reasons for a translation

In the years 1985-1915 some Italian scholars published many papers in which fundamental ideas on income inequality were proposed. In order to get a meaningful view of the evolution of these studies it is necessary to take into account, besides the well known contributions of V. Pareto and C. Gini, also those of G. Mortara and of G. Pietra. Unfortunately, it is difficult to get their publications. G. Pietra is the founder of the studies on the discordance between the values assumed by pairs of indices of variability and of concentration. Moreover, G. Pietra has formalized the Lorenz curve in the case of continuous variates. In detail, one year after the publication of the famous paper of Gini (1914), Pietra (1915) published the fundamental paper *Delle relazioni tra gli indici di variabilità* where:

- a) the Lorenz Curve is formalized for the continuous case;
- b) it is shown that the maximum of $(p - L(p))$, where $L(p)$ is the ordinate of the Lorenz curve, is attained for p evaluated in correspondence of the arithmetic mean M_1 and that this maximum is equal to $S_{M_1}/2M_1$ where S_{M_1} is the mean deviation from the arithmetic mean;
- c) it is shown that $(0.5 - L(0.5)) = S_{Me}/2M_1$, where S_{Me} is the mean deviation from the median Me ;
- d) the relations between indices of variability are pointed out.

In order to make this fundamental paper of G. Pietra available, its English translation is published on this number of *Statistica&Applicazioni*.