# CORRADO GINI: <br> PROFESSOR OF STATISTICS IN PADUA, 1913-1925¹ 

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#### Abstract

This paper is concerned with the period 1913-1925 during which Corrado Gini was a professor of Statistics at the University of Padua. We describe the situation of statistics in the Italian academia before his enrolment at the Faculty of Law and then his activities in this faculty first as an adjunct professor and then offull professor of statistics. He founded a laboratory of statistics, similar to that he established at the University of Cagliari, and in 1924 the first Italian institute of statistics, in which students could gain a degree in statistics. He was very active in statistical research so that most of the innovation he introduced in statistics was already published before the Great War. During the war, he was first a soldier of the Italian army and then he collaborated with the national government in conducting many important surveys at national level. In 1920 he founded also the international journal Metron. In 1925 he moved from the University of Padua to that of Rome.


Keywords: Corrado Gini; University of Padua, Institute of Statistics; Metron.

## 1. INTRODUCTION

Corrado Gini was born on 23 May 1884 in Motta di Livenza, Treviso Province, to Lavinia Locatelli and Luciano Gini, a couple who belonged to the upper-middle agrarian class. He died in Rome on 13 March 1965. After graduating with a law degree from the University of Bologna in 1905, he advanced rapidly in his academic career. He obtained a teaching qualification in statistics in 1908. The following year, he was hired as a statistics lecturer at the University of Cagliari. In 1910, at only 26

[^0]years old, he was granted a chair in statistics at the same university. ${ }^{3}$ Exactly three years later, in 1913, he secured a similar position at the University of Padua, where he remained until November 1925. On 1 December 1925, he was transferred to the Faculty of Political Science at the University La Sapienza in Rome.

During his stay in Padua, he strongly contributed to the mathematisation and abstraction of the statistical discipline in Italy, making it possible to bridge the gap separating Italian statistics from the more advanced Anglo-Saxon school. Furthermore, Gini applied the statistical method to many areas - genetics and anthropology, demography and biometry, sociology and economics, to mention the most important ones.

Padua owes him the creation of two new faculties. In 1924, as offshoots of the Faculty of Law, the School of Political and Social Sciences and the Institute of Statistics were established with Gini's support. In 1933, the first one converted itself into the Faculty of Political Science. The second gave birth to the School of Statistics in 1927 and then, in 1968, to the Faculty of Statistical, Demographic and Actuarial Sciences, which in 1993 became the Faculty of Statistics. In 1984, the Institute of Statistics was for its part converted into the current Department of Statistical Science. In Padua, two scientific journals were founded under Gini's supervision - the international journal Metron in 1920 and Indici del Movimento Economico Italiano in 1925 (renamed La Vita Economica Italiana in 1930).

No less important was his enormous contribution to Italian official statistics, whose development would have been surely different and probably more difficult if Gini had not so wisely organised the structure of the nascent Central Institute of Statistics (now the National Institute of Statistics [ISTAT]).

## 2. GINI'S COMPETITION IN PADUA

On 24 November 1913, during his inaugural speech in the academic year (AY) 1913-1914 in the Main Lecture Hall, ${ }^{4}$ Rector Vittorio Rossi introduced the new professor of statistics as follows: "A precious acquisition of the Faculty of Law coming among us with the degree of adjunct professor is Corrado Gini, who carried

[^1]off a singularly honourable victory on the occasion of the competitive examination he [took] for the award of the chair of statistics."


Figure 1: Main Lecture Hall of the Palazzo Bo, University of Padova in 2015. Photo source: web site of the University of Padova.


Figure 2: New wing of the Palazzo Bo, University of Padova on San Francesco street in 1942 just completed works. In the foreground the parapet of the San Lorenzo bridge and the statue of San Giovanni Nepomuceno (both now disappeared). The Institute of Statistics was placed on the top floor. Photo source: Camillo Semenzato (1989). 'Il Palazzo del Bo: Storia, Architettura e Restauri della facciata', Padova, Marsilio.


Figure 3: The Institute of Statistics of the Royal University of Padova classroom in 1942:. Photo source: Gaetano Pietra (1943). 'L’Istituto di Statistica della R. Università di Padova', Statistica, vol. 3, n. 3


Figure 4: The wing of the Palazzo Bo, University of Padova on the corner of San Francesco street and Riviera Ponti Romani. The Institute of Statistics was placed on the top floor in 1942. Photo of the author, 2015.

Certainly, that acquisition was precious for the Faculty of Law. Nevertheless, what reason made Gini's victory so singularly honourable? He managed to gain the chair of statistics twice in three years' time - first in 1910 at the University of Cagliari and then in 1913 at the University of Padua. In this sense, it represents a somewhat rare case in the Italian academia. Moreover, it is worthwhile to remember how the competitive examination for the chair of statistics in Padua was conducted. Five persons stood as candidates before the examination board; ${ }^{5}$ the oldest three with longer academic careers, already employed as full university professors, were considered inadequate. The first to be excluded was Aldo Contento, from Venice, already an adjunct professor at Catania University since 1903 and a full professor from 1908 on, who presented his most recent work, Teoria statistica generale e demografica (General and Demographic Statistics Theory), at the examination (Contento, 1909). The second was Costantino Ottolenghi, fromPiedmont, who was a lecturer of statistics at Turin University, a professor of statistics at the same university from 1899 and then an adjunct professor of finance at Camerino University from 1900. The third one was Filippo Virgilii, born in Modena, a mathematics graduate from Padua and a lecturer of statistics and a full professor of political economy in Siena from 1892 on. He had recently concluded a two-year mandate as rector of that university, from 1908 to 1910. His manual of statistics (Virgilii, 1891), which he submitted for the examination, was judged rudimentary and inadequate, especially from the perspective of the actual use of mathematical instrumentation, despite the methodological assertions and the constant updates of bibliographic notes (Favero, 2006). In the competitive examination, the two younger competitors were the ones who were positively evaluated and considered adequate - Corrado Gini and Giorgio Mortara, ranked first and second, respectively (Favero and Trivellato, 2011). ${ }^{6}$

## 3. STATISTICS IN PADUA BEFORE GINI AND HIS ARRIVAL

Gini served as an adjunct professor of statistics in 1913, occupying the second oldest chair of statistics in Italy, ${ }^{7}$ which had been established almost a century before his arrival.

[^2]In 1813, after the Napoleonic period, Francis I, the first emperor of Austria, reorganised the Habsburg domains and established the Lombardo-Venetian Kingdom. Austria regained control of Padua and its university. During an initial period of supervision of the provisions in force, the Austrians let the university continue managing with Napoleon's rules to ensure the continuity of teaching. The situation changed with the government notification dated 12 September 1815 (Carcereri de Prati, 2008) on the "restoration of Padua University and the scheduling of its course of studies". ${ }^{8}$ Under the new didactic regulations, statistics replaced the teaching of political economy because, being limited to describing the remarkable affairs of the state, it seemed to offer less possibility than economy to allow for the spread of liberal and anti-Austrian doctrines. In Padua, a new discipline called public economics and statistics was provisionally proposed. In the AY 1817-1818, this discipline was strengthened and structured into two courses general European statistics, which absorbed the previous course, public economics and statistics, and the new special statistics of the Austrian monarchy.

In 1825, the new general regulation for the university ${ }^{9}$ was issued in which the Legal School, as the faculty was named at that time, was renamed Political-Legal Faculty ${ }^{10}$ since in the intentions of the Hapsburg government, the adjective political was used as a synonym of administrative (Parini Vincenti, 2015). In the midnineteenth century, the Austrian government reformed the universities of Lombar-do-Veneto; consequently, the Political-Legal Faculty of Padua was transformed into the Juridical-Political Faculty (Di Nucci, 2011), namely, juridical and state sciences, to emphasise the two souls of the faculty. In 1860, the teachings of public economics and statistics and special statistics of the Austrian monarchy were replaced by three new disciplines - theory of statistics, general statistics of Europe and statistics of the Austrian Empire.

In October 1866, after the Italian unification, the commissioners of the King of Italy succeeded the Austrian delegates in the Venetian provinces, and the course statistics of the Austrian Empire became statistics of the Kingdom of Italy. In the AY 1873-1874, the Juridical-Political Faculty of Padua became the Faculty of Law, ${ }^{11}$ and in 1879 , a new discipline, simply named statistics, was introduced.

[^3]Already in 1903, Professor Carlo Francesco Ferraris, who had been the last full professor of statistics from 1886 to 1896 , before moving to the chair of administrative law, had raised the issue that the University of Padua's Faculty of Law had long lacked a permanent lecturer of statistics. In 1911, after enduring the difficulties in ensuring permanent and high-quality teaching of statistics, the faculty finally conceived the idea of appointing a full professor through a regular competition. The pertinent procedure started during the Faculty Council (FC) dated 14 March 1911, when the faculty decided to open the competition for statistics:

As [for] statistics, the dean recalls to the faculty members that Professor
Ferraris, during one of the last sessions, expressed the wish that the faculty
[would] directly provide for the chair of statistics that he heldfor so many years
[...].
Given the importance of statistical studies in Italy and their currentflourishing, as well as the demand [for] a professor of statistics in a royal university, requesting the transfer or the competition, he considers [it] appropriate to [make] a decision on the matter. The request mentioned by the dean is that of Professor Contento, ${ }^{12}$ that is read [...].
After some considerations, the faculty unanimously proposes that the chair of statistics [...] be covered by means of [a] competition for [an] adjunct professor.
Eight months later, on 6 November 1912, the dean informed the faculty that the competition for the appointment of a new holder of the chair of statistics in Padua had been opened and that Professor Jannaccone ${ }^{13}$ had been chosen as the chairman of the evaluation board. A year later, the dean was urged to conclude the work, and the FC's report dated 18 November 1912 stated the following:

Regarding the chair of statistics, the faculty, ascertaining that the competition [has been] closed [for] a long time and [that] the faculty still lacks the abovementioned teaching, requests His Excellency the Minister that the examining board [be] convened in time so that its report could be approved by the Superior Council at the next extraordinary meeting in January and hopes [that] the chair of statistics [will] soon [be] covered.
Finally, on 17 February 1913, the dean informed the faculty that Professor Gini won the competition and thus could be nominated starting from the AY 1913-1914. On 15 October 1913, Gini arrived in Padua; on 12 November, he

[^4]attended the council of the Faculty of Law for the first time and was welcomed by Dean Nino Tamassia and other colleagues. On 27 November, a month after he had started working as an adjunct professor of statistics, Gini applied for full professorship. In April 1914, he was promoted to full professor with the unanimous decision of the evaluation board. ${ }^{14}$

## 4. GINI AND THE GREAT WAR

What did Gini do during his first year in Padua? The year before, he had attended the First International Eugenics Congress. ${ }^{15}$ On his return, he continued to investigate that topic. In 1913, he participated in the establishment of an Italian committee for eugenics within the Roman Society of Anthropology. Referring to eugenics problems in which he was interested, he took advantage of the inaugural lecture that opened his statistical teaching in Padua on 11 December 1913 as a prestigious opportunity to expose his views on Quetelet's average man. On that occasion, he stated that the concept of the average man corresponded only to an aesthetic ideal and a statistical generalisation and that, similar to all generalisations based on statistical analysis, it could not and should not correspond to individual cases but only to mass descriptions. During his lecture, Gini criticised Quetelet, "who having successfully understood and conceived the 'average man' by means of painstaking scientific research, had got[ten] so excited that he finished by considering it even a God" (Gini, 1914a). In fact, in Gini's opinion, the "average man" could neither be regarded as the physical reference model that Quetelet intended since this would have contradicted Darwin's theory of evolution, nor could it be considered a moral ideal because this would have denied any stimulus towards progress (Cassata, 2011).

On his arrival at the University of Padua, Gini found the Statistics Section in the Geography Laboratory ${ }^{16}$ of the Faculty of Arts. From the beginning, he wished to transform the existing Statistics Section into an independent Statistics Laboratory of the Faculty of Law. Indeed, the new Statistics Laboratory ${ }^{17}$ came into existence in the beginning of the AY 1913-1914, a short while after his arrival in Padua. Hence, during the faculty session dated 11 December 1913, Gini suggested and the faculty approved that the books purchased with the proceeds from the fees of

[^5]students taking statistics and economics courses be destined for the new laboratory. On 11 July 1914, he proposed and the faculty approved that in addition to the ordinary funds, part of the mutual funds available for the next AY 1914-1915 be allocated as an extraordinary subsidy for the new Statistics Laboratory and its library.

During his lectures, Gini insisted on mathematics as a privileged tool of statistics and on statistics as an analytical method common to all applied sciences, especially in the investigation of the regularity of phenomena. This allowed him to present statistics independently from pure mathematics and to give it more strength and independence as a separate discipline within academia.

At that time, Gini counted among his interests the problem of how to measure income and wealth disparities in different countries. He had become fascinated with this topic during the period when he was studying at Bologna University, after reading some works on the subject published by Vilfredo Pareto between 1895 and 1897. Gini believed that the index suggested by Pareto could be improved, and in 1909, he suggested an index that he considered more satisfactory (Gini, 1909). Dissatisfied with the results, Gini continued with great fervour, looking for a correct criterion for measuring disparity, and his studies led him to the concentration ratio R , showing links with the diagram of Lorenz and the mean difference.

In 1914, completing his previous writings on the concentration of wealth, and thanks to his incipient relationships with the local cultural and scientific communities, he presented his work Sulla misura della concentrazione e della variabilità dei caratteri (On the measurement of concentration and variability of characters) to the Royal Venetian Institute of Sciences, Letters and Arts of Venice (Gini, 1914b). It was in this work that he developed the famous concentration index, so often used also in political speeches. ${ }^{18}$

In 1914, Gini also published his massive volume entitled L'ammontare e la composizione della ricchezza delle nazioni (The amount and composition of the wealth of nations) (Gini, 1914c). Starting from 1914, Gini finally published several other works in the proceedings of the Royal Venetian Institute, bringing new

[^6]contributions to the analysis of the relationships among variables and of distribution variability (Gini, 1914d, 1915a, 1915b, 1916b, 1917c, 1918, 1923).

His relationships with local and scientific communities were strengthened. In February 1915, at the Popular University of Padua, ${ }^{19}$ he held a conference on $I$ fattori latenti delle guerre (Latent factors of wars) (Gini, 1915c). In his speech, he illustrated his cyclical theory of war as an explanation and justification of war as a process for the natural demographic evolution of nations.
[Wars] [...] simply represent the ending of an evolutionary process, the clear manifestation of an imbalance that slowly arose and exacerbated under the veil of subsequent adaptations, between the trends of species or populations in their process of continuous transformation and the framework conditions that are not modified in the corresponding direction or with [the] same speed (Gini, 1921a).

On 21 March 1915, he became a corresponding member of the Royal Academy of Sciences, Letters and Arts in Padua. ${ }^{20}$ A year later, he presented a paper entitled Di alcune ricerche demografiche sugli israeliti in Padova (on demographic research on the Israelites in Padua) to the members of the Academy (Gini, 1917a). During that period also, his relationships with local citizens and students appeared to become friendlier and more intense, at least judging from a Gini caricature (see Figure 6). In 1985, this picture, together with the caricature of Professor Ferraris (see Figure 7), who preceded him in the chair of statistics, was found in the archives of the publisher CEDAM and then published (Toffanin, 1986). ${ }^{21}$

On 24 May 1915, Italy declared war on Austria and thus entered the Great War. The war brought a brutal change; due to mobilisation, the Italian university was

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Figure 5: Ancient courtyard of the Palazzo Bo and bucranium, University of Padova in 2015. Photo source: web site of the University of Padova.


Figure 6: Left side: Corrado Gini, c. 1926. Photo source: Giuseppe Leti (1996). 'L'Istat e il Consiglio Superiore di Statistica dal 1926 al 1945', ISTAT, Annali di Statistica, anno 125, serie X, vol. 8. Right side: caricature done by Sinopico in Padova in 1915. Source: Giuseppe Toffanin (a cura di) (1986). 'Sinopico e l'Università di Padova settantacinque anni fa', Padova, CEDAM.


Figure 7: Left side: Carlo Francesco Ferraris, c. 1915, professor of Statistics in Padova from 1885 to 1896. Photo source: Archive of the Department of statistical science, University of Padova. Right side: caricature done by Sinopico in Padova in 1915. Source:
Giuseppe Toffanin (a cura di) (1986). 'Sinopico e l'Università di Padova settantacinque anni fa', Padova, CEDAM.
deprived of a large part of its active force, both students and professors. As younger men were called for duty, research became stagnant, and the staff was reduced to a minimum. The alterations that perturbed the life of the University of Padua were described as follows (Del Negro, 2001):

During the First World War, in Padua, people resigned themselves to live with incessant fear of the 912 bombs that hit the city. The university was never officially closed throughout the war period. It continued its activities although with significant relocations and interruptions. An account of soldiers at the front was constantly given, tribute was paid to the fallen, while moral support and propaganda were continuous. In spite of that, university buildings were quickly emptied of students and professors. At the beginning of [the] war, classrooms [were] emptied because the large majority of male students had enlisted. Several of them died. Most disadvantaged were the students of humanities faculties who were recruited [for] ground troops, the corps that suffered by far the highest loss of life. On the contrary, less disadvantaged were the students of scientific faculties, more often sent as medical officers, artillerymen or sappers to the rears.
During the war, the university had struggled to carry on with its regular activities and had even activated accelerated courses for students who were doing their military service. ${ }^{22}$

[^8]Gini had already completed a year of military service as a volunteer in the Cavalrymen Regiment of Saluzzo starting from 1 December 1905 and had been discharged as a sergeant on 30 November 1906. ${ }^{23}$ On 2 May 1915, he was called as a second lieutenant in the Cavalrymen Regiment of Padua, but on 1 November, after a disease he contracted during military service, he was given an unlimited military discharge, with the possibility of leaving the territory in a state of war. ${ }^{24}$ However, on 20 March 1916, he was recalled, effective 31 March. Considering the damage that would result from the interruption of Gini's lessons, the dean of the Faculty of Law asked the supreme command to extend Professor Gini's leave to the end of the term. Thanks to the rector's favour, Gini managed to complete his lessons in the AY 1915-1916. On 25 July 1916, he assumed service as a lieutenant with the duty of organising the statistical services of the military offices at the Ministry of War.

At the Ministry of War, Gini was appointed head of the statistical division of the health statistical office, where he notably directed investigations on the losses and the recoveries carried out by the registration division. For the needs of his office, he also produced a manual for health statistical surveys (Gini, 1917b). At the end of that same year, Gini became head of the statistical office and of the economicalstatistical department of the historiographical mobilisation office of the Ministry of Arms and Munitions. ${ }^{25}$ Gini's participation in the historiographical office emphasised his project of involving a number of academics in the representation of the war's consequences on the Italian economic and social system. Cassata described his ambitious programme (2006, p. 56):

Firstly the framework of collaborators and research structured by Gini for the statistical and economic section clearly demonstrates his intention to involve a wide network of social scientists - mainly academics or high rank State officials - in the elaboration of a vast editorial programme, which aimed at studying the impact of war on the entire economic and social system of the country. In Gini's draft "within the necessary staff for statistics" were indicated the names of Alberto De Stefani, Giovanni Dettori, Gaetano Zingali,

[^9]Alberto Mancini, Filippo Carli and Marcello Boldrini. To these main contributors must be added all the scholars identified by Gini as possible authors of thirty-five monographs on specific topics: among others Mortara, Livi, Cabiati, Niceforo, Bachi.


Figure 8: First page of the military service record of Gini issued by the Ministry of War on 23 May 1918. Source: Ministry of War, Directorate-General for military personnel.

In May 1916, at the peak of the war, the Emigration Commissariat of the Italian Kingdom ${ }^{26}$ proposed a census of mass migrations due to the war circumstances in Italy. The Ministry for the Reconstruction of Territories Liberated from the Enemy ${ }^{27}$ conducted the war refugees' census only at the end of the war in October 1918, under Gini's technical and scientific consultancy. The census (Ministero per le Terre Liberate, 1919) reported the number of "unredeemed" citizens ${ }^{28}$ who had moved to Italy for war reasons, the number of Italian citizens who had been forced to leave their habitual residence because of enemy invasion, upon request of the military authorities or due to the difficulties in civil life resulting from the war, and finally, the number of Italian citizens repatriated because of war, except those whose repatriation had been determined by military requirements.

Meanwhile, in 1917, Gini had received the national award from the Academy of Lincei for Social and Economic Sciences. On 20 February 1918, he received official praise from the Ministry of War "for the delicate and important scientific assignment and the task of technical advisor for statistical health data". On 1 June 1918, he was appointed as a reserve official with the rank of major and subsequently sent on permanent leave.

Thanks to his activities during the war, Gini gained high visibility; the war economy and post-war diplomacy gave him the possibility to demonstrate the strategic effectiveness of statisticians' quantitative competencies. Certainly, Gini was not the only statistician making his skills available to the country. Many other statisticians were actively involved in the mobilisation and management of economic and logistical resources and participated in the new powerful bureaucracy that had arisen in Italy, as well as in other countries involved in the conflict (Melis, 1996; Prévost, 2013).

## 5. AFTER THE WAR

In the morning of 3 November 1918, at Villa Giusti in the suburbs of Padua, the armistice was set for 4 November, and the end of hostilities was signed, thus ending the war in Italy.

[^10]The conclusion of the war was conceived as an exceptional event, though the Ministry of Public Education did not officially declare the end of the war emergency period until two years had passed. In the FC dated 26 October 1920, the dean gave notice of the circular letter in which the minister stated that from the AY 1920-1921, it was necessary to resume the ordinary study programmes. At the University of Padua, activity slowly resumed, and so did scientific relationships among institutions. In fact, two months later, a ministerial note mentioned the delivery, by the German to the Italian government, of scientific papers published in Germany during the war. In this context, Gini's efforts to create a technical journal for emancipating statistics, both from the role of a sophisticated quantitative tool of economic theory and from the cumbersome bond with pure mathematics, succeeded when in 1920 the first volume of Metron - Statistical International Journal was issued, which published articles in Italian, French, German and English. ${ }^{29}$ Gini founded the journal with his own money and with the subscription of shares by other scholars.

In early 1920, once he had finally concluded his assignment at the Ministry of War, Gini resumed regular academic service. He managed to reconcile teaching in Padua with his commitments with the League of Nations. However, he did not remain in Padua for long. On 27 December 1920, Albert Thomas, the director of the International Labour Office, received a preliminary version of the Enquête sur les matières premières et les denrées alimentaires (Survey on raw materials and foodstuffs) that Gini coordinated on behalf of the Committee on Economic and Financial Affairs of the League of Nations. In March 1921, the Permanent Bureau of the League of Nations invited Gini to present the results of the Enquête, which he did on 6 August 1921. ${ }^{30}$

In the AY 1920-1921, Gini's teaching activity was concentrated between November 1920 and February 1921. On his registers (see Figure 9) for his statistics course and exercises, Gini reported 50 actually given lessons and five lost because of governmental assignments. In that year, the content of teaching was structured as follows:

1) Historical overview of statistics'development
2) Definition of statistics
3) Features of the sixth population's census of Italy that had to be held on
1 December 1921
4) Elements of probability calculus
5) Theory of distributions
6) Equalisation elements
7) Statistical surveys
8) Data analysis
9) Graphical representations
10) Means
11) Variability indexes
12) Concentration curves
13) Anthropology surveys

29 Gini wrote an editorial manifesto for the first issue (Gini, 1920).
30 The report was elaborated in the subsequent year (Gini et al., 1922).


Figure 9: Front covers of Gini’ register of Statistics (left) and Exercises of Statistics (right) in the academic year 1920-21.

In March, it was necessary to appoint a substitute teacher covering the chair of statistics for the remaining AY 1920-1921. Gini suggested Professor Alfonso De Pietri-Tonelli. ${ }^{31}$ The text used was a new edition of his statistical notes from the previous five years (Gini, 1921b). The volume index was as follows:

1) Historical overview of the origin and development of statistics
2) Preliminary notions
3) Collection of data
4) Reduction of collected data:

- Graphic representations
- About probability calculus
- Interpolations
- The means
- Statistical reports
- Distribution of a collective phenomenon (comparison of the actual form of more distributions, variability indexes, relative variability indexes, mutability

31 Professor Alfonso De Pietri-Tonelli was a lecturer of political economics at the University of Padua.
indexes for hardly measurable phenomena, differences between two distributions, dissimilarity indexes)

- Statistical ratios (transvariation, cograduation, correlation, connection, concordance)

5) Induction and logical deduction:

- Comparability of data
- Ways to induce the presence of certain causes in the phenomena
- Conjectural statistics
- Assessment of statistical laws
- Logical deduction

A year later, in January 1922, Gini informed the faculty that his commitments in Rome with the Commission of inquiry on industries would probably last longer than expected. To avoid interrupting teaching activities, the faculty definitely confirmed his substitution by Alfonso De Pietri Tonelli.

Meanwhile, in 1919, Gini had been appointed (together with Boldrini) as vice-president of the newly born Italian Society of Genetics and Eugenics. Gini was an important character in Italian eugenics (Mantovani, 2004), due to his ability to manipulate data and tables, his capability to address problems from a quantitative and statistical perspective, as well as his prestige, which was guaranteed by a number of positions of responsibility, both in Italy and abroad. Thus, in his report to the Congress of the Italian Society for the Advancement of Science held in Trieste in 1921, he wrote, in opposition to many other scholars, that "war from the eugenics point of view" could exert a beneficial selective effect by extirpating the weaker elements (Gini, 1921c). According to Gini, the children born after the war were not compromised from the eugenics perspective; in fact, they could benefit, among other things, from the hard rest to which the war forced the reproductive organs of their mothers.

In 1922-1923, with his commitments out of office completed, Gini returned to Padua. During those years, he worked hard, trying to involve other scholars in his research activity and to transform the Statistics Laboratory into an institute. In 1923, he requested and obtained adequate space for the laboratory on the second floor of the ancient Palazzetto Capodivacca located in San Francesco Street (see Figure 10). During that period, under his direction, a new field of demographic research on female fertility was started. Official data were analysed, referring to foreign cities and to surveys organised by the Statistics Laboratory in several Italian municipalities, with the help of official statistics. The results were presented on two occasions to the Royal Venetian Institute of Science, Literature and Arts of Venice (Gini, 1924, 1925).


Figure 10: Design of the Palace Capodivacca façade on San Francesco street in Padova in 1930. Headquarters of Statistics Cabinet in 1923 and, later, of Statistics Institute 1924-1942. Source: Giovanni Ferrari (1933). 'L'Istituto di Statistica della Regia Università di Padova', Barometro economico, n. 10.


Figure 11: The Palace Capodivacca façade on San Francesco street in Padova in 2015.
Headquarters of Statistics Cabinet in 1923 and, later, of Institute of Statistics 19241942. Photo of the author.


Figure 12: Front gate of the Palazzo Bo, University of Padova in 2015 which contains the names of 192 students who died during the First World War. Photo source: web site of the University of Padova.

He considered demography an aspect involved in innumerable economic and social phenomena. Given that a complete discussion of those phenomena was not possible in a general course that included statistics and demography, to enhance the study of demography, he managed to obtain approval for a complementary course in the subject. The course ought to be assigned to Marcello Boldrini, a statistics lecturer at the University of Padua, for the AY 1923-1924, in addition to Gini's teaching of statistics. On 11 May 1924, Gini became an active fellow of the Royal Academy of Sciences, Letters and Arts of Padua and inaugurated its 385th year (1925-1926) with an opening lecture entitled La ricchezza comparata delle Nazioni (The comparative wealth of nations) (Gini, 1926). In this lecture, Gini summarised the ideas he had elaborated for several years, notably the comparison of the qualitative composition of the nations' wealth. He briefly described the wealth structure of some countries and pointed out the relevance of including an estimate of human capital in the evaluation of wealth. On 4 January 1925, he was appointed as an active member of the Royal Venetian Institute of Sciences, Letters and Arts of Venice.

## 6. THE SCHOOL OF SOCIAL AND POLITICAL SCIENCES AND THE INSTITUTE OF STATISTICS

In the session dated 18 November 1912, the Faculty of Law sensed the need for renewing and reorganising its teaching programmes. It established educational seminars and tutorial support, aiming to give its study programmes a broader reach, to promote the practical applications of academic teaching in legal and social sciences and to encourage scientific research. It was a suitable time for change. When Gini arrived in Padua in October 1913, he took advantage of his experience in the laboratory ${ }^{32}$ he had established three years before at the University of Cagliari. ${ }^{33}$ In a short time, he managed to change what until then had been a section of the Geography Laboratory ${ }^{34}$ of the Faculty of Arts into an independent Statistics Laboratory annexed to the Faculty of Law. The new laboratory became operative in the beginning of the AY 1913-1914, with Gini as its director. However, at first, its independence was only nominal since the new institution still needed facilities and equipment to operate autonomously.

Gini intended to extend the model he had experimented on in Cagliari to the laboratory in Padua. In the new laboratory, statistical research should not be a personal, isolated activity but a common working method to be applied to research in the natural and experimental sciences to solve both the empirical and the foundational problems of academic disciplines. The elements characterising the laboratory were twofold - first, the strong interaction between the experimental inductive method and the generalised deductive one and second, the mutual influence among theory, research and empirical investigation. The work had to be strictly connected with interdisciplinary research, combining economy, sociology, demography and mathematics. A division of labour among professors, assistants and students was thus realised in the laboratory to deal more effectively and intensively with empirical research, particularly regarding the collection of data, as well as their processing and analysis. Obviously, the students' participation in the laboratory work produced significant improvements, not only in research but also in learning. To gain access to the laboratory, students had to fill in an application form, pay an annual fee, complete exercises and carry out investigations.

[^11]Once the Statistics Laboratory was established, it was necessary to increase its library holdings and instrumentation, which entailed Gini's subsequent effort. During a session of the Academic Senate on 29 May 1914, Professor Tamassia, the dean of the Faculty of Law, applied (as Gini recommended) for a subsidy for the laboratory, whose completion was then in progress. The Senate unanimously agreed; on 11 July 1914, an extraordinary subsidy was granted to the laboratory in addition to the current allocation.

Gini continuously sought to improve his teaching methods and to find adequate space for the laboratory, whose location was still temporary. In the FC dated 21 February 1918, Gini proposed the following agenda that was unanimously approved:
The Faculty of Law believes that to make the statistical teaching effective, in particular for the students of law, it is appropriate, even essential in the case of accelerated courses, to integrate lessons with diagrams and practical exercises. This could make it easier to find a location corresponding to the purposes of the Statistics Laboratory inside our university.
Gini's search for funds was uninterrupted. In the FC dated 20 June 1922, he clearly stated that the extent and the urgency of the laboratory needs should be considered while sharing students' fees. He stated that legal institutes had limited needs, only consisting of books and magazines. On the contrary, on top of books and magazines, the laboratory needed expensive equipment for computation. Consequently, he asked that an adequate portion of the sum available to the faculty should cover the requirements of his laboratory. Given the special nature of statistics, whose study interested both the Faculty of Law and other faculties, he added that the extraordinary needs of the laboratory should be fulfilled through a mutual fund available in the athenaeum budget for all faculties, not only from the share allotted to the Faculty of Law.

In January 1923, Gini again presented his laboratory's special needs, consisting of books and scientific instruments. Furthermore, he outlined the relationships that the laboratory might have with disciplines belonging to faculties other than the Faculty of Law and requested special support from the Academic Senate. On 20 February 1923, the senate replied that because of limited resources, his request could not be met. Nevertheless, considering the laboratory's special needs in terms of equipment, the senate empowered the rector to satisfy Professor Gini's wish to draw a grant from the funds made available by the Ministry of Public Education. On 1 May 1923, the dean announced that the Academic Senate had allotted to the Faculty of Law the sum of 16,000 liras. Gini immediately asked that the sum be equally distributed among the six institutes of the faculty (five institutes of law and
the Statistics Laboratory). Instead, the faculty decided to allocate only 2,000 liras to the Statistics Laboratory, that is, less than one-sixth of the amount. On the other hand, in the same year, the Statistics Laboratory was housed on the second floor of the Palazzetto Capodivacca, adjacent to the Palazzo $\mathrm{Bo}^{35}$ and two volunteer assistants, Dr. Gaetano Pietra and Dr Biagio De Simone, were added to the laboratory staff.

Nevertheless, the above solution was provisional. On 12 November 1923, the Faculty of Law empowered the dean to inform academic authorities and the Ministry of Public Education about the need for the annual state contribution to the University of Padua to include a congruent fund. This budget was intended to purchase materials and equipment, as well as to pay the wages of the assistants and the attendants in each of the five law institutes of the faculty and in the Statistics Laboratory.

While working to achieve his goal of transforming the laboratory into an institute, Gini was also active in another direction. In fact, he was planning to establish a Social Science School, whose content and objectives he presented for the first time at the faculty session of 12 November 1923. Many faculty members declared themselves in favour of the proposal, but there were discordant opinions on setting up a school within the faculty or annexed to it or creating a unique law degree with three different specialisations - private law, public law and social science. Some professors feared that a new study programme could lower the faculty's prestige; others expressed concern about a possible decrease in the number of registrations. Finally, during the session dated 4 February 1924, Gini's proposed project obtained unanimous approval of a new School of Social and Political Sciences ${ }^{36}$ annexed to the Faculty of Law. The new school would award two degrees, one in political science and another in social science. The school would be coordinated with the Faculty of Law so that it would use the courses offered by the latter, and the school could lend the faculty the courses aimed at refining the culture of law students.

[^12]During the first months of 1924, the Faculty of Law approved a statute draft for the new school. The debate within the FC was passionate. It concerned the subjects to be considered compulsory and those to be simply optional. Not everybody agreed with Gini, who wanted the inclusion of statistics, demography and economic statistics as compulsory courses for all students. Once put to the vote, Gini's proposal was rejected since it was deemed too rigid. This provoked much bitterness on his part. At the same time, the faculty found enough economic support from the Lending Institute of the Tre Venezie for the School of Social and Political Sciences to start. ${ }^{37}$

In July 1924, the FC sent to the Ministry and to the Supreme Council of Public Education a proposal of emendations to the University of Padua statute relative to the School of Social and Political Sciences. The new statute was approved through a ministerial ordinance dated 25 October 1924, and the school began to operate on 1 December, with Donato Donati, a full professor of constitutional law, as its director. The school had significant teaching staff members, including nine full professors belonging to the Faculty of Law (Simone, 2015), as follows:

- Giulio Alessio - full professor of science of finance, lecturer of political economy;
- Ageo Arcangeli - full professor of civil law, lecturer of ${ }^{\text {'civil law; }}$
- Francesco Carnelutti - full professor of civil procedure, lecturer of civil procedure;
- Enrico Catellani - full professor of private international law, lecturer of public and private international law;
- Donato Donati - full professor of public law, lecturer of constitutional law;
- Marco Fanno - full professor of science of finance, lecturer of finance and financial law;
- Corrado Gini - full professor of statistics, lecturer of statistics;
- Vincenzo Manzini - full professor of criminal law and procedure, lecturer of criminal law and procedure; and
- Adolfo Ravà - full professor of philosophy of law, lecturer of philosophy of law.

Despite the declared hostility of some of his colleagues, Gini managed to impose the teachings of some statistical areas he considered inalienable. For the political science degree, demography was compulsory, whereas statistics and economic statistics were optional. For the social science degree, statistics,

[^13]demography, economic statistics, biometrics and mathematics were compulsory, while a second course in statistics was optional.

The creation of the new school also fulfilled the governmental requirements, according to the political and economic stance of those years, because the Fascist regime believed that a major reorganisation of the ministries was needed, together with a turnover of the staff and a permanent supervision of bureaucracy on public administration activities. The best way to qualify bureaucrats was to enhance their education through the new school. Gini also perceived the opportunity to train technicians who were able to apply social science methods, first of all statistics, for the realisation of adequate demographic and economic policies of the regime.

In the social sciences section of the school, enough space was given to the teaching of statistics, with the involvement of some scholars who gravitated towards the Statistics Laboratory. Starting in 1924, Marcello Boldrini held a biometrics course there, and Gaetano Pietra conducted a mathematics course for social science, while Gini delivered courses in demography and economic statistics and the statistics course that he used to hold at the Faculty of Law. It should be highlighted that the establishment of the new school together with the Faculty of Law realised Angelo Messedaglia's ambition to separate legal teachings from political and administrative ones, which he expressed several years before (Messedaglia, 1851).

Partially satisfied with the success he was achieving with his proposal related to the School of Social and Political Sciences, on the occasion of the FC session dated 2 July 1924, Gini announced his intention to set up an independent Institute of Statistics. At first, he proposed a School of Statistics analogous to the rising School of Social and Political Sciences; then, he changed his plans, putting forward the idea of an institute independent from any faculty. Finally, in July 1924, the University of Padua created a two-year Graduate School of Statistics, which offered an advanced degree in statistics. Graduates from every faculty could enrol in this school. A few months later, in December 1924, the new Institute of Statistics was also established. It was located in the same rooms occupied by the Statistics Laboratory at Palazzetto Capodivacca, San Francesco Street (Ferrari, 1933) (see Figure 7). The following professors and lecturers reported to the new institute:

- Giulio Alessio - full professor of science of finance at the Faculty of Law, lecturer of political economy;
- Marcello Boldrini - adjunct professor of statistics at the Catholic University of Milan, lecturer of biometry;
- Filippo Carli - lecturer of sociology;
- Paolo Enriques - full professor of zoology at the Faculty of Mathematical,

Physical and Natural Sciences, lecturer of biology for social sciences;

- Marco Fanno - full professor of science of finance at the Faculty of Law, lecturer of science of finance and financial law;
- Corrado Gini - full professor of statistics at the Faculty of Law, lecturer of statistics, basic statistics, demography and health statistics;
- Gaetano Pietra - lecturer of mathematics for social science; and
- Enrico Tedeschi - full professor of anthropology at the Faculty of Mathematical, Physical and Natural Sciences, lecturer of anthropology.

The institute was also the reference address of the international journal of statistics Metron that was founded in 1920. Additionally, a new economics journal, Indici del Movimento Economico Italiano, was launched. ${ }^{38}$ The new institute's library, partly inherited from the pre-existing laboratory, was expanded through gifts and purchases. Its resources were significantly increased, thanks to the incorporation of Luigi Perozzo's collection ${ }^{39}$ and Professor Carlo Francesco Ferraris' personal library. Moreover, the Ministry for the Reconstruction of Land Liberated from the Enemy delivered to the archives 800,000 sheets about the war refugees of 1918 (Ministero per le Terre Liberate, 1919). Moreover, the institute was provided with mechanical equipment for statistical computing. ${ }^{40}$

Gini made every effort to fund the institute, seeking support from everywhere.
He was able to establish a good relationship with Confindustria, the national association of industries. This relationship intensified in 1922, when he was asked to be a member of the board for the survey on industries and also supported the Confindustria in the debate on real wages in 1920 compared to 1914. Gini’s other relationships with Confindustria were formed through his brother, Aldo Gini, and one of his pupils from Cagliari, Giovani Dettori, who were both among its founders.

[^14]Between 1924 and 1926, Confindustria became the main sponsor of the Institute of Statistics of Padua, which used to process the data to be published on its magazine Bollettino di notizie economiche (Favero, 2010).

In March 1925, Gini urged the athenaeum rector to obtain a grant from the university in order to complete some building adaptation and purchase new furniture. To allocate the material from the census of refugees and to organise it, he managed to secure funds from the Ministry of the Liberated Lands and the Commissioner of Emigration. In the AY 1925-1926, he obtained a grant of 5,000 liras from the National Association of Mutual Insurance Agencies against Industrial andAgriculturalAccidents, with the possibility of annual renewal, for the organisation of a six-month course on social insurances; 4,000 liras had been allotted to the professor's remuneration and 1,000 liras to books and other expenses related to the course. In the same month, Gini, who was previously in charge only of teaching in the Faculty of Law, realised that the biometry and statistics course held at the Institute of Statistics needed tools for medicine graduates who enrolled in the graduate schools of medicine and surgery. Hence, he urged the rector, with a request of 3,106 Swiss francs (approximately 15,000 liras at that time), for the purchase of scientific measurement and calculation tools that were useful for anthropology (he attached the price list of P. Herman Rickenbach \& Sohn Company from Zurich that produced the needed tools).

Despite the success obtained by establishing the School of Social and Political Sciences, the Graduate School of Statistics and the Institute of Statistics, Gini experienced student protest and the overt opposition of some colleagues. In local magazines, some students stated having been reassured by the academic authorities that statistics would be just an optional subject for their degrees. This statement was neither contradicted nor amended by academic authorities, which deeply hurt Gini. He requested his faculty to make a decision that statistics should continue to be considered a compulsory subject also for the law degree, stating he would give a special address for lawyers while delivering that course. Nevertheless, in the FC session dated 26 March 1924, his proposal was rejected. Gini stubbornly refused to give up, and in November, the Superior Council of Statistics, of which he was a member, approved the delivery of the statistics course in all law faculties for the attainment of law degrees.

On 1 December 1925, Gini was transferred to the Faculty of Political Science, University La Sapienza in Rome. ${ }^{41}$ The Faculty of Law of the University of Padua,

[^15]while giving him a warm farewell, expressed its gratitude for the establishment of the School of Social and Political Sciences and the Institute of Statistics. In his inaugural speech in the AY 1925-1926, Rector Luigi Lucatello took leave of Gini as follows:

From the Faculty of Law, as is well known, arose the School of Political and Social Sciences which released the title for the admission to public administrations.
The Institute of Statistics flourished luxuriantly under the active direction of the illustrious Professor Gini. Let me highlight that the Institute has been attended in the last year also by foreign graduates and received the benevolent attention of important companies and social welfare institutions, which bestowed substantial financial support for statistical investigations, awards and scholarships [...].
The ancient faculty was sorely tried with the departure of the Institute of Statistics director and full professor of the mentioned chair, illustrious Professor Corrado Gini, called [...] for teaching at the Faculty of Political Science of the Roman Athenaeum from 1 December 1925.

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[^0]:    1 In this document, an academic year (AY) coincides with the school year as it was used until the first years of the twentieth century. As far as Gini's presence and activity in Padua are concerned, the following documents of the Historical Archives, Centre for the History of the University of Padua, have been consulted: 1) Portfolio of Corrado Gini, 2) Portfolio of Rectorship (several yearly issues), 3) File of institutes (several yearly issues), 4) University Statements (then Annuals), referred to as Annuals; 5) Minutes of the University Academic Council (then Academic Senate $[A S]$ ); 6) Minutes of the Academic Council of the Faculty of Law (then Faculty Council [FC], 7) Minutes of the Academic Council of the Faculty of Arts and Philosophy (then Faculty Council [FC of Arts]) and 8) Minutes of the University Governing Board (then Administrative Board). The author expresses his gratitude to the people working at the Centre for the History of the University of Padua for their invaluable help.
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[^1]:    3 Gini became adjunct professor. The examining board, composed of Rodolfo Benini, Francesco Coletti, Giulio Salvatore Del Vecchio, Pasquale Jannaccone and Giovanni Battista Salvioni elected him unanimously.
    4 The Main Lecture Hall is located in Palazzo Bo, an ancient building erected in the middle of the fifteenth century, hosting the main seat of the university. Originally, the building was a guest house called Hospitium Bovis (Hotel Bo), with an ox skull on its sign. In 1539, the building's ownership was transferred to the university but retained the name Palazzo Bo, and the Athenaeum decided to conserve the bucranium in its coat of arms (see Figure 1). From that moment, the same Athenaeum has informally been called Bo.

[^2]:    5 The examination board comprised Rodolfo Benini, Luigi Einaudi, Maffeo Pantaloni, Gaetano Ferroglio and Pasquale Jannaccone.
    6 When Gini moved to the University of Rome in 1926, Contento and Virgilii, his two inadequate competitors, made another unsuccessful attempt for the chair of statistics in Padua.
    7 This teaching was the second statistics course created in Italy. A year earlier, in 1814, a course in European statistics was created at the University of Pavia, replacing political economics. Later, European statistics was divided into general European statistics and special Austrian statistics (Andreoni and Demuru, 1999).

[^3]:    8 Collezione di leggi e regolamenti pubblicati dall'I.R. Governo delle province venete, 1837.
    9 Regolamento Generale per l'Imp. Reg. Università di Padova, Vienna li 8 aprile 1825, 1830.
    10 In the above-mentioned General Regulations of 1825 (Title 1, Paragraph 3), the university was structured into four faculties - Theological, Political-Legal, Medical-Surgical and Philosophical-Mathematical.
    11 From the AY 1873-1874, the University of Padua was placed on the same rank as the other universities of the kingdom and was structured into four faculties, as follows: 1) Law 2) Medicine and Surgery, 3) Arts and Philosophy; and 4) Mathematical, Physical and Natural Sciences (Law No. 1821 dated 12 May 1872).

[^4]:    12 At that time, Contento was a full professor of statistics at Catania University.
    13 He was then a full professor of political economy at the Faculty of Law of the University of Padua.

[^5]:    14 The board was composed of Costantino Bresciani-Turroni, Francesco Coletti, Luigi Einaudi, Carlo Francesco Ferraris and Pasquale Jannaccone.
    15 First International Eugenics Congress, London, 24-29 July 1912.
    16 At that time, the laboratory's name was Gabinetto di Geografia.
    17 At that time, the laboratory's name was Gabinetto di Statistica.

[^6]:    18 For instance, during his State of the Union speech in January 2014 (President Obama delivered his 2014 State of the Union address on Jan. 28, 2014, at the U.S. Capitol in Washington), while speaking about the discrepancy in the distribution of wealth throughout the United States, President Barack Obama asserted that the statistics showed that income disparity "constitute[d] the real problem of our era". He referred to the statistical data provided by the Congressional Budget Office, a federal agency entrusted to provide economic data to the Congress, which uses Gini's index to illustrate income differences in time and in different countries.

[^7]:    19 Created at the end of 1902, the Popular University of Padua was an adult educational institute that aimed at the diffusion of culture through the organisation of courses, conferences and open forums.
    20 The academy was the descendant of Accademia dei Ricovrati, founded in Padua on 25 November 1599. It became the Academy of Agriculture and then the Academy of Sciences, Letters and Arts during the Republic of Venice; the Athenaeum of Sciences, Letters and Arts under Napoleon; the Franceschina Academy of Sciences, Letters and Arts in honour of Austrian Emperor Francis I; the Real Academy of Sciences, Letters and Arts in 1867, after Veneto's annexation to Italy; and the Academy of Sciences, Letters and Arts in 1946, after the creation of the Italian Republic. Since 5 May 1997, it has been called the Galilean Academy of Sciences, Letters and Arts in Padua.
    21 In 1985, 23 pictures that depicted some caricatures of University of Padua professors were found in the archives of the publishing company CEDAM. The author was Primo Sinodico, who revived the journal Lo studente di Padova (The Student of Padua) in 1911, offering satires of university professors. Gini arrived in Padua in November 1913, and Sinodico left Padua in 1915, so it can reasonably be believed that the caricature was made in 1914 or in the first half of 1915

[^8]:    22 The experience of the so-called Castrense University, a school for students of medicine and surgery, was remarkable. Organised in Padua, it hosted 2,189 soldiers who were students enrolled in the last four years of the medicine faculties of all the Italian athenaeums. They formed the "academic battalion". After five months of lessons, 524 degrees in medicine were conferred, with an oral disputation only. Once they completed their studies, the young doctors were enlisted to alleviate the soldiers' pains.

[^9]:    23 All information on Gini's military service has been extracted from his'military service record (see Figure 8).
    24 When the conflict began, provinces along which the front twisted were declared in a state of war, as follows: Belluno, Brescia, Sondrio, Verona, Vicenza and Udine.'Later in the same year, Cremona, Ferrara, Mantua, Padua, Piacenza, Rovigo, Treviso and Venice were added. In 1917, among the provinces in a state of war, Bergamo, Como, Messina, Milan, Modena, Parma, Pavia, Reggio Calabria and Reggio Emilia were also included.
    25 In 1915, the office of the Undersecretary for Arms and Munitions of the Ministry of War was established. In 1917, it became an independent ministry.

[^10]:    26 The Commissariat on migration had been established with Law No. 23 dated 31 January 1901.
    27 Founded with Legislative Decree No. 41 of 19 January 1919, the ministry dealt with the rebuilding of houses and aid to the refugees. Talking with one another in a friendly manner, the refugees designated it "el ministerin" or "el ministereto" ("the little ministry") (Pavan, 2004).

    28 The expression "unredeemed lands" was used for the first time in 1877, with an anti-Austrian meaning. Among the territories considered unredeemed were the regions of Trentino and Venezia Giulia that were submitted to the Austrian government, as well as the City of Fiume and the Dalmatian region.

[^11]:    32 The first experience of a social sciences laboratory in Italy dated back to 1893, when Salvatore Cognetti de Martiis founded the Laboratory of Political Economy of the University of Turin (Pogliano, 1976).
    33 Prévost (2009) considered the establishment of the Statistics Laboratory at the University of Cagliari in 1910 the starting point in the process of Italian statistics reorganisation.
    34 At that time, in the University of Padua, the laboratory's actual name was Gabinetto.

[^12]:    35 Forty years later, Paolo Fortunati (1964) revived the memories of this venue as follows: "In autumn 1923, looking for a refuge from the systematic hunters of underclassmen, the ancient seat of the Institute of Statistics of Padua, on the top floor of the old building attached to the administrative offices seemed to me as an oasis of pleasure!" Fortunati's memory failed in terms of a slight misunderstanding; in the autumn of 1923, the building he mentioned still hosted the Statistics Laboratory. Only in the subsequent year, 1924, did the laboratory become the new Institute of Statistics.
    36 Regarding the teaching of social and political sciences, Gini used the London School of Economics and Political Science (established in 1895) and the Paris école libre des sciences politiques (established in 1922) as international points of reference.

[^13]:    37 The Federal Credit Institute for the revival of the "Venezie", which seat was located in Venice, had been created by saving banks (Casse di Risparmio) and popular banks of the region "in order to contribute to a more rapid compensation of damages caused by the war".

[^14]:    38 The journal was created under the auspices of the Institute of Statistics of the University of Padua and the Institute of Political Economics and Economic Statistics, recently created within the University of Rome, and with the cooperation of professors belonging to these universities and others. It was published in cooperation with the Economical Service of Harvard University, the Economical Service of London and Cambridge Universities and the Institute of Statistics of Paris University. The General Confederation of Italian Industries, the Association of Limited Companies and the directors of the statistical offices of the main Italian cities also collaborated.
    39 Luigi Perozzo was a mathematician and a cartographer working at the Central Institute of Statistics.
    40 A few years later, adding machines (Dalton, Burroughs and Sundstrandt), calculators (Bruswiga, Trimphator and Comptometer) and so on, as well as two electronic calculators of the latest model (Mercedes Euklid and Hamman) were also mentioned. Besides these, were planimeters, tachometers, chronometers, a pantograph, slide rules, French curves and so on (Ferrari, 1933).

[^15]:    41 The School of Political Sciences was also established at the University of Rome in 1924. In September 1925, it was transformed into a faculty (Royal Legislative Decree No. 1604 dated 4 September 1925).

