

## THE SOCIOLOGICAL ORIGINALITY OF CORRADO GINI

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**Abstract:** *This paper offers some evidence of the sociological relevance of Corrado Gini. His activities are frequently analysed for their demographic, statistical or economic outcomes. Several aspects of his scientific experience are related also to sociology. The paper connects some aspects of his biography to the historical and political contexts he lived in: from the coming to power of the Fascist regime to the Second World War and the Italian post-war 'cultural' reconstruction. Gini appears as an original intellectual in a changing society: a polyhedral personality of scientist, whose intense teaching, research and institutional activities were conducted with a strong attention to social processes. His interdisciplinary profile and scientific results can be relevant also for the contemporary systemic social theories.*

**Keywords:** *Corrado Gini, sociology, neo-organicism.*

### 1. INTRODUCTION

The separation of a specific sociological trait from the polyhedral personality of a scientist such as Corrado Gini may turn out to be unsuccessful. The reasons for this failure are as numerous as those that outline him as one of the most outstanding social scientists of the last century.

To one who is interested about his research essays – they amount to some hundreds – or – like the author of this paper – simply studies or works at the Faculty he contributed to found, Corrado Gini represents a figure that is composite in its studies and interests, paradigmatic in its theoretical and methodological acquisitions, and controversial in the interaction with its time. Paradoxically, Gini's personality is similar to that of other contemporary scientists, and yet it remains difficult to explain to scholars who lived after him, probably because they try to embed his scientific contribution in distinct academic disciplines and to evaluate his way of thinking in light of his historical identity.

In fact, Gini, as a first part of the last century scientist, is linked to a precise historical context. At the same time, in the details of his biography and career, we can find elements that permit to know him in a more 'systemic' way, a way he would have preferred for sure.

Thus, these reflections, rather than surgically separate his sociological contribution, aim at analysing the sociological approach that Gini chose for his research and teaching activities and for guiding the intense institutional action he conceived as a “third mission”. The implementation, the enhancement and the use of knowledge in order to contribute to the social, cultural and economic development of the society are relevant aims of Gini’s biographic and scientific profile, probably the most interesting feature of Gini’s legacy to his alumni.

This legacy will be exposed in Section 2 of this paper: the major life and professional landmarks of the scientist – selected from autobiographical sources and adverse reviewers’ notes – will be stressed in their well-known and less known aspects, in order to draft the polyhedral identity of this scientist.

We will focus on some of Gini’s research and institutional experiences, in particular the foundation of the *Institut International de Sociologie (IIS)*, the publication of the *Revue Internationale de Sociologie*, which is the oldest sociological journal – launched by Renè Worms in Paris in 1893 – and the definition and implementation of the coefficient used for the evaluation of the income distribution. These scientific events will be analysed to outline Gini’s ideas of a society and of the role of a social scientist.

All these clarifications will be given in Section 3: the points of view of both his critics and supporters, will be juxtaposed to highlight his scientific way of thinking: the topics, the methodological tools and the possible role as a sociologist that Gini experienced, sometimes against adverse groups of scholars. In this sense, Gini appears as a forward-looking scientist who earmarked in an original and ‘spontaneous’ way many events of his life<sup>1</sup>. Many of these events can be considered as a positive effect of his strong personality and of the intense relationship Gini maintained with the political system of his time.

## **2. LIFE AND SCIENTIFIC ACTIVITIES OF A POLYHEDRAL SCIENTIST**

It is difficult to list all the topics Gini studied, analysed, and theorised. As some famous scientists of his time – among others, Vilfredo Pareto and Alfredo Niceforo – he was at the same time a demographer, a statistician, an economist and a sociologist. Nora Federici, one of his students and heirs, gives us a clear description

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<sup>1</sup> Vittorio Castellano called Gini a “spontaneous sociologist” in his obituary after Gini’s death on 13 March 1965.

of Gini scientific identity: “It is often difficult to distinguish his methodological contributions to statistics from the results of his actual research as a demographer, an economist or a sociologist, without falsifying the essential characteristic of the scientific contribution of him as a scholar who requires always a tool to analyse a concrete problem that either leads him to refine a measurement tool that is already known, or to suggest a new one, even when the procedures thus developed prove to have had wide application. Similarly, it is even more difficult to establish if a theory of his should be regarded as belonging to demography or economics, or whether it should rather be seen as part of sociology, given the breadth of the vision in which the theory is set” (Federici, 1966).

This Corrado Gini portrait by Nora Federici can be considered as an ascribed feature of his research line. Gini was born in Motta di Livenza (Treviso) in 1884 and died in Rome in 1965, giving to his heirs more than sixty years of very important scientific acquisitions, especially interdisciplinary and statistical. Statistics represents for Gini the basic scientific exploration instrument of the society: after the data have been collected, he believes that the best interpretation could be given by content disciplines such as demography or sociology.

One of the first evidence of this approach is represented by his studies on “Population Theories and History of Population Doctrines”, which includes such important articles as *I fattori demografici dell’evoluzione delle nazioni* (1912) and *Le leggi di evoluzione della popolazione* (Gini, 1924). He seems to be more than a single researcher: we can find evidences from a demographer, a statistician, an economist and a sociologist. The content of these two articles, as Gini explained years later, aimed at understanding a social phenomenon from different points of view in a strategic and ambitious combination of disciplines. In a previous article, Gini (1909) had formulated a *theory of social replacement* that revised nothing less than the Pareto’s theory of the *circulation of aristocracies* (Pareto, 1916) and, in his paper of 1912, he perfected the well-known *cyclical theory* of population development, in which we can perceive a strategic merge of demographic and biological development. In this way, Gini could promote a new evolutionary theory in respect to Spencer’s (Spencer, 1852) and to other mono-disciplinary researchers. Gini analyses the phenomena of birth control and fertility reduction as two correlated processes based both on biological and sociological theories. The phenomenon of reproduction differences in social classes thus becomes an important acquisition in Gini’s *cyclical theory*.

The fundamental feature of this way of thinking – say interdisciplinarity as a systematic approach – stands out just in other very first studies and articles published in national and international journals, of economic, statistical and

sociological orientation. One of these contributions was awarded the “Vittorio Emanuele Prize for the Social and Political Sciences” at the University of Bologna when he was 23 years old and, later, in 1917, also the “Premio Reale for the Social Sciences” at the Accademia dei Lincei. When he was 26, Gini became professor of Statistics at the University of Cagliari and, later, he taught at the University of Padua and finally at the University of Roma where he was full professor from 1925 to his death, with only a pause from 1944 to 1946 because he had to face a trial on his commitments with the Fascist regime (for more details, the reader is addressed to the papers by Puggioni, Rigatti Luchini and Cerbara in this volume).

Gini was already known as an outstanding researcher outside the country: the Commission for the League of Nations had appointed him with the drawing up of a report on the national wealth and income of its member states (1921). Since these first phases of his career, Gini had revealed a feature in his activities that fundamentally shaped his scientific profile. He was strongly involved in participating and creating official organisations: in fact, he had a major role in the “Commissione dei XVIII” (Commission of 18) for the Constitutional reform led by Giovanni Gentile (1925); in the foundation of the first Italian School of Political and Social Science at the University of Padua (1924), of the first Italian School of Statistics at the University of Rome (1928) and of the Italian Committee for the Study of Population problems (CISP).

In the meantime, since 1923, academic reform recognised sociology as a compulsory subject for the Social Sciences degree and as optional for that in Political Science. Gini worked hard for the recognition of sociology as an academic discipline, especially in the universities where he taught, and this reveals his attention for all the social sciences. He held lectures in many important universities in the world. During his visits in these universities Gini met all the outstanding scholars of his time, from Malinowski to Ogburn, from Zimmerman to Sorokin. These scholars continued to collaborate with Gini for a long time as speakers in the conferences he organized – among the others the International Meeting for the Studies on Population held in Rome in 1931 –, as members of the *Institut* that Gini led from 1933 to 1950, and as hosts of the Italian scientist’s lectures. Gini taught also at Harvard University.

Thanks to his strong personality, Gini was able to institutionalise sociology in Italy, despite Benedetto Croce’s ruling ideas. In 1936 Gini founded the Faculty of Statistical, Demographic and Actuarial Sciences at Rome University. It was the first in Europe and it put sociology as a compulsory discipline. During the following year Gini favoured the start of the *Società Italiana di Sociologia*, formerly the Italian section of *IIS*, and Gini was its president.

### **3. THE SOCIOLOGICAL CONTRIBUTION TO THE REVUE AND THE INSTITUT INTERNATIONAL DE SOCIOLOGIE**

Gini taught sociology from 1924 on, first at the University of Padua and then at the University of Rome. Especially after the Second World War, his scientific and editorial activities became more intense and his sociological contribution seemed to be as relevant as his demographic and economic ones.

With respect to educational activities, he proposed the renewal of university and faculty educational programmes, he tried to fit teaching programmes to the emerging needs and the social context. His efforts in sociological teaching produced innovation in teaching methods and specific materials.

But also as a researcher did Gini devote himself to create relevant organisational structures to support statistical studies: at the University of Cagliari he launched the first Italian Laboratory of Statistics and at the University of Padua he transformed the previous Section of Statistics of the Institute of Geography first in a Cabinet of Statistics and then into the Institute of Statistics. The institution of a School of Statistics and then of the Faculty of Statistical, Demographic and Actuarial Sciences at Rome University completed his institutional activity.

The foundation of two scientific journals as *Metron* and *Indici del Movimento economico italiano* met Gini's goal of better communicating the results of scientific outcomes because Gini was convinced of the relevance of social studies for decision-making, but also for educating public opinion. The institution of a Central Statistical Institute with these same roles subtended the real foundation of Istat. During his presidency, Istat started various data collection procedures and experimented with new criteria for the implementation of data quality control and for data communication to support decision-making.

In spite of all these activities and of his editorial engagement, Gini didn't overlook international relationships: among the most important, he collaborated with the International Statistical Institute, the League of Nations, the Bureau International du Travail. Gini paid a constant attention for the social disciplines to achieve an autonomous identity in the academia as well as to act as an informative tool for decision-making and for enhancing public opinion.

Among the various subjects he studied from different disciplinary perspectives, one was society, an organism that Gini analysed as if he were a biologist: he assumed it is composed of parts that control and compete to each other, under the supervision of a central power: Gini showed preference for a social model that implied individuals to be subordinate instances of society as a whole. This position is opposed to that of the supporters of individualism and of the *laissez-faire* lines of thinking, since he entrusted the central power to manage the entire system, with

a view to reconcile divergent tensions and achieve superior goals. This opinion – expressed in clear terms in his paper “The scientific basis of Fascism” (Gini, 1927a) – not only justifies Fascism as a non-democratic regime but also the possibility for a minority to rule on behalf of the whole community, provided this minority was able to satisfy the prevailing interests. Note that when Gini wrote this paper Fascism had already won a majority at Parliament elections.

Following Filippo Barbano’s classification, Gini’s positivistic neo-organicism, as it was called, represents a halfway phase in the history of the Italian sociology. It came after the experiences of the “classical” or “first” sociology of positivistic imprint (1850-1910) and the following one, the “new”, that had been permeated by the attraction for the north-American scholars and by national secular and neo-positivistic ideologies.

The traditional expressions of the discipline, banned by Fascist culture, were revised in an organicist way: later on, Treves and Barbano stated that Gini, Pellizzi and Squillace sacrificed the discipline to the interests of Fascism. Gini, on the contrary, did not give himself a rest between the first two seasons of sociology because he continued to develop the discipline together with other social sciences after World War II. This development was the task of Gini as a sociologist, even if many of his foreign colleagues charged the Italian sociology of that time as being a total science in the Comtian sense: it had nothing to do with empirical research and much to do with philosophical and political ideologies (Rapport et al., 1975).

In Italy after World War II, sociology started a new life through journals, academic teaching, constitution of research centres and investigation of family, modernisation, urban and technological development. Sociologists from Italy and from other countries, especially from North America aimed at studying those aspects that revealed a discontinuity with pre-war sociology, that is the sociology represented by Corrado Gini. The latter aspired to pursue his research lines, promoting his institutions, research centres and journals, and opposing certain issues such as the analysis of the industrialization and the rural development, the refinement of survey tools and some newer forms of neo-organicism.

Gini promoted a sociology that was an analysis of the reality through statistical tools, conceiving statistics as the common method of the social sciences. According to Castellano (1965) in his introduction to the Gini’s *Laurea ad honorem* at the University of Córdoba, Italy of his time was still dominated by the influence of Benedetto Croce’s ideology that conceived demography and statistics as prevailing on sociology. In opposition to Croce’s ideas, Gini promoted a theoretical system of functionalist imprint and developed the Pareto theories on the equilibrium of the society, whose prevalent interpretation at that time was neo-organicist. But Gini

didn't neglect individual aspects in his social functional system and carried out numerous studies focusing on the centrality of actions, choices and relationships between the actors of the labour market.

The same "spontaneous" sociologist used the empirical method in his analysis of migration to the United States (1954-1955) and used the same data to classify migrants from a eugenicist perspective.<sup>2</sup>

Furthermore, in the essay *Progresso o decadenza?* (Gini, 1959), an example of reactionary manifesto in the opinion of critical reviewers, it is possible to find some new features of a 'sociology of the crisis' starting from the sociological examination of the social changes due to modernity in a neo-organicist key: growing anomic trends for the continuous changing processes; removal of the traditional landmarks; supranational organizations that weaken the central power of the state; invasive growth of the technology into the media and also the new media of his time as enemies of mankind because they can replace persons and consume human and environmental resources. In this perspective, even medical discoveries may become a *vulnus* to society because they could limit the natural selection of the weakest and so weaken the species.

In Section 4 we will focus on the sociological approach, but, before that, we stress two focal elements of Gini's sociological activity after World War II. The first is the *Revue Internationale de Sociologie* and the other is the *Institut International de Sociologie (IIS)* – respectively the first sociological journal and organisation, both led by René Worms until 1939, when World War II stopped their activities.

Since 1950, they resumed with an international conference in Rome promoted by Gini who led the *IIS* till 1963 and the *Revue* as editor-in-chief till 1964. In the first issue of the *Revue* Gini edited, he favoured submissions whose content was basically empirical.

The *Revue* and the *IIS* were permeated of Gini's ideas of sociology in which theoretical debates were more frequent than political and ideological disputes. Among the members of the *Revue* editorial committee, as well as among its authors, we can find scholars who appreciated Gini's contribution to the sociological discipline concerning, among others, the cyclical theory of the nations and the evidences about birth rate and its decline. Other scientists, as an aged Pitirim Sorokin, gave their contribution to the *Revue* and the *IIS* as a reaction to the 'new' empirical sociology and the crisis of the modernity.

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<sup>2</sup> These results convinced some American clients of this research to stop funding Gini and Zimmermann and to consider as politically dangerous both their methodological approach and the potential use of their research.

According to Cassata (2006), the profile of scholars who established scientific relationships with Gini, often through the *Revue* and the *Institut*, belonged to the North-American group headed by Carle Zimmerman and by his master, William Ogburn; to the German scientists devoted to Hans Freyer and Karl Valentine Mueller; to the Spanish sociological school of the Balmes Catholic imprint; to the South-American scientists, known as 'indigenisti'; and, finally, the representative members of the International Association for the Advancement of Ethnology and Eugenics (IAAEE). This latter group of scholars put forth a racist and eugenic manifesto through a revue, "The Mankind Quarterly", which was linked to Gini and to the *Revue* of which it was an important sponsor.

The activity for the *Revue* and the *Institut* shows that, searching for independence from political and ideological influences, Gini intensified his sociological activities, his teaching as well as his research activities and, above all, institutional representation at an international level. He deliberately chose institutions that were linked to the 'past' sociology. But Gini was sure that sociology had its continuity and worked toward a re-foundation of Italian sociology, sponsoring the participation to the Società Italiana di Sociologia of scholars with a juridical, philosophical, political or even biological background.

Meanwhile, in 1949, the newborn International Sociological Association (ISA), conceived by several North-American scholars under the aegis of the UNESCO for a re-foundation of the social sciences, asked the Gini-headed Società Italiana di Sociologia for adhesion of its members. Gini refused because he privileged the relationship with the existing ISS. His refusal was a clear ideological stance against the new sociological schools; in this purpose, all his support came from scholars who had had a public and active role during the totalitarian regimes between the two wars. As a matter of fact, Gini replied in a positive way to the invitation of the new society: he participated at the first ISA Conference (Oslo, 1949) and offered to ISA a partnership with the *ISS*. But some ISA delegates publicly rejected his offer, stating that the *IIS* was not a legitimate peer organization. So, the ISA announced a new conference in Zurich in 1950, at the same time as that of the *IIS* in Rome.

Although Gini received many demonstrations of respect by the ISA president, Erik Rinde, the ISA did not recognise the *IIS* as a peer organisation. So, the members of the *ISS*, during the Rome Conference proposed that Gini mediated with the ISA the possibility of a joint registration to the ISA and the *IIS* and the possibility to participate to mutual events and activities. But this mediation failed when Gini accused the ISA of boycotting the *Institut* during the organization of its 1952 Conference in Istanbul – both insisting on the Turkish government not to hold the



conference and opposing Gini as delegate of the Italian sociologists at the ISA. Attempts to find an agreement through mediation by UNESCO also proved hopeless.

If the IIS Conference in Beirut (1955) precluded the participation of Jewish scholars, thereby arousing public indignation, the following conference in Nuremberg (1958) saw the international mass media characterize the past of Gini and of many of his colleagues as “ignominious”. So that the popular image of the *ISS* was increasingly one that referred to a group of sociologists whose ideology was of Fascist imprint.

Nevertheless, attempts for a mediation put forward by some IIS members as Poviña, later president of the *Institut*, were eventually successful, though only after the Gini’s death in 1965. Then, in 1970, Vittorio Castellano, as *ISS* president, adhered to the ISA during the Conference of Varna (1970). This event put an end to the long dispute between the two organizations.

Among Gini’s scientific stances, there was the idea of a sociology that was tangent to many other social sciences. The topics preferred by Gini in the IIS Sections were: ludology and hairy bipeds, animal sociology, sociology of the family, analysis of the war effects on the population (Cassata, 2006: 204).

#### **4. GINI’S WAY OF THINKING BETWEEN ORIGINALITY AND ‘SPONTANEITY’**

His strong personality and his original scientific approach met with diffuse disapproval in sociological literature. This negative reputation was reinforced after his involvement with the Fascist regime: for instance, he strongly cultivated relationships with intellectuals and editorial teams that worked on eugenic issues, like Robert Gayre and Luigi Gedda, and his research line marked his closure to Italian and foreign scientists endorsing the ‘new sociology’. For instance, Gini did not participate to the 4<sup>th</sup> World Conference of Sociology in Stresa in 1959 because he objected to the emerging sociological trends. In his introductory speech at the Stresa conference, Renato Treves significantly pointed out the relevant features of Italian sociology, even referring to Benedetto Croce’s way of thinking as a sociologist in the effects of his research and a philosopher in his scientific approach (Barbano, 1998: 207). Treves explained the importance of research about the South of Italy in a new culture free from Fascism. This new culture was described as a *milieu* for a new positive sociology for studying the society, for productive scientific relationships with foreign sociologists, especially from North American countries, and, so, for the renaissance of the social sciences. Gini was not mentioned in Treves’ speech.

But we can try – and this is for us an easy task – to add to Italian and foreign criticisms on pre-World War II sociology regarding some trends and topics that the same Gini nurtured. Critics didn't recognise as relevant the contribution to sociological teaching and research of Gini and other scholars – among others Pellizzi, first professor of sociology at the University of Firenze after World War II because he previously taught History of Fascism.

In the analysis of the cultural scenario where sociology matured during Fascism, we can notice a significant integration between cultural identities: among which the most significant was that between Fascist and Catholic cultures due to the sensibility of the latter for macro-social processes and its aversion to the fragmentary method of micro-sociology. One could find a strategic nexus between Gini's definition of the function of sociology and some of his scientific collaborations: in 1964, at the height of his scientific career and close to the end of his life, Gini proclaimed sociology as the fundamental discipline that synthesized all the other specialised sciences (Gini, 1964: xi). He identified some examples in the traditional sociology of Vico, Spencer and Comte: their 'sociological' analysis through a constant turn to biological and physical sciences so, in his opinion, it was a regrettable damage for sociology that other scientists did not share the same attention to other disciplines that he did. But Gini appreciated the colleagues – not many as a matter of fact – who collaborated with him to produce social, demographic and biological research, such as the studies on the evolution of the population that he realised together with Agostino Gemelli and Marcello Boldrini. These collaborations, according to Cassata (2006: Introduction), highlight a scientific convergence with the Catholic scientists in Gini's works, especially there where we can find the reproductive and familial features of the first scholars and the fertility policy issues of the second one.

The same collaboration with Don Luigi Sturzo and his research institute in Rome confirms the convergence between the Gini neo-organicist sociology and the social regulation processes that the religious scientist dealt with in his works. Gini paid a specific attention to the sociological synthesis with other disciplines also in contributing to international network studies, one on birth control, typical of the Protestant culture and another on policies that may favour fertility, which is typical of Catholic culture.

This necessity to link scientific research with political decisions is another relevant feature of Gini's way of thinking. With reference to Fascism, Gini can be considered the perfect example of how scientific élites can be tuned with political power while maintaining their scientific independence. He was a scientist whose research could allow the achievement of political goals of a regime. In fact, in Gini's

research, particularly in his demographical studies, best represented the correspondence of scientific and political purposes. Moreover, Gini stated that only a centred-power regime such as Fascism could achieve positive demographical changes, despite the negative evaluations put forward by Myrdal. And there is no better and effective definition of the nature of the relationship between Gini and the political regime of his time than Treves' sentence: "Gini was Fascist in the measure the Fascism was permeated by Gini's ideas. He found many shareable features in the Fascist culture, even if he preserved his research autonomy that was evident after the end of the Fascism." (Treves, 2001: 228)

His neo-organicist or eugenic theories could thus be interpreted as closely linked to Fascist ideologies – as his opponents stressed – but also as the effective results of the analysis of a dynamic society: this was, for example, the case of his research about human fertility conducted with a biological approach. As president of the Italian Committee for the Studies of Population problems (Cisp) and of Istat, Gini was really identified by the national and international scientific communities as the main statistical and demographic advisor of Mussolini: until 1932, the harmony between the scientist and the statesman was perfect. In 1932 Gini resigned from Istat. This was due in part to bureaucratic infighting, but, according to some, also because he did not fit with nor he did want to bend to Mussolini's way of governing official statistics. Mussolini looked for a scientific *imprimatur* for his political decisions. Finally, Gini may represent the figure of the scientist who wished to support political plans with scientific tools that were able to produce outcomes.

History tells us that later on, following the German experience, Mussolini re-directed his demographical policies, including marriage loans and correcting his fertility measures. He turned to the scientific contribution of Livio Livi, a demographer then called to direct the Demographic National Office. So, even Livi represents the scientific expert that closely collaborates with the statesman. It was thus Livi who became the model of scientist that Gini had proposed when trying to shape the Fascist campaign in favour of fertility and to sensitise Fascism to his theory of demographic decline in Italy.

Hence, in examining the relationship between Gini and Fascism, we can argue that it is appropriate to refer to a deliberate scientifically-based support for Fascism. An example of that relationship can be just one of Gini's most criticised positions: he theoretically defined race thanks to a sociological analysis of its strategic biological function in nationalistic regimes, that is in an organic society.

His scientific production – more than 800 publications, 87 monographs and also essays, lessons and notes – is very large and deals with topics that refer to many

disciplinary fields. His interdisciplinary approach is very interesting because it is guided by an original *curiositas* about the society: his scientific observation can't ignore the most pertinent tools, mathematics and statistics. According to him, social phenomena can be measured only through rigorous tools as means or index of concentration or other statistical indices. Gini explained his idea of the observation of the society through scientific methods stating that "sociology surely counts on a historical base, but history is not enough to include all the knowledge that is the heritage of the same sociology. History, then, takes into consideration only a sequence order, that links the past phenomena to each other. But, there is not only a sequence order. Sociology includes also a co-existence order that permits to analyse the relationships among all the contemporary phenomena –as they are highlighted by analytic disciplines – and a concurrence order that emphasizes the pause between two facts".

According to Gini, it is fundamental to resort to all the scientific tools in an integrated disciplinary method for the analysis of the social change and the comparison of the different contexts through causal factors and induced effects. Only in this way could the scientist obtain possible interpretive models that can be used in each different context and with common elements useful for the research (Federici, 1966; Giorgi, 2013).

Since 1912, Gini's concentration coefficient is the most authoritative, universal and reliable statistic tool for the measurement of the income distribution of a nation's residents and it is just used as one of the more representative measure of inequality. It is particularly useful in societies where is increasingly evident an inequality drift, which is not only ethically and politically unacceptable but may also be an obstacle to an economic upturn. During the last decades, the coefficient scientifically showed a clear growing of the inequalities, both in a diachronic trend (from the beginning of the 20<sup>th</sup> century) and in a synchronic trend (since the 1980s there has been an increasing accumulation of wealth of the upper class and a stagnation of the economic condition of the middle class). The Gini's coefficient surprisingly lasts, even if revised, for the measurement of other relevant forms of inequalities as those about the education, social mobility and equal opportunities (Lanza, 2015).

If we assume that a community is like a human body, we can compare and underline the social processes that give vitality, solidity and equilibrium to a biological system. Gini (1923: 56) states: "I have referred to physiology and economic pathology, for example, and I have often and systematically compared biological and economic processes not only for my interlocutors to picture analogies but to show that all the ideas I have developed in my works are founded

in these processes regardless of these comparisons and I could represent these concepts without them too.”

Gini’s systemic and interdisciplinary analysis highlights not only exemplar but also essential features of the social processes: mathematics, biology, statistics, demography and sociology, all together contribute to a more precise conceptualisation, application and empirical monitoring of the world. For this reason we could define Gini’s sociology as systemic *ante litteram*: he described the organism as a “system in a steady, evolutionary and regressing equilibrium; it can keep itself alive and in equilibrium by adjustments time after time” (Gini, 1927) and these internal and external adjustments are essential to keep social order. Pareto had just explained the importance of social equilibrium and proved that it allows to keep vital and solid social systems. Gini was concerned with the description of the elements of social equilibrium so to enable to identify the components of the social change, those of the adaptation and these of regulation when the central motor of control – that is the political power – is inefficient.

Therefore, among the different features of Gini’s sociological way of thinking today we can trace some of his landmarks in the current theory of the systems, structural-functionalism, social ecology and biology. The natural process of the biological and social systems to constantly restore their equilibrium is a concept shared by Parsons and by Merton and, more recently, by Luhmann: these scholars analysed the internal and external connections of a system, its central organization and the series of its consecutive adaptations and composing differentiation. Castellano (1989), one of Gini’s disciples, proposed a definition of his sociological approach as a neo-organicist discipline, that is a social science of second approximation because it performs in a theoretical system the results of disciplines of first approximation, as biology or physiology exactly is. Only the sociological conceptualisation of the analysis and outcomes of other disciplines can give back a systemic vision of the society.

Gini examined in detail the vital processes of a social system that are crucial for its equilibrium and identified the demographic density as one of the most revealing factors to be analysed with an interdisciplinary approach. He accurately collected historical and statistical data that allowed him to highlight some recurring trends and to hypothesize a social replacement rate that is inversely proportional to wealth. Gini obtained significant confirmations of this relationship comparing the birth rates of urban and rural districts with different distributions of wealth and, with an analogous methodology he measured the birth rates of different areas of a city together with selected variables (educational level, occupational rate, income level, family composition and other relevant aspects of people’s lifestyle).

So, he obtained original results: he was one of the first scientists to characterize the reciprocal influence between development level and well-being conditions on the one side and birth rate on the other. His dynamic representation of internal and external connections of a system can be considered an original result of Gini's work, especially in the economic analysis of the vitality of a social organism. According to economist Levi Della Vida (1936), a social system is generally in a status of equilibrium and there could be only temporary deviations. Similarly, Gini proposed an equilibrium asset constantly fluctuating between an evolutionary and a regressive status: the social system tends to restore its equilibrium in the same way as how a biological organism reacts to a pathological status. In Gini's representation, these social processes follow one another, but not in synchronic or corresponding ways. Moreover, there is never a condition of perfect equilibrium nor is there a real correspondence between the components of the system and their reciprocal connections.

Finally, in a situation of growing social complexity, Gini identified as an ascribed feature of the social equilibrium its dynamic nature and described – and simplified – the progress and regression of the social processes. Gini counted on his interdisciplinary approach for a more structured analysis of the social systems and their interactions to develop a relevant methodological equipment (Castellano, 1965; Sgritta, 1994). His interdisciplinary approach guided him to categorise the components of the social system on the basis of their reciprocal influence he was able to detect through economic and demographic data.

Gini described the economic and demographic processes of a system that determine its equilibrium, for example when there is an increase of production and of the number of inhabitants or when there is a successive decrease of the birth rate because of the reduction of the poor classes that are the most reproductive. In a similar condition, Gini deepened his analysis with the introduction of some other factors, such as the political ones: for example, he noted that the phases of a growing well-being and of a decrease of the number of inhabitants corresponded to political trends towards a more shared management of the common good, as in democratic regimes. There is a different trend when the authoritarian regimes assume and centralize the social control to reach equilibrium. Gini pointed out many recurring similar events in the history and analysed many societies: in this way, he resolved various cases of incongruity highlighted by specific disciplines (Gini, 1940; Federici, 1977). Gini explained that a 'pathology' of the system according to a discipline can be interpreted as an evolutionary process to get the system back to equilibrium. Furthermore, Gini was able to point out systemic mechanisms that were not properly observed and measured before his time, despite their relevance

for the vitality and stability of the system.

One of the most important research fields that Gini analysed adapting this approach is that of migrant movements. Especially after World War II, Gini (1946, 1948, 1955; D'Agata, 1948/9) studied this issue from a demographic viewpoint, trying to define the causes and investigate its effects. Gini moved from the research evidences of Pareto and of Coletti and analysed the effects of European migrations to the United States in relation to the level of wealth of the departure country. So, Gini suggested that North American countries should evaluate the contribution of immigrants to its wealth. Gini documented that American prosperity could be determined also by the working capacity of a huge mass of migrants from Europe: for this, he found a link between economic and demographic aspects.

Furthermore, he tried to link causes and effects of migration and to establish the limits of the validity of the two approaches – economic and demographic – showing that they were only apparently in opposition. In this way, he outlined a neo-organicist interpretation of migration: it appeared a positive process for the social systems, because it brought advantages both to the country of origin and to that of destination (Federici, 1966).

Gini (1954, 1955) applied the same analytical approach to the study of internal migrations – a topic to which he lent much attention. His studies focused on the selective aspects of population movements for updating his theory of adaptive migrations. He considered migrants as the most dissimilar individuals from the “typical” one of the place of origin and, simultaneously, the most similar to the “typical” one of the place of destination. This theoretical setting later brought the basis of the theory of “anticipatory socialisation” linked to the migration processes. According to its proponent scholars, in a complex society the success of the migrant integration is directly associated to the similarity between the social system of origin and that of arrival: they developed the factor of the social similarity between migrants and inhabitants that Gini stressed as relevant to study the causes of the migration processes and, later, it was interpreted as meaningful in the analysis of the effects of migration, especially in that of migrant integration.

Gini analysed this correspondence, collecting historical, demographical and statistical data and then applied an interdisciplinary approach for their interpretation. And yet, both in his papers edited between the two wars and, then, after the second one, he was censured for this “unusual” integrated methodology. This is his reaction: “In 1940, when I published the theory of ‘adaptive mutations’ some biologists objected that it was a theoretical speculation not supported by factual data. That was true. And, being a specialist in statistics and sociology, I had neither time nor means of dealing with biological experiments. I was waiting therefore for

experiments by biologists to supply the elements to confirm or reject my theory (...). Unless I am mistaken, there is now no shortage of elements to prove my theory” (Gini, 1961: 16).

Gini was – and still is – criticised for his theoretical and methodological approach. In the decades after his death, social research has increasingly specialised and it has more and more accurately represented processes and trends of the social complexity. Gini was aware of what should follow his research, as well as of the heritage of his interdisciplinary approach. In fact he stated that (Gini, 1927b: XIX): “the neo-organicist theory could derive many and many scientific and practical consequences: even if in the future it will be replaced by a different and more complete social concept, its walk ‘on the stage of science’ will not be useless for the development of the scientific knowledge and of the political management of the society”.

The awareness of his position in the overview of the social sciences could contribute to a more measured interpretation of the figure of Corrado Gini as a sociologist. In order to interpret his figure, we can also count on the analytic key of interpretation that Weber called *absence of evaluation* (Nocenzi, 2015), which means that, even if he was certainly influenced by his socio-political background, both when he operated as a researcher and in relation to his life and societal activities, the scientist has to operate only through facts and data because we should only expect from him a contribution to an objective analysis of reality.

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