

KNOWING TO TRANSFORM

Three ways for agricultural economists to observe

Italy 1900-1940

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Three ways for agricultural economists to observe Italy 1900-1940

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List of initials and investigations

Initials:

ACS: Archivio Centrale dello Stato, Roma

CA: Catasto Agrario

CT: Catasto dei Terreni e dei Fabbricati (Land and Buildings Cadastre)

FAO: United Nations Food and Agriculture Organization

Federconsorzi: Federazione Italiana dei Consorzi Agrari

ICS: Istituto Centrale di Statistica (Central Statistical Office, now ISTAT)

IGM: Istituto Geografico Militare (Army Ordnance)

IIA: International Institute of Agriculture

ISI: International Statistical Institute

INEA: Istituto Nazionale di Economia Agraria (National Institute of Agricultural Economics)

MAIC: Ministero di Agricoltura, Industria e Commercio (Ministry of Agriculture, Industry and Trade)

SAI: Società degli Agricoltori Italiani (Association of Italian Agriculturalists)

SAL: Società Agraria di Lombardia

SUM: Società Umanitaria di Milano

SBV: Schweizerischer Bauernverband

Main investigations and surveys

Inchiesta Jacini: Giunta parlamentare per l'inchiesta agraria e sulle condizioni della classe agricola in Italia (Parliamentary Enquiry on the condition of agriculturalists in Italy), 1877-1885.

Catasto dei Terreni e dei Fabbricati: a complete mapping of properties for fiscal reasons, beginning in 1886 and ending in the 1950s.

Inchiesta Zanardelli sulla Basilicata, 1902.

Inchiesta Faina: Inchiesta Parlamentare sulle condizioni dei contadini nelle Province Meridionali e nella Sicilia (Parliamentary Enquiry on the conditions of peasants in the Southern Provinces and Sicily), 1906-1911.

Catasto Agrario 1910 (CA): a survey of Italian land by crop and average yield per hectare which served as the basis of statistics of agricultural output, 1907-1910.

Inchiesta sulla formazione della piccola proprietà nel dopo guerra (Enquiry on the formation of smallholdings after the War), 1929-1931.

Catasto Agrario 1929 (CA): a second survey of Italian land by crop and average yield per hectare which updated the CA 1910.

World Agricultural Census: a collection of data provided by national statistical offices on the number, size, and productivity of properties, 1930.

1 Introduction

When I was appointed by Dr. Harro Maas as a graduate student at the University of Amsterdam, he explained to me that I would take part in a project that consisted of three parts, each of them dedicated to a specific site from which economists observed the economy. My colleague Andrej Svorenčik would take up the study of economic laboratories, while Dr. Maas himself would focus on economists as “armchair observers”. The object of my investigations would be the economic observatory. For today’s economists, “observation” is almost equivalent to a data point in itself, but where do such statistical data points come from? Mostly from (national) statistical institutes. Following a suggestion by Ted Porter, we labelled institutions which collected statistics “social and economic observatories”¹. We intended thus to apply to this wide range of institutions the categories developed by science studies for astronomical and meteorological observatories. The focus was on the way in which information was fed into the observatories, how it was manipulated, digested and transformed within the observatory, and how the imposing machinery of the observatory put out for a crowd of anxious economists, clean and smooth packages of data.

As a case study, I chose to focus essentially on three forms of observation discussed by statisticians and agricultural economists in Italy between the end of the 19th and the beginning of the 20th century. The statistician Giovanni Battista Salvioni, for instance, distinguished enquiries from statistics, and monographs. Although he never ventured into formal definitions, statistics were for Salvioni collections of numerical data on the social and economic situation of a country. Statistics lead to “numerically determined conclusions over the units existing in a given mass”². They were impersonal collection of quantitative data, in principle covering the whole relevant population. Such data could be subject to statistical elaboration: the computation of averages, variance, and the drawing of graphs. Samples smaller than the whole population would have distorted the results, and made the averages meaningless. For

¹ [Porter (2007)].

² [Salvioni (1892)], p. 38.

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agricultural economists, agricultural statistics meant almost invariably yearly statistics of surfaces classified by crops and agricultural output.

Enquiries (It. *inchieste*) were also investigations of social and economic problems but they included also qualitative data and took advantage “of the knowledge of all those who have the skills and interest to express what they know about the topic of the enquiry”. The truth, in this case, would emerge from “the clash of opinions and the comparison of often contradictory witnesses”³. These witnesses came as respondents to a questionnaire. Legitimate answers were not impersonal. Instead, they were valuable because of the position of the respondent (geographical position, social status, profession, etc.). Their answers summarized a long (often experiential) acquaintance with the phenomenon under scrutiny or with certain aspects of it. The task of the enquirer was to analyze and recombine these answers in a sufficiently impersonal and consensual report, by weighting them against his or her own direct investigation and by trying to offset the partisanship of the respondents’ positions.

Monographs were for Salvioni similar to enquiries, but instead of observing a great number of facts of a given type, they investigated a single instance, often a typical instance, of a kind. There were monographs on families, of farms, of villages, and provinces. At the core of the family and farm monographs there was a budget: a list of assets and liabilities which characterised the life of the family or of the farm. By combining many of such budgets it became possible to treat monographs statistically (computing averages and variance, and drawing graphs). Monographs then became the raw material for aggregate statistics of businesses. The way that monographs recorded the information was impersonal (a budget), but the selection of the individuals to be studied relied on a combination of contingent factors, including experiential and positional knowledge.

This work discusses these forms of observation as they were employed in investigations related to agricultural economics. For each form of observation, (agricultural) enquiries, (agricultural) statistics, and (farm) monographs, I tried to disentangle the components of the process of observation and identify the sites of observation. By choosing this case study, I consciously

³ [Salvioni (1892)], p. 32: “[Le inchieste] si giovano delle cognizioni di tutti coloro i quali hanno capacità ed interesse ad esporre quanto sanno relativamente a quest’oggetto; dall’urto delle opinioni e dal confronto delle deposizioni spesso contraddittorie, ma non perciò meno utili, balza fuori la verità” (all translations in the text are mine).

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pushed the initial idea of a statistical observatory to its limits. The focus on a relatively early moment in the history of national statistical offices and on agriculture forced me to reconsider the basic concept of the observatory.

My initial view of the observatory was inspired by the book *The Heavens on Earth: Observatories and Astronomy in Nineteenth-Century Science and Culture* (2010) by David Aubin, Charlotte Bigg, and Otto Sibum. They mainly referred to astronomical observatories, i.e., to hugely centralized research sites mobilizing important resources over long periods of time. Moreover, they straightforwardly assumed the distinction between observing and experimenting which is the final crystallization of a long historical development⁴. For these three authors, the observatory is essentially a physical site where observations are collected by means of appropriate tools and then centralized and mathematically manipulated with the statistical techniques elaborated by Laplace and Gauss⁵. Methods of observation, techniques of mathematical treatment, and instruments form the basis of what they call “observatory sciences”.

This initial image of the observatory clearly fell – in my view – into Bruno Latour’s broader category known by its “centre of calculation”. Latour describes a *dialectic movement of knowledge*, with cycles leading to the accumulation of knowledge (and therefore power) into centres embodied by academies, observatories, laboratories, etc. The tool of this accumulation is the mobilization of the world, in both senses of the term: mobilization in the sense of making things mobile, capable of being moved to the centre (as seen in the translation of a territory into a geographical map) but also in the military sense of making things responsive to orders coming from the centre⁶. Although Latour’s idea of centres of calculation applies in fact to scientific activities in general, it reveals, nevertheless, a very centralist view, shaped by the institutional arrangements of modern science: the centre leads and dominates the whole process of *probing, mobilizing, and accumulating*.

As the work advanced, I realized that the resulting picture was more open than Dr. Maas and I had first expected. Agriculture being probably the most geographically spread of all economic activities, the focus of the research shifted from the immobile observatory of astronomers to the *wanderings* of data-gatherers. The centralization of agriculture within the statistical observatory

⁴ [Daston and Lunbeck (2011)].

⁵ [Aubin et al. (2010) Aubin, Bigg, and Sibum].

⁶ [Latour (1987)], pp. 223ff.

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revealed itself more as a difficult effort of self-discovery by the Italian state and society than an achievement. Attention to geographical and historical distinctions emerged, instead, as the core of the discourse of agricultural economics since its beginning.

1.1 Observatories, centres of calculation and local elites

The institutional indeterminacy so typical of the Italian state, which seems to be a mix of local resistance and central negligence, added to the difficulty of identifying clear cut observatories. The fact, however, that the Italian state was less capable than other European states of building actual sites for the accumulation of knowledge on agriculture by means of long-term, expensive investment programs was not the only peculiarity of this case study. The metaphor (or heuristics) of the observatory became a problematic guide for my research when the collection of economic data in agriculture turned out to be very far from the practices of observation in observatory sciences, as described by Aubin, Bigg, and Sibum. Discrepancies were particularly evident when looking at the agencies involved in the process of observation. On the one hand, the notion of an observatory as a site of detached observation did not correspond to the aim of agricultural economists as observers: knowledge, for them, meant first and foremost the *transformation* of the countryside. Even a more general view such as Latour's, on the other, was far from perfectly fitting the patterns of agency behind the observational processes here described. The active effort that the centre directed at mobilizing the peripheries was matched in fact by the effort that the peripheries, in turn, put into transmitting and shaping the information that the centre was to receive.

To start with the first element, the degree of involvement of agricultural economists in agriculture had hardly any parallel in the observatory sciences of Aubin, Bigg, and Sibum. Involvement and practical concerns were the points that agricultural economists continuously stressed. In contrast with pure or theoretical economists, they considered themselves applied scientists, technicians and engineers. Observing agriculture was, for them, inseparable from transforming agriculture. This blurs significantly the classic distinctions between observation and action (or *vita activa* and *contemplativa*, so to say), and between observing and experimenting. We will see how this shaped the way in which the opposition between *subjective* and *objective* was built in this period.

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Agricultural economics, in particular, as a *savoir* concerning agriculture, agricultural businesses and agricultural populations empowered the managing of agriculture at different levels and rested on tools, methods, procedures, devices (institutional devices as well as techniques and material objects), and practices that were directed at observing agriculture, agriculturalists and their economic interactions⁷. The problem that agricultural engineers, agricultural economists, agricultural statisticians, politicians, functionaries and the agricultural ruling classes in general faced was not that of detached observation, or “science”. They wanted to build the “informational space” for directing agricultural transformation, and to carry out agricultural improvements.

Agricultural transformation consisted first of all of introducing new technologies, of the technical transformation of productive systems by means of fertilizers, new crop rotations, new machines, and new patterns of land division. It was carried out not only in universities or laboratories, but mostly *in corpore vivo* of the economy, in farms and local markets and it required endless transactions between experts and farmers. Practices of observation and transformation formed an inextricable nexus and the sites of observation and transformation coincided to a great extent. Instead of an observatory science, agricultural economics, in terms of an observation site, can be more appropriately labelled a “science of the construction site” or a science of transformation.

The underlying power structure is at first sight similar to Latour’s cycle of science: the outside world is mobilized and incorporated into the “centre” that can therefore project its power outside and manipulate the world it now knows; it can then extract more knowledge from it and start a new cycle. The fundamental dynamic determines therefore the existence of a centre and a periphery. In this respect a science of directing transformation justifies and is justified by divides between experts and laymen, between urban culture and rural marginality, between progress and backwardness, between those who lead and those who are led. The cluster of what we can call the “sciences of agricultural transformation” (agronomy, agricultural economics, rural sociology,

⁷ The bases of any transforming power as Michel Foucault put it, are “des instruments effectifs de formation et de cumul du savoir, [...] des méthodes d’observation, des techniques d’enregistrement, des procédures d’investigation et de recherche, ce sont des appareils de vérification” [Foucault (1997)], *cours du 14 Jan. 1976*, p. 30.

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agricultural engineering), has been analysed by the literature arising from similar disciplines (such as urban planning) that focus on *shaping the environment*⁸.

James F. Scott, for instance, has criticized the *grand plans* of agronomists and agricultural economists, their arrogance in imposing transformations planned by the centre rather than accepting gradual and spontaneous changes. In his words: “If the logic of actual farming is one of inventive, practiced response to a highly variable environment, the logic of scientific agriculture is, by contrast, one of adapting the environment as much as possible to its centralizing and standardizing formulas”⁹. Jan Douwe van der Ploeg focused his critique of “high modernist planning” on the issue of agency, which is expropriated from farmers and conferred upon “agricultural experts”. Critiques analogous to those of van der Ploeg have been applied to specific historical cases: Judith Pallot discusses, for instance, the role of agronomists in the top-down reform of Russian agriculture attempted in the early 20th century, while Yannis Kotsonis points to the paternalistic leadership of agronomists in the cooperatives of farmers of the same period¹⁰.

But those who actually engaged in agricultural transformation in the early decades of the 20th century saw their work in much more nuanced terms. Beyond the undeniable relationships of power hidden in the apparent neutrality of techniques, agricultural transformation in Europe in the early 20th century still remained a cross-road of the periphery and the centre, of local ambitions and planning ability. The persisting role of the traditional elites, which has been the object of so much historical research since Arno Mayer’s celebrated *The persistence of the Old Regime*, constituted, in Italy in particular, alternative and local centres of power, decision, and the accumulation of *savoir*¹¹.

The strategies of observation discussed in this work show in fact that, under the liberal government of Giovanni Giolitti, at least, the knowledge and statistics of agriculture were the result of the combined actions of a multiplicity of centres within the administration of the Italian state and in civil society. Statistics and economic observation in general were more the vehicles of the political representation of local forces in the centres of political decision. Chapter 5 and

⁸ [Rabinow (1989), Scott (1998)].

⁹ [Scott (1998)], p. 301.

¹⁰ [van der Ploeg (1999)], for the concept of agency referred to by van der Ploeg see [Giddens (1984)], p. 9: “Agency refers not to the intentions people have in doing things but to their capability of doing things in the first place” [Pallot (2000)] and [Kotsonis (1998)].

¹¹ [Mayer (1981)].

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Chapter 7, below, are in particular dedicated to the issue of the representation (in the Italian meaning of political *rappresentanza* rather than *rappresentazione*) of the agricultural classes. Each of the local groups added its locally oriented item to the information collected and tried to steer the policies of the government in its favor. Even the harvest statistics, which allowed in principle comparisons across regions and nationwide aggregation, were somewhat remote from any centralist and statist model. Although they empowered the centre (the political centre), as in Bruno Latour's scheme, they were also intended for the peripheries, for geographical differences to assert themselves and to make themselves heard by the political centre.

Agricultural economists also to some extent collected the voices of the various bodies of society. Civil society, we would say, expressed itself in the making of statistics. Obviously not everybody was represented in the same way. Landed elites dominated the very structure of observation, but the lower classes, farmers and peasants, were not left completely without a voice. And if they expected to be damaged by the information, they could mislead the investigation or refuse to cooperate (what Albert Hirschman would have called a strategy "Exit"). Since observation of agriculture was a multilayered enterprise that necessarily began with the peasant, the state and the ruling classes could not ignore the problem of consensus. Therefore, agricultural economists attributed crucial importance to the participation and involvement of the population observed in the observation process. Between the late 19th century and the end of the 1920s (and beyond), recommendations to empirical researchers repeated the *mantra*: gain the trust of the peasant! Agricultural economists then took up the task of translating the "unreflecting word" of peasants into the categories of the reading public.

Knowledge was participative and the observed actively engaged in shaping the observation that reached the observer. The stabilization of the Fascist regime, which was *also* propagandising centralization and modernization, modified and stiffened, but did not eliminate, these interactions. Latour's view of centres of calculation seemed consequently an exceedingly simple way to encompass these interactions.

1.2 Agricultural zones as biological niches

I take the problematic appropriateness of the centralist notions of "observatory" and centre of calculation" as capable of defining the cluster of practices that I discuss here. It demonstrates the

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fact that agricultural transformation was much more than a set of high-modernist projects stemming from a ruthless, universalistic, bulldozer-like rationality. In fact, agricultural economists since the “founding fathers” of the discipline, Arthur Young and Thaer in the 18th century had always alleged an opposition in principle to “centralizing and standardizing formulas”. Agricultural economics stressed first of all differences, anomalies and peculiarities¹².

In Italy, agricultural economics had had at least two fathering groups. In Lombardy, it was Carlo Cattaneo and his friend Gaetano Cantoni in the 19th century, and in Tuscany it was the group Accademia dei Georgofili. If both groups believed (the first more than the latter) in progress, technological improvement, free trade (a portrait of Richard Cobden still hangs in the hall of the Accademia dei Georgofili), both groups, albeit with different *stresses*, praised and celebrated the slow and natural accumulation of knowledge and labour that the territory itself represented. The form that had been given to the landscape, and the social relationships that had created the agricultural landscapes of Lombardy or Tuscany, were recognised as the embodiment of adaptive knowledge.

For Cattaneo, the legislation on canals and the cadastre of Maria Theresa, the structure of large tenancy, sericulture and the industry of the cities merged with the natural flows of rivers, geology, and climate into a harmonious whole built by centuries of anonymous farmers and landowners. Cattaneo’s masterpiece, *Dalcune istituzioni agrarie dell’Alta Italia applicabili a sollievo dell’Irlanda*¹³ documents precisely this inextricable connection of nature, human creativity, and history. When shortly after the catastrophic “potato famine”, in an early example of “development economics”, the British government asked Cattaneo how the best practices of Lombard agriculture could be transferred to Ireland, Cattaneo explained to the British ambassador that Lombard agriculture was strictly linked to the complex of Lombardy’s social institutions and geographical conditions and concluded that there was no easy model that could be applied to the island¹⁴. Cattaneo was certainly convinced of the progressive virtues of non-

¹² Significantly, the first models of economic geography were developed by Johan Heinrich von Thünen, a German agricultural economist with pedigree (he was a pupil of Albrecht Thaer, the dean of German agronomists and himself a follower of Arthur Young, the revered British agronomist); [Nou(1967)]contains a good illustration of the point, on von Thünen see chapter 6.

¹³ Of some agricultural institutions of Upper Italy that could be applied for the relief of Ireland.

¹⁴ Now in [Cattaneo and Einaudi (1939)].

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aristocratic large tenants; he believed in the civilizing role of cities, and in the international division of labour; but it would be unjust to enrol him in the group of modernist planners.

It is equally difficult to classify according to the categories of modernist *pensée unique* the “moderate” landowners of Tuscany gathered in the Accademia dei Georgofili. They celebrated Cobden’s struggle for a free grain trade, but the manifesto of their system of estate management was Jean Charles Léonard Simonde de Sismondi’s *Tableau de l’agriculture toscane*¹⁵. In this short treatise, the Swiss bourgeois who styled himself the descendant of a patrician family from Pisa, described the spontaneous and harmonious wisdom that was embodied in Tuscan agriculture: the careful managing of water sources, the participation of sharecroppers in entrepreneurial risks, the integration of vine-growing and fruit gardens etc. – these were all aspects of a living organism that no conscious imitation could reproduce. Sismondi’s praise of the social stability engendered by Tuscan share-cropping became a commonplace and passed into Sidney Sonnino’s project of agricultural reform around the turn of the century, and even into the scientific debate of the 1920s and 1930s.

It is needless to underline here the pervasiveness of biological metaphors in agricultural economics, but the understanding of agriculture as a living organism, the attention to differentiated *agricultural niches*, was a key element of agricultural economics in continental Europe. Whether they fought against or for the intervention of the state in agriculture, agricultural economists insisted on the peculiarities of agriculture, its local and differentiated nature, the fact that it obeyed biological rather than mathematical laws. Two aspects merged in such claims: 1) each agricultural niche was in its own way an organic whole; 2) agriculture, where nature prevailed, differed from industry, where the machine dominated the production process.

For Aleksandr Čajanov in Russia, for Ernst Laur in Switzerland, for Arrigo Serpieri in Italy, the transformation of agriculture could not be based on rational deductive principles. Čajanov in 1917 opposed, for instance, a “grass-roots” (Rus. *stikhijnoe*) development led by “socially organised reason”. He claimed that “socially organised reason” was particularly ineffective in guiding agricultural transformation. To an audience of Russian agricultural economists and agronomists, he stated: “in undertaking the reconstruction of the foundations of the agricultural structure of our fatherland, we cannot set to ourselves [Russian agricultural experts] a plan

¹⁵ [Sismondi (1801)].

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which is only deduced from reason, from our abstract ideas”. Agricultural transformation should face local, context and time-specific problems, rather than seeking to offer universal solutions, because it was engaged in the “construction of real life”¹⁶.

In 1947, in a speech to the constitutional assembly of the recently proclaimed Italian Republic, Luigi Einaudi distinguished the alleged “rational exploitation” of land from the practice of agricultural transformation as it was before the 1930s. According to him, before Fascism, agricultural experts “never taught the “rational exploitation of land”: they always examined local crops, local customs and local economic possibilities, pushing farmers to perfect their local and consuetudinary systems”¹⁷. He attributed to the centralization of agricultural assistance brought about by the Fascist regime the introduction of ‘rational’ planning and the oppression of agriculturalists. There is of course a fair amount of idealization in both Čajanov and Einaudi’s claims, but still it is significant that they both advocated a way of observing/transforming agriculture which clashes with the image of stubborn, projecting agricultural engineers such as Scott or van der Ploeg depict in the late 1990s and early 2000s, after decades of development economics and market globalization.

Scott’s *high-modernism* presupposes, in fact, an effort to make the world *legible* for bureaucrats and planners, however ignorant of the context they might be. Legibility, as the informational base of modern statecraft (in an almost Weberian sense), implies mapping with a high degree of standardization, and betrays the fact that the appropriation of the land in terms of knowledge precedes only the colonial appropriation of the soil. The French cadastre in Indochina is a representative example of this kind of *legibility*. Statistics are also an important tool of legibility. In *Trust in numbers*, to which Scott refers, Porter underlines how statistics developed as an instrument of power that was transparent and equalizing¹⁸. What Porter (and Lorraine Daston; see [Daston and Galison(2007)]) call *mechanical objectivity*, the observation of reality on the basis of uniform rules, creates a universe of numbers and procedures that governments can count upon for their action. The role of the above mentioned “statistical observatories” would consist

¹⁶ Čajanov, Aleksandr Vasilevič, *Čto takoe agrarnyj vopros?* (What is the agricultural question?) republished in [Čajanov and Tonču (2006a)], p. 12f.

¹⁷ Einaudi, Esame degli emendamenti agli articoli del Titolo terzo Parte prima del progetto di Costituzione, held on May, 13 1947: “Costoro non hanno mai insegnato sfruttamenti “razionali” del suolo: hanno sempre cercato di vedere quelle che erano le culture del luogo, quelle che erano le consuetudini e le possibilità economiche del luogo ed hanno cercato di spingere i coltivatori a perfezionare i loro sistemi locali e consuetudinari”.

¹⁸ [Porter (1995)].

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precisely in stabilizing the flow of these objective numbers. Nevertheless, while Porter underlines the intrinsically democratic nature of “objectivity” so defined (everybody obeys the same transparent rules), Scott stresses that these technologies of legibility can be used to flatten differences and impose control.

It is very revealing that Scott’s interpretation of cadastral mapping (one of the key elements of *legibility*) is actually based on the reading of a book by Roger and Elizabeth Baigent that is fundamentally dedicated to cadastral maps as *title deeds*, only one and not by far the most important of the functions of modern cadastres. The authors privileged the moment of mapping rather than the procedures of assessment. In fact the book adopts a very broad understanding of the notion of “cadastre” which includes property mapping in the British colonies. The very broad definition of cadastre that they used led them to assimilate to European cadastres the surveys carried out in colonial or imperial contexts where mapping and appropriation in practice went hand in hand and the level of detail of the mapping was inevitably low¹⁹. Kain and Baigent, for their part pay very little attention to the Milanese cadastre and fail to understand its importance and the relevance of the Milanese model to other countries²⁰. If they had focused instead on early modern Italian cadastres, very different features would have emerged: first of all, the degree of contextual and local knowledge that was required for cadastral mapping; then, the niveau of analytical detail that the operations that led to the mapping demanded; and finally how much the whole enterprise, although clearly done in the service of the state, relied on consensus and on the operations of the “intermediate bodies” of the *ancient regime*²¹.

In fact, agricultural transformation, as it was understood by the Italian agricultural economists of the early 20th century, although it clearly was a *modernizing project*, did not rely on “abstraction and universality” as did Scott’s “scientific agriculture” and “modern statecraft”. On the contrary, agricultural economists looked for data with a high degree of detail. The fact that agriculture was considered to be so locally differentiated and conceived in terms of biological units made it very difficult to fix its production in the schemes of statistics. Statisticians did not fail to remark this

¹⁹ The book is often cited by studies in colonial surveys in non-European contexts: [Brayshay and Cleary (2002)][Kark (1997)].

²⁰ [Kain and Baigent (1992)].

²¹ The contractual strength of landowners in 18th century Milan has been stressed by recent studies such as [Pederzani(2008)], while [Locatelli (2003)] signals that the relationship between the Austrian government and local elites changed in the 19th century.

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fact. For Alfredo De Polzer, in 1942, agriculture had been the last domain for which convincing statistics were made available²². As we shall see, at the beginning of the 20th century agricultural statistics seemed to require the critical intervention of experts, of individuals endowed with contextual and often tacit knowledge. The importance of local elites in mediating knowledge about their territories was also a consequence of the assumed impossibility of reducing agricultural expertise to standardized procedures.

If we now look at the specific observational tools that agricultural economists had recourse to in order to observe and systematize local differences, we see that statistics in Salvioni's sense formed only some of the instruments of choice. Agricultural transformation required a mapping that would preserve the variety of agricultural organisms populating the countryside. It demanded taxonomies and typologies. To farm types I devote what became the most conceptually demanding chapter of this work. Agricultural economists were interested not in a "statist" homogeneity of censuses and numbers, but rather in parcelling the territory, delimiting "agriculture zones" with constant characters, and well defined relationships between their parts. Serpieri's analysis of Upper Milanese (1910), for instance, discusses an integrated system of sericulture, manufacturing workshops, sharecropping and irrigated farming²³. From this point of view too, the observative practices of agricultural economists challenge the notion of a statistical observatory and come closer to the work of ethnographers and geographers, who describe "societies" as whole structures. But in contrast to ethnographers who usually operate in remote colonies, agricultural economists deal with citizens (sometimes well-off landlords) and officials, who are very concerned about the potential effects of the analysis.

The immediate consequence of this conception of agriculture and of these methodologies of observation was that agricultural economists thought they needed local rather than national observatories. In fact, the very involvement of local elites in the making of nationwide statistics in Italy derived – as noted above – from the recognition that without a fine-grained understanding of peculiarities (such as only locals can have), the final result would be meaningless. Each group of landowners, each one of the agricultural associations that took part in the preparation of the statistics of 1910, was in some sense observatory of its own. The need for regional observatories was even more evident in the case of analyses of farm budgets, farm

²² [Polzer (1942)].

²³ [Serpieri (1910)].

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monographs and other forms of observation that targeted individual businesses. In the 1920s Italian agricultural economists, therefore, tried to establish provincial observatories (It. *osservatori provinciali*) on the model of the *Sekretariat* created by Ernst Laur in Switzerland. These observatories were to follow individual businesses and collect their budget accounts for as long as possible. They needed small samples and sensitive contact with the surveyed farms.

The *osservatori provinciali* resemble more the “observatories for the social sciences” currently discussed in the United States than the centralised and heavily numerical observatories sketched by Porter. The consensus reached at the National Science Foundation Workshop held in October 2011 stresses indeed three main features that should characterize social science observatories (SSOs). For the participants to the NSF workshop, SSOs should be able to conduct observation on a longitudinal sample (following the same individuals over time), they should be local or “place-based” rather than national, and they should be connected with local institutions and communities²⁴.

1.3 Small holdings and large estates

The final element that I want to address in this introduction is ideology. Agricultural economists, in Italy and elsewhere in Europe, shared similar concerns and gave similar ideological responses in the period following the agricultural crisis of the late 19th century, so that I think it important, at least in this introduction, to suggest a wider, even European perspective to the reader. The stress on the local element of the technically progressive transformation of agriculture contains the seeds of a seemingly paradoxical conservative discourse. The observation of local integrated agricultural systems very soon began to evolve into a eulogy of rural marginality. This went hand in hand with the crisis of the traditional forms of large property, a crisis that began before the war, with the inflow of American and Australian cereals in European markets. While the first globalization pushed factories to grow in size, and companies united in huge *trusts*, the effect on large estates of the inflow of cheap products from outside the European core was disruptive. Although to manufacturing firms growth and gigantism were inevitable strategies of survival, small agricultural businesses proved unexpectedly more resilient to economic crises, because to a

²⁴ [Moran et al. (2011) Moran, Entwisle, and Brown].

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great extent they produced only for the consumption of the peasant family itself or specialised in products such as cheese or garden vegetables that were not shipped.

Even Marxists were forced to face this. Already at the end of the 19th century the German social-democrat Eduard David had explained this phenomenon, which seemingly contradicted Marx's predictions, in these terms: in agriculture, Nature, not the machine produces, and small farms can thus win the competition against big ones. In agriculture therefore the tendency towards concentration of capital would not take place²⁵.

Agricultural economists felt that the rural world was threatened by the expansion of industry, by the flight from the countryside, and by the subverting influence of socialism. Day labourers above all, deprived of land, threatened the old order and their demands for better wages called into question the viability of estates employing hired labour. Social problems in the countryside obviously differed from country to country. In Germany the flight from the land (*Zug vom Land*) was caused by the burgeoning industrialization. In the East of the country, the administration of large estates substituted ethnic Poles for ethnic Germans as day labourers, a phenomenon that increasingly worried Prussian authorities. But in the whole of Germany, the conditions of peasant workers were such as to impel peasants towards the cities. The ideologues of the *Bund der Landwirte* and related organizations lamented the decline of the countryside and the resulting depletion of the "sources of German population"²⁶. These issues mobilized important intellectual resources: the *Verein für Sozial Politik*, for instance, commissioned from Max Weber an enquiry into the conditions of the peasants who lived East of the Elbe²⁷.

A possible solution was identified in *innere Kolonisation*. Settlers from agriculturally overpopulated areas of Germany would receive plots of land in the East, where they would set up intensive farms. In principle the land would be obtained from aristocratic families in financial distress, whose large estates would be broken down into smaller plots. The main theoretical contributions in this field came from Max Sering, a pupil of Gustav Schmoller, who wrote his *Die innere Kolonisation im östlichen Deutschland* (1893) after visiting farmers' settlements in Canada and the United States²⁸. *Innere Kolonisation* was a solution that allowed peasants to be kept in the

²⁵ [David (1895)]. Eduard David was a legal Social-democrat and a follower of Bernstein.

²⁶ [Bergmann (1970)].

²⁷ [Weber (1892)].

²⁸ [Nelson (2010), Sering (1893)].

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countryside without radically changing economic relationships²⁹. Sering's projects were revived in a leftist mode after the Great War by the Social democratic government of Philip Scheidemann and Eduard David, in an attempt to weaken the Prussian Junkers³⁰. The NS government changed the meaning of *innere Kolonisation* in a markedly ethnic direction and expanded the program to the territories occupied in WWII.

In Italy there were great disparities between different areas of the country. While the area of Milan in the early 1900s was already affected by the development of manufacture in the cities, in other areas the excess of agricultural population gave rise to massive waves of emigration abroad. Arrigo Serpieri therefore complained, in his analysis of the conditions of peasants of the Upper Milanese, that rural families were getting "contaminated" by urban habits, since sharecroppers were turning into factory workers³¹. Southern landowners instead lamented that because of emigration good workers were increasingly scarce³². Malaria, water scarcity and goat herding left vast portions of land almost unproductive. Internal colonisation seemed also, in the case of the South of Italy, to be an appropriate solution. Sharecroppers from overpopulated areas of Central Italy would be induced to move to the underexploited areas of the South to *teach* the locals better techniques, and to carry out, with their work and superior knowledge, the transformation of the soil. Agricultural economists in Italy also expected that the large, extensively farmed latifundia would be replaced by more effective intensive family farms, which absorbed more labour and increased the value of the land capital. In this way, the flow of migration would stop and people would remain in their native villages.

Internal colonization became a key promise of Italy's ruling class to the peasant soldiers of WWI: after the war they would receive their plot of land. These promises inspired the aborted project of a law *On the transformation of latifundia and inner colonisation* rejected by the Senate in 1922. The land reclamation policy, to which Arrigo Serpieri had made an essential contribution since 1923, was in many senses a politically conservative prosecution of the programs of internal

²⁹ [Bergmann (1970)], p. 98.

³⁰ They approved the famous *Reichssiedlungsgesetz* of the 11th of August 1919; see [David (1930)], see also the obituary that appeared in the Italian *Giornale degli Economisti*: [Lorenzoni (1940)].

³¹ [Serpieri (1910), Corner (1993)].

³² Such were the complaints recorded by the Faina enquiry of 1906.

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colonisation. Significantly, Giovanni Lorenzoni, who was Sering's Italian pupil, applauded Serpieri's initiative and Sering himself insisted on meeting Serpieri³³.

A presupposition of this program was the assumption that small, intensive farms were more efficient than large extensive ones and better able to stand international competition from countries outside Europe. This point was not obvious, for most agronomists and agricultural economists of the 19th century had hitherto concentrated on the modernization of large estates that could afford new machines and complex rotations, while small farms were thought to produce mostly for their own consumption. How were small farms to play the progressive role that supporters of inner colonisation expected from them? Their ideas were reinforced by the data collected by Ernst Laur, the leader of the Swiss Union of Farmers, who proved empirically that small farms could be more efficient and socially more desirable than large ones.

In 1901 Laur began moving the focus of his enquiries from the exploitation of large farms to medium-sized and small farms where most of the agricultural population was employed. His *Sekretariat* collected hundreds of budget accounts of Swiss farms and elaborated them statistically by classes of surface. The results shaped the whole discussion on the advantages of small and large farms. The key fact was that small farms had a higher yield per hectare than large extensive farms. Moreover, and this was a very important point, their yield per hectare was so much higher, that, although small farms dedicated a larger share of their product to internal consumption, in absolute terms they still sold more of their product per hectare on the market than did large farms.

A new paradigm with three pillars was deduced from these facts. The first pillar was small property. It had to be small, but not exceedingly small - enough to support a family by farming. The second and third pillar were intended to defend small property so defined. They consisted of state intervention (protectionist tariffs on milk in the case of Switzerland), and cooperation. Co-operatives of farmers would enable small farmers to buy fertilizers and machines, and acquire modern farming techniques at the same price as bigger farms. They would thus enjoy the advantages of economies of scale without being reduced to agricultural proletarians. The ensuing path of development would be based on capital and labour intensity alike, since human work would improve the land and enhance the value of land capital. Laur was immensely influential in

³³ [Lorenzoni (1925)][Lorenzoni (1940)].

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Europe and his importance has not received due recognition in the historical literature. Čajanov's family farm and Serpieri's *ruralismo* are heavily indebted to Laur's ideas and observational methodologies (see Chapter 9).

For Laur, for Serpieri, and for many of their pupils, the defense of the peculiarities of the countryside assumed over the years, and after World War I in particular, a distinctively conservative flavor. But even Max Sering, who vehemently opposed the NS regime in Germany, considered with a benevolent eye the leading fascist agricultural economists such as Serpieri and Giuseppe Tassinari³⁴. The documents preserved in the archive of the International Institute for Agriculture that relate to the 1920s and 1930s show parallel concerns for overproduction crises, for the flight from the countryside, and for the expansion of socialist movements. The IIA, led by first rank officials of the Fascist regime such as Giuseppe De Michelis, Ludovico Spada Veralli Potenziani, and Giacomo Acerbo kept an invigilating eye on the activities of the Economic Committee of the League of Nations, dominated by its Belgian pro-industrialist president. The leadership of the Institute enthusiastically followed the activities of the Agrarian Unions of Czechoslovakia and Estonia. The IIA organized meetings and congresses of agricultural economists until the war, notwithstanding the increasing difficulties due to the international sanctions imposed on Italy in 1935.

Even "leftist" agricultural economists ended up on the right of the socialist movement. Eduard David was targeted by Lenin's accusation and shortly before his death (1930) engaged in a revealing debate in Friederich Ebert's journal *Die Arbeit*, where he attacked collectivization, and distinguished the *organic processes* of agriculture and the *mechanic processes* of the factory system. In Čajanov's post-revolutionary utopia *Travel of my brother Aleksei to the land of agricultural utopia* (1920), Russia in 1984 is ruled by peasants; they have "ruralized" cities, imposed a taste for populist painters (the *peredvižniki* and Pieter Breugel) and confined industry to high technology complexes that are almost completely mechanized³⁵. It is not surprising that Stalin arrested Čajanov in 1930 as the head of a counterrevolutionary conspiracy.

But it was of course in the conservative countries of Central Europe that the hostility to industrial modernization fully displayed itself. In these countries there was a widespread

³⁴ [Lorenzoni (1940)], p. 7.

³⁵ [Kremnev (1976)].

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intellectual opposition to centralization, economy of scale, planning and the global market and praise for smaller-scale, segmented, traditional societies, such as can be found in Ernst Jünger or Carl Schmitt. Against American market capitalism and Soviet planning, against the dominance of “unbridled *tékhné*”, they invoked a space where impassable barriers repulsed technologies that would inevitably lead to standardization, concentration and gigantism³⁶. Schmitt’s *Großräume* were basically a compromise between the need to grow in scale imposed by new technologies and the desire to avoid surrender to either the American or Soviet ideals³⁷.

In the 1930s, in Germany, a country where mechanization was much more advanced than elsewhere in Europe, there was powerful resistances to the idea of “doing like in America”³⁸, i.e., organising farms as factories. As for Laur, the Swiss agricultural economist is well known as the propagandist of an inward oriented rural Switzerland. Laur’s *Erinnerungen eines schweizerischen Bauernführers*, published in 1943, proudly documents his relationship with the German NS-minister (and agricultural economist) Richard Walther Darré, and with the Italian Fascist leadership. In Italy: the *kholkoz* and the American farm were equally disapproved of³⁹. When the philosopher Ugo Spirito, the ideologue of *corporativismo*, imagined the future of agriculture in Fascist Italy, and invoked mechanization and standardization, Serpieri reacted irritably. According to Spirito’s journal *Studi corporativi*, agriculture should become an industrial sector like any other. Serpieri answered by defending the peculiarities of agriculture⁴⁰.

1.4 The structure of the work

In this introduction In this introduction I have tried to sketch the intellectual evolution of Italian agricultural economists in a European context. In very broad terms, I wanted to present the way in which Italian agricultural economists of the first three or four decades of the 20th century

³⁶ [Schmitt (1942)].

³⁷ [Schmitt (1939)].

³⁸ [Uekötter (15.09.2010)] for the 20th century, but for earlier examples of anti-American rhetoric among German agricultural leaders see: [Bergmann (1970)] p. 93.

³⁹ For an example, see the discussion of Soviet Union war communism in [Lorenzoni (1929)], shortly before the dekulakisation of 1929: the Soviet attempts to create huge socialist farms in the year 1918-1920 were deemed a failure, and Lorenzoni stressed that the NEP was forced to liberalise peasant farms.

⁴⁰ [Spirito (1930)] and Serpieri’s answer in the following issue of the same journal.

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situated themselves within the alternative between a *smooth* and a *corrugated* space. I borrow these terms from Jacques Deleuze, and Felix Guattari, for whom ‘corrugated’ stands for the coexistence of historically and geographically differentiated *loci*, while smooth defines a space that opposes no limit to the products of a technical rationality detached from history and geography⁴¹. In my examination below of the observative practices of agricultural economists in Italy between the end of the 19th and the first decades of the 20th century, I try to show the permanent oscillation between these two poles: smooth and corrugated, centre and peripheries, mechanical and experiential, statistics (as the expression of universalising and mechanical procedures) and typologies.

The result is four blocks of two chapters each and one final chapter. The first block (Chapters 2 and 3) introduces the readers to the characters of my story: the agricultural branches of the state administration that were concerned with agriculture, the associations of landowners, the agricultural technicians. These characters are not stable, and they evolve as the story unfolds, but the *dramatis personae* should make it easier for the reader to follow the developments. In particular, Chapter 3 focuses on agricultural experts in the era of Giolitti. I approach there the connection between the theory of agricultural economics and agricultural transformation, and introduce to the reader the schools and *cattedre* that formed the frontline of the agricultural transformation.

The second, third, and fourth blocks, for their part, are dedicated to the three *forms of observation* which I identify in the methodological tracts of the late 19th and early 20th century. Each block has its own internal chronology and follows the way that the forms of investigation evolved over time in Giolitti’s and eventually Fascist Italy. The combination of these forms describes an overarching line of development from the early years of the Italian State to Fascism. The enquiries are derived from relatively ancient practices of government. They require no permanently dedicated structure charged with observation and are bound in time and space. Instead, the end points of this work, the new agricultural cadastre of 1929 and the observatories of agricultural economics, mark the victory of relatively stable and even centralized sites of observation, with permanent staff and long-term programs.

⁴¹ [Deleuze and Guattari (1980)].

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Two chapters (Chapters 4 and 5) are intended to show the evolution of enquiries in the first decade of the 20th century. While giving a comprehensive definition of this neglected form of social investigation, they pinpoint the shift in focus that took place between the Jacini Enquiry of 1877 and the Faina Enquiry of 1907. This shift was brought about, to a great extent, by the importance attributed to the issue of distribution of income. This form of investigation remained the same in its general lines, but the conflicting tendencies of production and distribution in it came to the fore.

Here, I also introduce a specific definition of the duo ‘objective/subjective’. In contrast with our current use of “objectivity”⁴², for Italian agricultural economists objectivity was not necessarily restricted to the product of mechanical observational devices or of standardized procedures. The judgment of an expert could be objective enough if it was intended to simply assess facts without adding controversial political judgments or provided it did not express the desires of any particular individual or group. It might seem to us that this is a naive concept of objectivity, but still it is what agricultural economists considered a realistic *desideratum* in a context so filled with uncertainty as the investigation of the countryside.

In Chapters 6 and 7, I discuss national statistics of yearly agricultural output, as they came to be organized between 1907 and 1910, around the Agricultural Cadastre 1910. These two chapters closely relate to the initial idea of the statistical office as a site of economic observation. As announced in section 1.1, above, this prototypical notion can be invoked for the Italian Bureau for Agricultural Statistics only as a loose metaphor. The making of agricultural statistics dissolved in a multiplicity of local sites of observation, kept together by a differentiated *network of networks*. Far from the ideal “democratic number” that Porter saw behind statistics, far even from the centralistic super-number that is described in Scott’s *Seeing like a state*, agricultural statistics were made possible only by cooperation between the centre and the local elites. But as the observatory, a physical site of observation, with its imposing buildings, telescopes, igrometers, instruments of various kinds, and celestial maps, is translated into a myriad of fields and

⁴² [Daston and Galison (2007), Porter (1995)], for a contemporary view of expert judgement see, among others, [Boumans (2008)].

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local offices, into the forms filled up by agricultural economists with the help of local informants and military maps, much of its methodological and “anthropological” structure is lost.

The third block (Chapters 8 and 9) is dedicated to monographs and to the study of farm budgets. The two are closely linked because studies of farm budgets historically derive from farm monographs. Chapter 8 should summarize for the reader the references made to the concept of “typical”. The idea of typical served at least two different needs. First it was the basic unit of a cognitive “corrugated space”. Well defined typologies made differences visible and ontologised peculiarities and agronomic wholes that would have dissolved in statistics. In fact, an essential part of this chapter is dedicated to the attempts made by agricultural economists and statisticians to fit the types in statistical theory. Second, farms guaranteed to a great extent the objectivity of expert judgements. The description of typical instances allowed generalizations that were in some cases more informative than statistics. They also served as the basis of statistics, since typical instances were the only level of reality where certain details (for instance production coefficients) could be feasibly observed.

The chapters in this block analyze the institutions and methods of investigation of individual businesses (monographs). This kind of research, which historically derives from 19th century monographs on farms, was a mine of data for the agricultural economists. It provided them with precisely that fine-grained knowledge of farming that was most valuable to them. Laur’s results were based on this kind of data. The tasks that Čajanov set for to post-revolutionary Russian agricultural economists, the increase in productivity and justice in the distribution of income, also required detailed statistics of farm structure⁴³. In Italy the concept of *azienda agraria* (agricultural business, corresponding to the German *Agrarbetrieb*) was at the core of the discourse of agricultural economy. Business statistics guaranteed the highest level of detail. They shed light on the level of the echnological advancement of a farm because they showed what part of the farm’s gross product went into the purchase of fertilizers or into the amortization of machines, but they also laid out how the product was distributed among

⁴³ Čajanov, *Čto takoe agrarnyj vopros?* (What is the agricultural question?) republished in [Čajanov and Tonču (2006a)], p. 12f.

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the “cooperators” of production, between landlords and tenants, between entrepreneurs and day labourers. In business statistics, problems of distribution met problems of production and political economy merged with private economy.

Chapter 10 shows the interplay of statistical enquiries and monographs within agricultural economics in the late 1920s. The combination of different observations revealed a specific element to the agricultural economists: the psychology of peasants. This psychology of peasantry was assigned a key role in the design of policies that targeted smallholders and small tenants and their living conditions.

The resulting thesis will appeal, I hope, to a variety of audiences. During the years that it took me to write it, I had the good fortune to present individual chapters at conferences with different focuses, from meetings of historians of science to those of my fellow historians of economics. I also had the opportunity of discussing some chapters with social historians, agricultural historians, historians of science, rural sociologists. Quite obviously, the fact that I try to address so many disciplines is a risk as well as an opportunity, since many will find that their field has not received due attention. I still hope that the advantages of a multidisciplinary perspective will prevail over the weaknesses of my research.

This is first of all a contribution to the history of Italy. It sheds light on specific aspects of different problems: the role of the public administration in fostering economic development between Giolitti and Fascism; the relationships between academics, associations and the state; the birth of regionally differentiated policies. It is also, nevertheless, a contribution to the history of statistics and economics. The concept of *stakeholder statistics* that I propose here is, as far as I know, original. The attention that I dedicated to enquiries as a self-standing form of investigation is to a great extent new. Finally, I hope that my thesis will be able to open up, from an Italian angle, a problem of European intellectual history: the fundamental influence of agricultural economics on social thought between the end of the 19th century and the Second World War.

2 Actors and agents I: society and institutions

The thirty years that I cover in this work were a time of great changes for Italy. Needless to say, all the forms of observation, the observers, and the observed all changed as did their reciprocal relations. In the political sphere, the thirty years from the beginning of the 1900s to the early 1930s witnessed the end of Italy's parliamentary regime and the rise of Fascism, with the expansion of mass parties and the First World War in between. In the economic sphere they saw an impetuous spurt of industrialization. At the beginning of the period considered, the landed classes still represented the *universal class*, the nation. The local (landed) elites offered their unavoidable mediation between the state and civil society, and to a certain extent were part of both. For this reason both the political and the cognitive representation of the countryside were entrusted to them. The Jacini enquiry of 1877 was a good example of their role. The same was true for the statistics of the nation's agricultural output: in the 19th century these were mainly entrusted to institutions of local notables, the *comizi agrari*.

With the new century, the role of the traditional ruling classes was called into question from below, by the growing social unrest, and from above, by the state itself and the expanding bureaucratic and technical structure. Already the Faina enquiry of 1906 introduced the intermediation of agricultural experts (It. *tecnici agrari*), as technical delegates. The statistics of agricultural output prepared since 1910 by the Ministry of Agriculture, Industry, and Trade (MAIC) also combined the contribution of traditional elites and that of the administration's technical staff. Nevertheless, during the first decade of the 20th century, the landed elites still dominated the relationship between the state and the countryside. For this period, historians of the Italian public administration underlined that the governments of the Giolittian era, until the 1910s, generally promoted cooperation between the administration and interest groups, thereby transforming the ministries and in particular such "special offices" as the Bureau of Labour and

the Bureau of Agricultural Statistics into “reference points” for such interest groups within the government¹.

The decline of the landed elites became more visible when social tensions increased between 1909 and the war. Giolitti’s third cabinet, with Francesco Saverio Nitti as Minister of Agriculture, Industry, and Trade, marked a discontinuity, while agricultural experts increasingly saw the state as the source of their legitimacy. Agricultural experts from the 1920s became more and more a part of the state apparatus, with weaker direct links to the landed elites². The focus of agricultural economics itself inadvertently moved from the management of large properties, as had been the case for the late 19th century, to large scale economic policies that concerned agriculture. This became increasingly the case after the 1920s.

The combination of these transformations in the status and interests of agricultural economists, as well as in the status of their political patrons, inevitably over time determined the evolution of each of our three forms of observation. In this chapter I briefly resume the historical context and the actors who are relevant for the understanding of this evolution.

2.1 Landed elites after the Risorgimento: landowners and their experts

After the Unification, the agricultural elite of the former Italian states was widely represented in the two houses of the new Parliament. Many of the parliamentary leaders of the *Risorgimento*, Camillo Benso di Cavour and Bettino Ricasoli, for instance, were the innovative owners of large properties. To a great extent, the most illustrious personalities of the so called *Destra Storica* were member of the agricultural elite³. The right to vote was limited to a tiny minority of tax-payers, and taxes on land rent (*imposta fondiaria*) formed a large share of the total revenue from direct taxation. Therefore, the preeminence of landowners in the parliament was sanctioned by law.

¹ [Melis (1985)], p. 1434; on the *Ufficio del lavoro* see: [Johnson (1985)].

² On this shift, see also: [Vaquero Pineiro (2011)].

³ [Malatesta (1999)] for a comparative and comprehensive discussion of the evolution of European landed elites.

They could present themselves, as Sandro Rogari argues, as the “universal class”, the nation itself⁴.

Locally their leadership appeared in the dominating role of landowners in the *comizi agrari*, which the Ministry of Agriculture, Industry, and Trade had instituted to give some form of representation and unity to the interests of agriculturalists in general, an ambiguous definition that included in principle small peasants and rich absentee latifundists⁵. But landowners (and the wealthiest tenants) also held an unchallenged intellectual and scientific hegemony over the discourse on agriculture. Raffaello Antinori, Stefano Jacini, and Cosimo Ridolfi were at the same time landowners and celebrated writers on matters agricultural. The schools of agriculture, the agricultural societies, the agricultural academies that studied the conditions of each agricultural area relied on the monetary and intellectual contributions of landlords⁶.

Most of all in the northern and central provinces, many associations of landowners enjoyed a great reputation and played an important role: the Società Agraria di Lombardia in Milan, the Associazione Agraria Friulana in Udine, the Florentine Società di Orticultura and Accademia dei Georgofili, the Subalpina in Turin, the Società Agraria in Bologna and many others gathered the most relevant representatives of the landed elites and the agricultural experts of each area.

From the 1870s onward, moreover, the municipal and provincial administrations, which the landlords controlled thanks to the electoral system, began creating and financing travelling chairs of agriculture (together with *comizi agrari* and agricultural societies). This institution, which I examine more closely in section 3.2, below, was intended to provide technical assistance to farmers in a variety of fields ranging from crop rotation to cattle-breeding and sericulture. The first significant one was established in Rovigo in 1870, and many others were created in the following decades in Northern and Central Italy⁷.

⁴ [Rogari (1998)], p. 138.

⁵ [Corti (1973)].

⁶ [Pazzagli (2008) in particular, pp.45-48, discusses the case of Ridolfi, see also: [Biagioli and Pazzagli (2004)].

⁷ Although some regional cases were made the object of interesting studies (see f.i. Miriam Olmi's contribution in [Zaninelli (1990)]), the only account of the history of *cattedre* in the whole country remains [Zucchini (1970)].

In 1876, with a sudden reversal of the political majority, the *Destra storica* ceded power to the so-called “Historical Left”. The government of the Left, which under the guidance of Agostino Depretis and Francesco Crispi, was in power almost without interruption from 1876 until 1896, weakened the position of landowners. The electoral reforms of the 1870s and the industrial development of the country jointly reduced the importance of agriculturalists in parliament, while their traditionally free-tradist stance was challenged by increasingly protectionist policies⁸. Jacini’s enquiry on agriculture was requested and carried out mostly by members of the parliament who were also agriculturalists and hoped to balance Vittorio Ellena and Luigi Luzzatti’s enquiry on manufacture⁹.

Agriculturalists tried to counteract their relative weakness, and in 1884 some of them established, with the help of MAIC, the Society of Vinegrowers (*Società dei Viticoltori*). Faithful to the principle of free trade, presided over by a fervent free-tradist such as Giuseppe Devincenzi, the Society still could not prevent the new protectionist tariffs of 1887 and the ensuing trade war with France, which basically closed to Italian winegrowers their main export market¹⁰. The new tariff has traditionally been seen as a victory of the industrialists over a front of the most advanced export-oriented agriculturalists (citrus fruits, silk, wine, cheese), while the rise of customs duties on wheat favored and protected the relatively backward wheat producers¹¹. The wheat producers gave their support to the new tariff. The truth was that the variety of agricultural landscapes and patterns of landownership of the new country was reflected in the multiplicity of diverging interests among the agricultural elite.

In 1894, a group of agriculturalists tried to form an “agrarian party” in parliament with the explicit intention of pushing Italy toward even greater protectionism, and therefore threatening the balance of Crispi’s governmental majority. This initiative was carried out by rt. Hon. Carlo

⁸ Voters rose from 2% of the population in 1880 to 6,9% in 1886; [Farneti(1971)], pp. 194ff. and [Rogari (1998)], pp. 76f.

⁹ [Caracciolo (1959)][Baglioni (1974)]and section 4.1.

¹⁰ [Rogari (1998)], pp. 43-54.

¹¹ This view and the stress on the political exchange between the heavy industry of the North and owners of latifundia in the South is usually attributed (for instance by [Romeo (1998)]) to Antonio Gramsci and Emilio Sereni ([Sereni (1968)]) and its origin is ascribed to Gaetano Salvemini. For a review of the positions on economic and trade policies of the 1870s and 1880s: [Federico (1996)]. For a reassessment of the importance of the tariffs of 1878 and 1887 and the respective weight of protection on agriculture and industry, see the persuasive [Federico and Tena (1998)], p. 84.

Compans, Ludovico Fusco and Edoardo Ottavi, among others, and supported by the organizational ability of Tito Poggi. Its failure coincided with the parliamentary debate on wheat duties of June 1894. The “agrarian party” proposed to exchange a reduction of the excise on salt (a tax that was particularly hated by the people) for an increase in the duty. But Fusco’s group collapsed in front of a compact governmental majority¹². After 1894, Fusco and his followers converged by force into the Società degli agricoltori italiani (SAI) which Crispi’s supporters had created to counter Fusco’s maneuvers. This organization, while offering some sort of representation to landowners and capitalist tenants, posed no threat for the cabinet¹³.

The first Secretary of SAI, charged with mostly technical and organizational tasks, was Ghino Valenti, soon succeeded by Francesco Coletti. SAI attracted not only individual members, but also comizi and associations from all over Italy¹⁴. After the turn of the century, in particular, its political line resulted from a compromise between its more progressive members and administrators (Valenti, his successor Coletti, the SAI’s second president Marquis Raffaele Cappelli, Ottavi, Giovanni Battista Miliani, and Giovanni Raineri) and a large number of agriculturalists, who expected the SAI to assert more firmly the interests of landowners and large tenants against industrialists and farm workers. Politically, the leadership of the SAI inaugurated a line of “friendly cooperation” (as Sandro Rogari calls it) with successive governments. This “moderate” leadership saw in Giovanni Giolitti the leader who dominated the first decade of the 20th century, the right man to pursue modernization and social stability.

Economically, agriculturalists reacted to their relative decline by establishing savings banks and cooperatives of farmers (*consorzi agrari*) for the collective purchase of industrial products such as fertilizers and machines. In 1892, in Piacenza, *consorzi* from different areas of the Po Valley united in the Federazione Italiana dei Consorzi Agrari. Initially directed by Giovanni Raineri and Enea Cavalieri, the Federazione grew constantly over the years as more and more cooperatives joined¹⁵.

¹² [Rogari (1998)], pp. 89ff.

¹³ [Rogari (1998)], pp. 75-100. Among the founders of SAI, there was Nicola Miraglia, a top official at MAIC.

¹⁴ For a discussion of SAI’s membership: [Rogari (1998)], pp. 109ff.

¹⁵ [Fontana (1995)]. See also Ciuffoletti, Zeffiro, “Dirigenti e ideologie del movimento cooperativo” in Sapelli (Ed.) 1981 – Il movimento cooperativo in Italia, p. 111.

Together with the landowners themselves, the personnel of travelling chairs, agricultural societies, and schools of agriculture, the technical staff of farmers' cooperatives constituted, at the beginning of the 20th century, what has been called in Germany "ländliches und dem Land verbundes Bildungsbürgertum", the educated strata of agriculturalists and agriculture-related professionals¹⁶.

2.2 Giolitti's long cabinet and the alliance with agriculturalists, 1906-1909

Giovanni Giolitti's so-called "long cabinet" (1906-1909) was probably the high point in his political career. After the first nationwide general strike of 1904, Giolitti's conciliatory policy rallied the votes of the Catholics and all sorts of moderates. He became "indispensable": the only politician who could save Italy from the violent escalation of repression and revolution that socialists and right wing reactionaries would have ignited¹⁷. Supported by a vast parliamentary majority including the left liberals (but not yet Francesco Saverio Nitti's radicals, as would be the case in Giolitti's 1911 cabinet alliance), Giolitti presided over an unprecedented economic expansion. The interest rate on Italy's public debt was lowered from 5 to 3.5%; thanks to the financial maneuvers of Luigi Luzzatti (*conversione della rendita*), the Lira was stable; and the public administration expanded its tasks and personnel without unbalancing the State budget.

Public opinion was not altogether convinced by Giolitti's propagandized "neutrality" in economic conflicts. For many a member of the old landed and industrial elites in particular, the government had "surrendered to the mob", and ceased to protect the citizen's freedoms¹⁸.

This tendency would eventually strengthen after 1909, and lead a vast agrarian block to rally under the banner of the Nationalist party and eventually Fascism. For the moment, though, the

¹⁶ [Bergmann (1970)], p. 77.

¹⁷ Carlo Mozzarelli and Stefano Nespor saw the key of Giolitti's success "in putting aside, in many ways, the political value of social conflicts and in reducing struggle to a matter of good administration" ("quella multiforme rimozione delle valenze politiche dei conflitti sociali e nella loro riduzione a tentativo di soluzione in termini di buon governo amministrativo"), [Mozzarelli and Nespor (1985)], p. 1674.

¹⁸ See for instance the positions of capitalist tenants recalled in [Cardoza (1982)] and [Roveri (1974)].

cabinet proceeded at full steam. To prove the confidence of the State administration and the growing importance of State organs, the Ministry of Agriculture Industry and Trade (MAIC) decided to move out of its old building (which had become too small) and begin the construction of a new building in Via XX Settembre, in front of the Ministry of War and not far from the Ministry of Finance. Francesco Cocco-Ortu, the Minister, a left liberal lawyer from Cagliari, celebrated the laying of the foundation stone in front of H.M. the King Vittorio Emanuele III on 8th June 1908¹⁹.

The Ministry that Cocco-Ortu headed had survived thanks to a coalition of manifest and opaque interests and the vehement criticisms of supporters of free-trade and *laissez-faire* policies and had enlarged its tasks immensely. An official report stated:

the field of action of the Ministry embraces all the phenomena of economic activity, it follows the progress of social legislation, it studies and regulates all new institutional forms that the increase in traffic, the spirit of prudence and association are continuously creating, it promotes and encourages private initiatives whenever they strive for the economic progress of the country, it directs the rational and practical preparation of all those productive forces that have been meaningfully called the armies of agriculture, industry and trade...²⁰

The Ministry was a sort of Logistic Corps of such “armies of agriculture, industry and trade”, and was also charged with the tasks of the Army Ordnance: the production of statistics concerning all sectors of Italian life, from demography to meteorology, from justice to education, and a significant number of economic statistics that more directly concerned the productive system: trade balance, production, credit, etc.

The cabinet realized in some ways a sort of magical equilibrium in its relationships with the agricultural elites. If Giolitti did not support the hard line against day labourers and small tenants that the many local associations invoked, in particular in Northern Italy, and the activism of MAIC was in line with some of the new demands of agriculturalists and their associations. These demands significantly differed in the early 20th century from those of the previous decades. The institutions that had traditionally been financed by the landed classes, such as the travelling

¹⁹ [MAIC (1909)].

²⁰ [MAIC (1909)].

chairs, became increasingly dependent on public financing (in 1910, they received 391,100 Lire from MAIC, 530,390 Lire from the provincial administration, and 446,090 Lire from municipalities). Experimental institutes, schools of agriculture and similar organizations that promoted the development of agriculture were also financed by the Ministry²¹. The movement of cooperatives, syndicates, and saving banks that the landed elites had been promoting since the 19th century was often supported in many ways by MAIC. To these, land reclamation authorities and consortia for the fight against the phylloxera epidemics must be added. The interests of the landed elites were now connected with a great number of institutions that depended on MAIC for legal recognition and/or financing²².

In exchange, Giolitti and Cocco-Ortu gained the support of a parliamentary group of agriculturalists and of the leadership of SAI. As the works by Cardoza and Roveri convincingly show, support for Giolitti's long cabinet was far from universally shared by agriculturalists, and yet until 1909 most of the rich agriculturalists gave their confidence to the cabinet in the Chamber of Deputies and in the Senate²³. Owners of large properties such as Marquis Raffele Cappelli, at the head of SAI between 1896 and 1911, or Giovanni Battista Miliani, embodied the group of agriculturalists that was close to Giolitti's cabinet. Miliani's biography is particularly significant as he was at the juncture point of all the different forces, groups, and institutions that engaged, for different reasons, in the effort of "getting to know" Italy's agriculture by means of statistics.

Miliani was born in 1856, in Fabriano, to a family which had owned the city's paper mills since the end of the 18th century. Notwithstanding the importance of his family's industrial investments (and his own involvement in the family's activities), he graduated in agricultural sciences from the *Scuola Superiore d'Agricoltura* in Milan: the same institution that eventually educated most of the best agricultural experts that will appear in this work. He was twice elected mayor of his town and was elected to the Chamber of Deputies in 1906. He was a left liberal, who opposed the revolution demanded by the Socialist Party but was in favor of improvements in the

²¹ [Desideri (1981)], p. 16.

²² This nexus of interests corresponds to what Mozzarelli and Nespor describe for urban interests around the Chambers of Commerce: the law of 1910 put electoral lists under the control of the government, while it allocated to the chambers public tasks and public funding, [Mozzarelli and Nespor (1985)].

²³ [Roveri (1974)][Malatesta (1989), Cardoza (1982), D'Attorre (1998)].

conditions of the workers and built theatres and houses in Fabriano for his employees. In 1902, in agreement with Edoardo Pantano²⁴, he promoted the enquiry of SAI on agricultural strikes. The enquiry, materially conducted by Francesco Coletti and a commission composed by Eugenio Faina, Pietro Carmine and Pantano himself, was very inclusive, since questionnaires were sent to the Chambers of Labour and other organizations of daily workers. It therefore entailed some sort of recognition of the opinions of the strikers²⁵.

In parliament Miliani supported Giolitti's policy of neutrality in social conflicts (as opposed to the sheer repression of strikes). Once an MP, his influence grew and as a graduate agronomist, he became one of the reference points for those who gravitated around agriculture: he was in the Council of the Association of the travelling chairs of Agriculture (Miliani became president of the association on 28th May 1910), he was also a member of the Società degli Agricoltori Italiani (becoming the last president of the Society in 1919), and in 1908 he was among the founding members of the National Agricultural Committee²⁶.

National Agricultural Committee was a group formed by MPs and agricultural experts as a study group for legislative activities that concerned agriculture. Together with Miliani, many other significant personalities sat on the committee: Giovanni Raineri, and Edoardo Ottavi (future president of the SAI), among others. The group was not simply the expression of the interests of landowners: it had, for the weight that Miliani, Raineri, Ottavi had in it, a clear conciliatory stance, against class struggle, but in favor of social change (so much so that even such a reformist socialist as Giuseppe Canepa joined it²⁷). The leading members of the group, like Miliani, were close to the majority in the cabinet²⁸.

Agricultural technicians (agricultural economists) also cooperated with the National Agricultural Committee. But the connection between landowners and agricultural technicians was strong at all levels. Locally, associations were in contact with technicians in the travelling

²⁴Pantano was eventually Minister of Agriculture in the cabinet of Sidney Sonnino, February-May 1906

²⁵ [Musella (1984)], p. 69, [Rogari (1994b)], but see also section 4.3 below.

²⁶ Bollettino dell'associazione delle Cattedre Ambulanti di Agricoltura, anno 2, Maggio-Giugno 1910; [Rogari (1994a)] and [Rogari (1994b)]; [Fontana (1995)], p. 45.

²⁷[Fontana (1995)] p. 52; [Rogari (1994b)].

²⁸ The behaviour of Raineri when he eventually ascended to ministerial responsibilities (1910), the stance that the SAI adopted on the question of the strikes of 1910 derived from this political position, see [Rogari (1994b)] and [Musella (1984)].

chairs, or in the *comizi agrari*, or hired them to write in the specialized press. Besides, employment as administrators of estates on behalf of landlords or farming companies was an obvious professional career outcome for graduates in agricultural sciences²⁹.

The connection between agrarian societies and agricultural experts was strong. The *Scuole superiori di agricoltura* were so well integrated in the network of landowners that the exchange between associations and professors of agricultural sciences was constant wherever the two coexisted (the cases of Milan and Bologna are particularly significant). The case of Milan in the 1900s shows how, concretely, Giuseppe Soresi (the director of the travelling chair), Serpieri (Scuola Superiore di Agricoltura and Società Umanitaria), Vittorio Alpe (vice-president of the Società Agraria di Lombardia) were able to coordinate in order to carry out research projects³⁰.

Initiatives such as the Italian sponsorship of David Lubin's project of the International Institute of Agriculture (IIA; a sponsorship that owed much to Raffele Cappelli and Eugenio Faina) have to be placed within this framework. For the foundation of the IIA, the state cooperated at the highest level with the landed elites by bending its foreign politics in their favor and promoting an international forum that was at the same time intended to let states exchange information (the IIA was an intergovernmental organization) and associations of agriculturalists coordinate worldwide (under the auspices of the IIA a forum of associations was also proclaimed)³¹.

The cooperation between Giolitti's cabinet and the representatives of the most important groups of agriculturalists in parliament enabled also a Bureau of Agricultural Statistics to be created at MAIC. The Bureau, under the guidance of Ghino Valenti, produced statistics that responded to the multiple needs of agriculturalists. Statistics could be used to influence policies (notably trade policies) in favor of specific products, but also to demonstrate to the public how important (and how neglected) the agricultural sector was in the economy of the nation.

Ghino Valenti (1853-1920) is a key figure for our story. Valenti was born in 1853 in Macerata (Marche). His father was judge in the local high court, his mother a descendant of an aristocratic

²⁹ On the professional outcomes available to agricultural technicians see [D'Antone (1990)] and [Fumian (1990)]

³⁰ See for instance: p. 240, below. For a later period, the case of Tassinari in Bologna shows that the liaison between academia and the local agrarian society remained solid.

³¹ [Tosi (1989)].

family. An *Avvocato*, he graduated in Macerata from the faculty of law, where he also attended classes in Political Economy. Apparently he dissipated the family fortunes in visionary industrial projects. Possibly because of his financial setbacks, he was forced to start an academic career as professor of Political Economy, first in Macerata, then in Rome, Padua and finally in Siena. In Rome he had been the Secretary General of the Società degli Agricoltori Italiani³². He therefore represents a significant *trait d'union* between agriculturalists and academia.

Within the environment of the Bureau, associations of agriculturalists interacted with the ministry's bureaucracy. The "observatory" of agricultural facts, the Bureau of Agricultural Statistics was thus the product of a frail coincidence of interests between the state and the associations that Valenti embodied. Observation was made possible by the cooperation of state employees with the local agricultural experts who could be mobilized by the associations. Since these statistics not only served the purposes of agriculturalists but were also produced with the participation of their associations, I call them "stakeholder statistics" (this concept is explored further in Chapter 7).

2.3 Agriculturalists against Giolitti and Nitti 1909-1922

The strike crises of 1907-1908 and 1909-1910, which were particularly harsh for the capitalist tenants of Romagna and Emilia, moved significant groups of agriculturalists towards the right and against the government. Already in 1901 and 1904, when repeated waves of strikes had hit the large tenants and landowners of Northern Italy, some agrarian associations had proposed to form, beside the SAI, an *agrarian league* (Unione agraria italiana) with the task of defending the interests of landowners and tenants against day labourers³³. The SAI's leadership decided not to support this initiative. Associations of agriculturalists of the lower Po Valley remained thus isolated at national level, while the SAI restated, at least in principle, its mission: representing the interests of "agriculture as a whole", including day labourers and sharecroppers. In fact, the

³² For a short biography of Valenti, Enciclopedia Italiana, *sub voce*, but the most complete biographical information I could find is in [Giaconi (2003)]. For his intellectual formation see [Guidi (2001)]; for the importance of Valenti's role at SAI, see Chapter 7 below.

³³ [D'Attorre (1998)], p. 13.

society increasingly confined itself to the encouragement of scientific studies³⁴. Coletti's enquiry on strikes, mentioned above, mirrored this orientation of the SAI's leadership.

The contradictions between SAI's inclusive (and pro-Giolitti) attitude and the will of the capitalist tenants exploded in 1908. Many capitalist tenants considered strikes illegitimate and illegal. In Parma they reacted by hiring labourers from outside the province in order to bend the strikers. Raffaele de Cesare in Apulia and Paolo Niccolini claimed that aim of the strikes of 1908 was no longer better salaries, but to affirm socialist principles and overturn the whole order of society³⁵. Against the workers, military intervention was invoked. These were old complaints, but this time the agriculturalists tried to organize themselves.

In 1909, an alliance of capitalist tenants and some landowners from the Po Valley and the Adriatic was formed: the Federazione Interprovinciale Agraria established in Bologna a new nationwide organization, the National Agricultural Confederation (Confederazione nazionale agraria, CNA), politically ambitious and hostile to Giolitti's coalition. Its leadership stressed the differences between the *Interprovinciale* and "neutral and apolitical organizations of agriculturalists such as SAI or the National agricultural committee". They accused the SAI and the Committee of Miliani and Raineri of "addressing merely technical problems". CNA and *Interprovinciale* promoted, instead, the "agrarianisation" of candidates for the elections of 1909 and proposed a "minimum program of agriculturalists". Most of the CNA members, however, refused to form a political party, and the Confederation's leadership was unable to transform the organization into a permanent union of large tenants and landowners. Once the wave of strikes died away, local sections of the CNA, outside Romagna and Emilia, were dissolved³⁶.

Historiography insists that until the end of the Giolittian period the associations of agricultural producers were unwilling or unable to transform themselves into trade unions of agriculturalists (*sindacati padronali*). Local agricultural associations and SAI served different purposes: they tried, directly or more often indirectly, to influence the decisions of the government on relevant issues (tariffs, contracts, industrial relations, taxes, statistics, etc.), but they were also at the centre of a network of other institutions in cooperation with state organs. The travelling chairs of agriculture (see Chapter 3) were to a great extent the product of such cooperation. This dependence limited the political options available to the associations and the possibility that

³⁴ [Rogari (1994b)], pp. 138f.

³⁵ [Musella (1984)], pp. 74f.

³⁶ [D'Attorre (1998)], p p. 15f.

they would overtly oppose the government on relevant issues, such as labour relations or exchanges between economic sectors.

Various reasons have been invoked to explain “the delayed formation, at national level, of a trade-unionist organization of agriculturalists”³⁷. Delayed, of course, with respect to what happened in other European countries, in particular, France and Germany (the *Bund der Landwirte* was the recurring model of those who wanted a more assertive organization), where strong associations of landowners and large tenants were able to influence the government and to face the pressure of labour unions³⁸. The “moderate” course chosen by the SAI’s leadership has also been attributed to the persistence of traditional, “liberal” models of parliamentary representation and traced back to the latent antagonism between the capitalist tenants of the Po Valley in particular and the absentee landowners. While the former pressed for a more decided opposition to Giolitti’s neutrality, the latter were more inclined to look for alternatives and preserve social peace.

As in 1894, the attitude towards labour unions was not the only issue that pitted agriculturalists against the government. The industrial sector constantly gained more influence over Italian politics, determining the policies on international trade, taxes, etc. as the country industrialized and this was also an issue that the SAI seemed unable to cope with. To the hardliners of the Federazione Interprovinciale and CNA, the SAI and its moderate leadership proposed only cooperation among agriculturalists in the face of industrialists (the syndicates of Federazione italiana dei consorzi agrari), studies on tariffs, and skilful mediation with the labour unions.

At the elections of 1909, the agrarian block of CNA was defeated. Only a few members of the association were elected. Two short-lived cabinets were formed, first by Sonnino (December 1909-March 1910) and then by Luzzatti (March 1910-March 1911). Although both Sonnino and Luzzatti were leaders of the Right, the cabinets rested on a wide and unstable majority. Raineri, as representative of “moderate” agriculturalists and head of the National Agricultural Committee, succeeded Cocco-Ortu and Luzzatti himself as Minister of Agriculture in 1910, but the wavering parliamentary alternative to Giolitti finally dissolved in 1911 and the old prime minister was able to form his fourth cabinet. Giolitti’s new cabinet (March 1911-March 1914) initially at least marked a decided shift to the left in Italian politics. It included the radical Francesco Saverio Nitti as Minister of Agriculture, Industry and Trade and approved an electoral reform that granted universal male suffrage.

³⁷ [D’Attorre (1998)], p. 9.

³⁸ [Fontana (1997)]

On the eve of war, the Federazione Italiana dei Consorzi Agrari, under the leadership of Raineri, just as the social progressive Umanitaria had done in the earlier 1900s with Serpieri, asked Giuseppe Tassinari to collect data on the distribution of agricultural income³⁹. The aim was to find a “scientific” solution to the struggle between labourers and entrepreneurs: how much could salaries grow without eating the just profit of farmers, and discouraging investment?

From this point on, as we see in Chapter 9, analyses of farm budgets were identified as the main source of empirical evidence on class relationships. Knowledgeable agricultural technicians started to play the role of mediators between interest groups⁴⁰. The war contributed to further emancipate them from landowners and their associations. As Salvatore Adorno has shown, agricultural technicians were included in the study groups that directed the war economy at central level, while the war effort entrusted travelling chairs of agriculture with tasks relating to the food and horsepower supply of troops and civilians⁴¹.

The war marked, nevertheless, new and more consistent advances for manufacturers. The Ministry of Agriculture, Industry and Trade was split in 1916 into the Ministry of Agriculture on one side and the much more powerful Ministry of Industry on the other. The war economy fostered contacts between representatives of heavy industry and the government that had no equivalent in agriculture⁴².

After the First World War, labour unions became more aggressive and obtained great concessions from the new cabinets of Giolitti and then Nitti. The ruling classes had been generous with their promises in 1917 when the front collapsed and peasant-soldiers had to be persuaded to fight. The promises included the distribution of “unexploited land” to veterans, but left undetermined what counted as unexploited land. In the year 1919-1920, the so-called *biennio rosso*, the Socialist revolution (“like in Russia”) seemed to be a real and imminent possibility. Moreover, the war had shown the importance of industrial development, making terms of trade for agriculture worsen, while the Giolitti and Nitti’s governments were perceived as “pro-industrialist”.

As the literature on agriculturalists of the Po Valley consistently demonstrates, the groups of Interprovinciale and CNA progressively but steadily joined the ranks of the rising Fascist party. Fascist violence was employed

³⁹ *Introduction* to [Tassinari and Federazione Italiana dei Consorzi Agrari (1926)].

⁴⁰ In 1911, Serpieri was also asked to give a scientific opinion on contracts of sharecropping in the dispute between landowners, sharecroppers and day labourers over the use of threshing machines: [Rogari (1998)], p. 167.

⁴¹ [Adorno (1995)], see also section 3.2.

⁴² See [Villari (1975)] for some examples of the inclusion of representatives of heavy industry in “planning” experiments.

to repress workers' protests and the connections intensified between the local leaders of the Fascist movement and the agriculturalists in Emilia and Romagna⁴³. Agriculturalists from other areas soon followed this example as Mussolini came to power in 1922. The Fascist party was not exclusively joined by the large capitalist tenants that had opposed Giolitti, but by many of the older "moderate" leaders of agricultural organisations.

The political evolution of Miliani is again paradigmatic: like many of the cautious reformists of the Giolittian era, in the 1920s Miliani also joined Mussolini's supporters and became a fascist, while SAI, under his presidency, merged with CNA and dissolved into the Fascist Confederation of Agriculture. When the old Miliani died, in 1937, the president of the Italian Senate, the Fascist Federzoni, commemorated him as "the purest fascist"⁴⁴.

2.4 The bureaucratization of the countryside under Fascism

The Fascist regime, as Paolo D'Attorre underlines, rewarded this support with a tough policy against unions of workers employed by the day⁴⁵. It also developed, over the 1920s and 1930s a "ruralist" ideology that put the countryside and its traditional values at the core of the nation⁴⁶. This "ideology" was able to gather around the regime not only the agricultural bloc of the Po Valley, but also the traditionally "pro-government" (It. *ministeriali*) landowners of Southern Italy, and even large groups of the population as a whole.

In 1923 Mussolini, in a general effort to verticalise the state structure, once more merged the Ministry of Industry and Trade and the Ministry of Agriculture into the Ministry of National Economy (RD 5 VII 1923 n 1439). But the new Ministry did not live long and in 1929 its competencies were divided, this time between the brand new Ministry of Corporazioni and the Ministry of Agriculture and Forests. At the same time, the centralising policy of the regime and its interventionism in the economy accelerated the transformation of the institutions that landowners and large tenants had established and controlled since the late 19th century into

⁴³ [Cardoza (1982), Roveri (1974)].

⁴⁴ [Senato della Repubblica Italiana].

⁴⁵ Tables from ICS on salaries of agricultural workers in [D'Attorre (1998)], pp. 126f.

⁴⁶ On the traditional character of Fascist *ruralismo* see: [Rogari (1998)]; a well documented analysis of a specific form of propaganda (stamps) in [Zeri (1993)].

branches of the central government. The travelling chairs, for instance, were first taken over by the Ministry of National Economy and then renamed the “Provincial inspectorate of agriculture” in 1935, while farmers’ co-operatives (*consorzi agrari*) became public organs.

Fascism also tried to reduce the importance of private associations and public/private institutions such as the *comizi agrari* and chambers of commerce, by first creating (RD 30 XII 1923 n 3229) the Provincial Councils of Agriculture and then transforming them, together with the Chambers of Commerce, into the Provincial Councils of National Economy in 1926:

the spirit of this law is that the Provincial Councils of National Economy will beam into the provinces the directives that the government intend to give the national economy, while at the same time they will inform the centre about the conditions and needs of the local economy of the province⁴⁷.

But the nature of such organs was never fully clarified, since they responded to a variety of administrations at the same time: the Central Statistical Institute (ICS), the Ministry of Corporazioni, the Ministry of Agriculture, etc. Yet their establishment marks an increasing bureaucratization of the institutional structures of the countryside and indicates a loss of status for agriculture, considered simply one of the many components of national economy⁴⁸.

This progressive bureaucratization was somehow marked by the substitution of Alberto De Stefani with the economic interventionist Giuseppe Volpi di Misurata in 1925, and the corresponding dismissal of Arrigo Serpieri from his post as under-secretary of state for Agriculture⁴⁹. Agricultural technicians, nevertheless, had an important role in the new course. The *battaglia del grano* (the “battle for grain” was the name given to the policies devised for increasing the production of wheat and launched in 1925), and the “total land reclamation” policy saw agricultural technicians play an essential role as technical advisers (Serpieri, for instance,

⁴⁷ R. Balzanini, W. Cesarini Sforza, G. Chiarelli, *L'organizzazione sindacale e corporativa in Trattato di diritto corporativo*, a cura di G. Chiarelli, Giuffr , Milano, 1940, p. 795, quot. in [Mozzarelli and Nespor (1985)], p. 1648.

⁴⁸ [D’Autilia (1992)] recalls the contrast between the Ministry of *Corporazioni* and ICS over the Councils.

⁴⁹ [Maier (1988)], p. 83.

devised the legal framework of land reclamation, while Nazzareno Strampelli engineered the new breeds of wheat that “won the battle”⁵⁰.

According to the historian Paolo D’Attorre, Fascism introduced at the core of the social relationship in the countryside a “third element” next to labourers and “padroni”: the state and its bureaucracy: “If in the 1920s the centre of social relations is still ‘the lord of the land’, who directly mediates, in many areas of the Po Valley, between the rural masses and the state, thanks to his organizations; since the 1930s this connection is increasingly assured by the apparatuses of state that are autonomous from the class of landowners”⁵¹. The relationship between agricultural technicians and landowners that we see at work in Valenti’s statistics (see Chapter 7), when agricultural technicians were very close to the landed elites, relaxed between the 1920s and the 1930s, when agricultural technicians became first of all state employees within the Fascist National Union of Agricultural Technicians. The de-centralised approach that agriculturalists had always favored (and that guaranteed their control over syndicates and technical assistance)⁵², was replaced by a much more centralist attitude on the part of the state. At the same time, the new configuration gave greater autonomy to technicians: Serpieri’s land reclamation policy was designed in opposition to the will of many of the landowners of the areas involved (who successfully demanded and obtained from Mussolini the second dismissal of the technocrats in 1935).

Agricultural technicians organised themselves in order to benefit from this autonomy. In 1923, when he was under-secretary of state for agriculture for the first time, Serpieri established the Istituto di Economia e Statistica Agraria (IESA). Its task was that of coordinating research in agricultural economics and statistics, with special attention to the agricultural cadastre and to the collections of farm budgets. The reactions of the statisticians of Istituto Centrale di Statistica (probably the most important of the Fascist centralising endeavours) forced Serpieri to agree to split IESA. The statistics of agricultural output were assigned to ICS in 1928, and, under Serpieri’s guidance, the Istituto Nazionale di Economia Agraria (INEA) became the central

⁵⁰ [Stampacchia (2000), Saraiva (2010), Saraiva and M. Norton Wise (2010)].

⁵¹ [D’Attorre (1998)], p. 153.

⁵² See [Valenti (1919b)], but also [D’Attorre (1998)] who stresses the importance of decentralisation in the program of the short-lived Partito Agrario Nazionale, p. 53.

institution for research in agricultural economics, thanks to the political and scientific personality of its founder⁵³.

2.5 The Technicians, 1900s-1940s

I want to conclude this short historical summary, by introducing the topic of the next chapter: agricultural technicians. I group three “generations” of experts of agricultural economics (*tecnici agrari*) in the period between the turn of the century and the Second World War. The most prominent figure of the first generation is Ghino Valenti. His involvement in statistical surveys of Italy began with the Jacini enquiry in 1877. Although it was completed long before the facts that form the core concern of this work, the Jacini enquiry represented a sort of *Big Bang* of investigations into the agricultural economy. Economists and politicians such as Jacini, Angelo Messedaglia, and Luzzatti left a strong mark on Valenti’s generation. A feature shared by all the agricultural experts of this generation was their immediate direct connection to the land and to agricultural business. It was the interest groups of agriculturalists, rather than the state, that acted as a referent for this generation. Valenti’s combination of state and interest groups in the activity of the Bureau of Agricultural Statistics mirrored this relationship.

The second generation was dominated by Arrigo Serpieri. A pupil of Valenti, Serpieri’s career was spectacular, rising from the Società Umanitaria di Milano up to Mussolini’s cabinet (he became an under-secretary for the first time in 1923). He began his career in a close connection with the Società Agraria di Lombardia, and after the First World War he was an influential member of the Study Centre of Federazione italiana dei consorzi agrari, but he was able to achieve some independence from the organisations of agriculturalists. Autonomy was granted above all by a steady collocation within state institutions, the first being academia. The process of emancipating agricultural technicians intensified with the strikes and disorders of 1909, as seen above, and speeded up after the war.

It would be wrong, nevertheless, to think of the second generation as a break from the first, with the foundation of the National Institute of Agrarian Economics (INEA) in 1926 as a watershed.

⁵³ [Magnarelli (1981)].

Some of the best agricultural economists of the second generation collaborated with the Faina enquiry of 1907-1911 under the direction of the old statistician Francesco Coletti (and Coletti's instructions were eventually repeated by Serpieri in his seminal *Guida a ricerche di economia agraria*, 1929). First and second generation agricultural economists also joined in a second common initiative, under Valenti's guidance, immediately after WWI – the group *L'Italia agricola e il suo avvenire*, which eventually evolved into the study group of the Federazione Italiana dei Consorzi Agrari (Federconsorzi)⁵⁴. These two initiatives exemplify the direct filiation of the second generation from the first, and the persistence of political and intellectual links that do not coincide with the primacy attributed by historiography to Nitti's "technocratic" aspirations⁵⁵.

The third generation is formed by Serpieri's pupils and those who grew up in the institutions that he had helped to shape: mainly the INEA, and the provincial observatories of agriculture (the local offices of INEA). Some of these men disappeared with the Fascist regime (Giuseppe Tassinari, for instance, died in 1944, while he was serving as a minister of the fascist Repubblica Sociale Italiana), but most of them survived WWII and led the post-war debate (Giuseppe Medici, Manlio Rossi-Doria). From one generation to the next, the driving force was a progressive emancipation from the landed elites and the quest for an autonomous scientific legitimisation. This is reflected by the establishment of "observatories" of agriculture (in the general sense of institutions with the task of producing data on agriculture) that were more independent from the landed elites and assumed increasingly the neutral point of view of science⁵⁶.

⁵⁴ [Adorno (1995)].

⁵⁵ The role of Nitti in favoring the careers of "technicians" and in particular that of Serpieri has been stressed (I think excessively) by [D'Antone (1979), Prampolini (1981)].

⁵⁶ The way that statistics and economics as a whole have become a science seems to have served as a model for the evolution of agricultural economists.

3 Actors and agents II: people and sites of agricultural transformation

The three generations of agricultural experts (It. *tecnici agrari*) introduced in the previous chapter were not simply kept together by relationships of collaboration and academic filiation. They shared a commitment to the agricultural modernization of Italy, the agricultural transformation of the country. Their discipline, agricultural economics, gained a specific identity among other kinds of agricultural sciences, from their concern to make modernization possible and profitable for the actors involved. The research methods that agricultural economists selected and the institutions where they carried on their studies and activities were chosen for this goal. To examine the world view of agricultural technicians between the era of Giolitti and the Fascist takeover is essential in order to understand the way in which they collected and interpreted their data.

This chapter focuses on agricultural experts as agents of technological transfer, of the agricultural transformation. I trace here the disciplinary roots of the generation of agricultural technicians to which Valenti and Niccoli belonged. By examining the documents that agricultural economists produced about their activity (reports, textbooks, journals, etc.) I describe what, according to the agricultural experts themselves, their expertise consisted of, what kind of knowledge it relied upon, and what its goals were. The ethos and principles of this expertise were transmitted and preserved in the higher schools of agriculture and the travelling chairs of agriculture where agricultural economists received their professional education and training.

Schools put a stronger emphasis on the theoretical basis of the discipline, while travelling chairs familiarized young agricultural experts with specific conditions. Travelling chairs were also among the leading sites of agricultural modernization, where agricultural technicians put into practice the principles learned in universities. Agricultural technicians were fully aware that a variety of local conditions, interests, and actors had to be faced before modernization could take place and they were aware that the adaptation of methods and principles of modern agriculture

was a key element of successful programs¹. Agricultural experts acted as liaisons between the centre, where new techniques were elaborated, and the fields, where they were to be applied. They were thus truly experts on the periphery, but at the same time experts of the new principles, techniques and technologies, and in the periphery itself.

The chapter begins (section 3.1) with the distinction made by the agronomist Gaetano Cantoni (1866) between the science, art, and industry of agriculture. This is important because Cantoni, the father of the Lombard school of agronomy, set the oppositions (theory/practice; disinterested knowledge/profit) that dominated the discourse of agricultural economics. This distinction introduces a cognitive and a functional opposition. From the cognitive point of view the science, art, and industry of agriculture diverged despite the findings of science according to Cantoni being universal, because art and industry required an analysis of the peculiar conditions of the places where the expertise was applied. Institutions that operated peripherally accumulated a vast mass of data on the local conditions for agriculture and farmers².

To the expertise of botanists, plant physiologists, zoologists, or economists, agricultural experts added knowledge of local conditions of specific places, or processes. This was sometimes tacit, and could only be learnt and taught by direct experience (experiential knowledge)³. In contrast to farmers, agricultural experts benefited from their scientific education: they were not mere practitioners, but had a method of investigation. The right combination of local and general knowledge allowed agricultural experts to make the discoveries and inventions produced in remote universities and laboratories relevant and trustworthy for specific farmers. This tuning effort, in turn, made “scientists” into “experts”, guaranteeing that science was not sterile but actually contributed to the effort of modernization and transformation of agriculture. The functional opposition between the science of agriculture, on the one hand, and its art and industry, on the other, lay in the fact that the latter two were not merely cognitive enterprises. They were directed, instead, at transforming the situation. The site par excellence of this transforming effort was, in the case of Italy, the network of travelling chairs of agriculture (section 3.2).

In section 3.3, I show how the importance of economic constraints in projects of agricultural improvement induced some agricultural technicians to specialize in agricultural economics. This

¹ An almost ethnographic study of a technological transfer in rural India is [Velkar and Howlett (2011)].

² Carlo Fumian has cleverly pointed to the passage from art to science in agronomy in [Fumian (1990)].

³ Epstein quot. by [Velkar and Howlett (2011)].

move towards (applied) economics was inscribed in the constraints imposed by the “industry of agriculture”. Costs and benefits were inescapable constraints on any transformation. Agricultural economics evolved from these concerns. It was from the beginning an example of what John Neville Keynes would have called the “Art of Economics”, and David Colander nowadays “the Lost Art of Economics”, “a system of rules for the attainment of given ends”, which “relates the lessons learned in positive economics to the normative goals determined in normative economics”⁴.

3.1 The epistemological status of agricultural expertise: science, art, and industry

Cantoni graduated in medicine in 1837 and then studied botany in Pavia, but soon turned to the administration of the family estate. The Austrian government forced him into exile after the revolt of Milan in 1848 (le Cinque Giornate) and he joined Carlo Cattaneo at the Liceo cantonale in Lugano. When the unification of Italy recalled him to Lombardy, Cantoni taught at the newly created agricultural school of Corte Palasio until Pietro Maestri, then head of the Italian statistical service, appointed him to the Royal Industrial Museum of Turin. In 1870, he went back to Milan to become director of the Scuola Superiore d'Agricoltura in Milan, which was affiliated to the local Museum of Natural History and the Istituto Tecnico Superiore (a school for engineers)⁵.

Over the years, Cantoni not only taught but also conducted research, and competed with Pasteur to the first to discover a method for fighting pebrine, a disease of silkworms. He published a great number of volumes, including textbooks, collections of experiments, etc. and he was among the founders of the Società Agraria di Lombardia, an association of agriculturalists, whose statutory goal was to spread rational agriculture⁶. He thus personified different aspects of agricultural expertise: the useful character of agricultural knowledge, its relationship with natural sciences, and its missionary zeal.

⁴ [Colander (2003)], pp.19f.

⁵ [Cantoni (1885)], Introduction to the anastatic reprint edited by Tommaso Maggiore, Milan 2010.

⁶ [Società Agraria di Lombardia (1998)] and [Malatesta (1989)].

According to Cantoni, “agronomy consists of theory, i.e. the theoretical norms that it receives from natural sciences (physics, chemistry, mineralogy, botany, and zoology) which offer the general principles that will guide the agriculturalist in the choice of those transformations that are required by the specific and different conditions of climate and soil where his action takes place”⁷. We see here the opposition between theory, relying on natural sciences and conducing to general principles, and practice, the goal of which is transformation and which is affected by local specificities of climate, soil, etc. This binary opposition gave rise to a ternary distinction between agronomy, agriculture, and rural economics. While agronomy consisted of theory and attained general principles, agriculture and rural economics referred to the sphere of practice:

Agriculture is the art of governing the land and the plants, on the basis of the special needs of the first and the latter, without concern for profit (*tornaconto*)⁸.

The introduction of a discourse about profit transforms the art of agriculture into the industry of agriculture, which is explained by rural economics:

Rural economics covers the economic and administrative norms for a better management (*governo*) of soil and plants, in order to achieve from them the highest possible profit (*profitto*). This part is thus destined to lead agriculture to the condition of industry⁹.

Cantoni explained that whenever we say that in order to have this or that product we need certain conditions of air or soil, that the soil can be known in such and such manner and its flaws corrected so and so, we do not refer to a specific farm, nor to a way of knowing the quality of a given soil, and even less do we take into account matters of profitability. We simply state a general law or norm. This is agronomy. When instead we say that a certain crop (wine or wheat, for instance) fulfills this or that requirement, we already assume general conditions, but we are not yet interested in profitability. We thus teach the art, i.e., agriculture:

⁷ “L’agronomia comprende la teoria, ossia le norme teoriche desunte dalle scienze naturali (fisica, chimica, mineralogia, botanica e zoologia) che servono a fornire quei principii generali, i quali dovranno poi guidare l’agricoltore nella scelta di quelle modificazioni che sono reclamate dalle speciali e diverse condizioni di clima o di terra nelle quali può trovarsi”, [Cantoni (1866)], p.6, my emphasis.

⁸ “L’agricoltura è l’arte di governare il terreno e le piante, dietro gli speciali bisogni del primo e delle sconde, senza occuparsi del tornaconto”.

⁹ “L’economia rurale poi comprende le norme economiche ed amministrative per governare terreno e piante, in modo da trarne il maggior possibile profitto. Questa parte è quella pertanto destinata a condurre l’agricoltura al grado d’Industria”.

Agronomy hands the norms to agriculture, but she does not teach her any special way of cultivating; Agriculture in turn teaches how to grow crops, without concern for profit, which means she could also teach us how to make losses¹⁰.

In order for the art to become profitable, “in order for it to become an industry”, “it is necessary that the agriculturalist follows those economic principles that show him how to practice the art with the maximum possible advantage. Rural economy therefore teaches us how to carry out industry”.

Cantoni seems reminiscent of vaguely Aristotelian schemes of *episteme*, *tekhne*, *poiesis*, but this did not prevent him from being at the core of the movement for the improvement of sciences and technologies in Milan, with its characteristic emphasis on the useful (*utile*). He thus imagined the objection: could we learn from practice, and ignore the science of agriculture? Cantoni’s answer is no. But he justifies his negative answer not as a matter of principle, but of opportunity: too much time is needed to “make a complete man of industry”¹¹ simply by means of practice. In contrast to the scientists described by Brian Wynne, agricultural technicians such as Cantoni are not “denying, and thus threatening, [the farmers’] social identity by ignoring the farmers’ specialist knowledge and farming practices, including their adaptive decision-making idiom”¹².

Practice and theory share, for Cantoni, the same experimental nature of “tentando e ritentando”¹³, but theory reaches its conclusions faster and more safely. But in the case of agriculture discoveries are not a goal in themselves (as in science), and nor is production (as in art), since they are both aimed at profit (industry). Cantoni compares agricultural economics to medicine: just as medicine relies on physiology in order to preserve the physiological state of the body, agricultural economics subordinates the preservation of the physiological state of the plant to profit¹⁴.

¹⁰ “L’Agronomia porge le norme all’agricoltura, ma non le insegna alcun modo speciale di coltivare; l’Agricoltura insegna il modo di coltivare senz occuparsi di tornaconto, il che vuol dire che può insegnare anche a perdere”.

¹¹ “fare un industriale completo”.

¹² [Wynne (1992)], p.298.

¹³ “Trying and trying again”, a Galilean motto quoted in [Cantoni (1885)], Introduzione.

¹⁴ “L’agronomia, al pari della medicina, è basata sulla ripetuta osservazione dei fatti. La sola differenza sta in ciò che, mentre la medicina ha unicamente per iscopo la conservazione dell’organismo animale nello stato

Once usefulness was established by Cantoni as the ultimate goal of agricultural disciplines (he took profit as the indicator of usefulness), economic information becomes essential: agriculturalists need to know “the value (*l'importare*) of raw materials, the cost of transformation, of management, the sum of fixed and circulating capital, etc.” Thus they will know the cost, and the convenience of crops. “In order to make profit – Cantoni argues – it is not enough to grow crops well. In order to make money, you need a comprehensive knowledge of local economic conditions and to administer your farm so that you can account for any enterprise”¹⁵.

Accounting thus had a key role to play in rural economics. It made explicit what profit could be expected out of any new undertaking and allowed an assessment of the agricultural routines (*rotina*) that too often farmers followed unreflectively. New and old systems of farming had to be evaluated on the basis of their economic results, as they appear within the accounting framework. Examples of this pragmatic use of accounting methods were offered by Cantoni's own experiments as he assessed, for instance, the convenience of agricultural operations performed on mulberry trees or beetroot¹⁶. The expertise of agricultural technicians thus ranged over the natural sciences, agricultural techniques, economics and accounting, that is, over science, art, and industry. Expertise was directed at the application of science to maximize profit.

Not only did Cantoni's principles inspire the Scuola Superiore of Milan, but also the handful of agricultural schools where agricultural technicians received their academic degrees at the end of the 19th century was inspired by similar principles: they trained agricultural engineers (*ingegneri agronomi*) to apply natural sciences to the practical questions of farming. The most important of the schools, besides the one in Milan, were in Naples (Scuola Superiore di Agricoltura di Portici), and Tuscany (Istituto forestale di Vallombrosa-Firenze, Sezione Agraria at the University of Pisa). However, these agricultural schools did not cover the whole range of possible curricula. Some faculties of engineering, at the university of Padua, for instance, or at the polytechnic school in Milan (which together with the Scuola Superiore di Agricoltura formed the Istituto

fisiologico, l'agronomia oltre alla conservazione dell'organismo vegetale, ha pur quello di subordinare lo stato fisiologico al tornaconto” [Cantoni (1885)], p. VI (anastatic reprint edited by Tommaso Maggiore, Milan 2010).

¹⁵ “Per far denaro non basta il coltivar bene. Per far denaro bisogna conoscere perfettamente le condizioni economiche della località e bisogna avere un'amministrazione valevole a dar ragione delle operazioni intraprese”, [Cantoni (1866)], p. 10; Enterprise is each different activity carried out within the farm and intended to yield a product: for instance, every different crop represents a different enterprise of the farm.

¹⁶ see: [Cantoni (1885)], *Coltivazione del la barbabietola* and *Coltivazione del gelso* (anastatic reprint edited by Tommaso Maggiore, Milan 2010).

Tecnico Superiore), offered courses in agricultural engineering and land appraisal (*estimo*). This galaxy of schools and degrees educated agricultural technicians.

In schools of agriculture, teaching concentrated on issues related to the botany and zoology of useful plants, chemistry, hydrology, rural architecture, husbandry and hygiene for farm animals, the study of crop rotations, etc. The core courses offered the scientific foundations of agriculture and introduced the students to the related sciences, such as chemistry, botany, physiology etc. Courses on farm management, the choice of techniques, and the technologies available completed the curriculum with notions of the art of agriculture. Courses in *economia agraria* including appraisal and accounting finished with the fundamental notions of agricultural industry. The practical, profit-oriented, character of this training was underlined by the fact that agricultural schools were under the Ministry of Agriculture, Industry and Commerce (MAIC)¹⁷. The Scuole Superiori, thus, were closely linked with an institution, the Ministry, whose mission was to promote economic activity, rather than science. The MAIC, moreover, also patronized the *cattedre ambulanti di agricoltura*, i.e. organizations that offered technical assistance to farmers.

In addition, no training was considered complete without the direct experience of agriculture. Agricultural experts needed what the Stephan R. Epstein calls experiential knowledge, a combination of tacit (non propositional, non linear) and explicit (propositional and linear) knowledge¹⁸. Experimental fields and farms not only offered teachers the possibility of carrying on research, but also gave students the opportunity to practice and learn different techniques and also to experiment in order to make new discoveries. A well functioning agricultural school included experimental fields and in most cases had a stock of agricultural machines at its disposal for demonstration purposes: Marquis Cosimo Ridolfi, who established the agricultural school of Pisa in the first half of the 19th century, required from the Grand-ducal government two experimental farms as a precondition for accepting his post at the University of Pisa¹⁹. Conversely, Cantoni left Corte Palasio when the school lost its experimental fields²⁰.

Because of its artificial and controlled character, the experience acquired in experimental fields was considered insufficient for forming good agronomists. Until well into the 20th century, some

¹⁷ The Sezione Agraria in Pisa, which was part of the faculty of Natural Science at the local university, was an exception.

¹⁸ Epstein, quoted in [Velkar and Howlett (2011)].

¹⁹ On Ridolfi and his schools in Meleto and Pisa, see [Biagioli and Pazzagli (2004), Pazzagli (2008)].

²⁰ [Cantoni (1885)], Introduction to the anastatic reprint edited by Tommaso Maggiore, Milan 2010.

experience of farming in practice was deemed necessary for teachers and students. Cosimo Ridolfi was first of all a landowner, who began teaching agriculture in order to spread the farming system that he had devised. Pietro Cuppari, who was Ridolfi's pupil and successor in Pisa, was a farm administrator. Cantoni, as we have seen, was in the first place an agriculturalist. Ghino Valenti, who graduated as a lawyer and an economist, owed his influence on agricultural economists in the first two decades of the 20th century to the experience that he acquired from administering his family's estate. At the beginning of the 20th century, Arrigo Serpieri, who belonged to an urban family, and represents a model of agricultural economist relatively more remote from the fields, recalled the time he had spent at his uncle's model farm near Bologna as a decisive experience.

Many graduates moved from schools to farms and followed careers as farm administrators (in some cases in the course of practical internships on farms during their years of education), and thus completed their experience while at the same time helping to "spread rational agriculture". Others instead became assistants to the *cattedre ambulanti di agricoltura* and served their apprenticeship there, as advisers not to a specific estate-holder but to a whole agricultural community²¹.

3.2 The apprenticeship of agricultural technicians: the *cattedre d'agricoltura*

The *cattedre ambulanti di agricoltura* (travelling chairs of agriculture) played a fundamental role both in the transformation of Italian agriculture and in the self-perception of agricultural experts in the 20 years preceding the First World War. These organizations were staffed with a permanent director, with the title of professor and a varying number of assistants, usually young graduates from the Scuole Superiori. They were usually funded by consortia uniting agricultural societies, provincial administrations, savings banks, and other local institutions. They also received special contributions from the central state as a reward for the services they rendered

²¹ [Biagioli and Pazzagli (2004)] contains a list of the graduates from Ridolfi's school in Meleto in the 1840s with their occupation, pp. 280-282; [D'Antone (1990)] includes a statistics of the occupational patterns of graduates from the SSdA of Milan, Perugia, and Naples (Portici) in 1908-1909, p. 411. According to D'Antone's data 13,1% of graduates found employment in travelling chairs.

(for instance, to the statistical office), but they were created and nurtured by different constellations of local forces whose centre was occupied by “enlightened” landowners.

There was a great number of *cattedre* in Northern Italy, where civil society was stronger and richer, while they were almost absent from the South, where the economy was weak and civil society therefore poor. Although their effectiveness varied greatly, their contribution to the technological and managerial improvement of Italian agriculture is generally recognised. They were especially effective in the areas where they acted in closer connection with associations of agriculturalists and agronomists in academia²².

These travelling chairs gave young agricultural technicians a double experience. On the one hand, they engaged in the efforts of making the knowledge acquired in school useful for farmers. They saw it at work, they verified it, they faced its limitations. On the other hand, agricultural experts could specialize in a specific territory and context. While the science learned in universities remained general, assistants and directors of travelling chairs faced the daily problems and needs of real farmers. Expertise and experience entered into a sort of mutually reinforcing spiral. This also strengthened the dynamic distinction between science and “empirical practice” (It. *empiria*). While farmers, without a proper education, farmed according to “metodi empiricissimi”, seeded as it came, used fertilizers in arbitrary proportions, and persisted in suboptimal crop rotations, etc., the agricultural technicians helped them manage their farms according to the latest findings of science, they “unite[d] and catechize[d] the smallholders”²³. As the director of the *cattedra* of Amelia expressed himself, the *cattedra* carried out a “lavoro di apostolato agrario”²⁴.

Directors and assistants of the travelling chairs spread their catechism in lectures, booklets, practical demonstrations, consultations to farmers, and, of course, a journal. The *Cattedra* in Milan, for instance, with its two detached sections in Gallarate and Lodi was one of the most active. In 1908, its director, Professor Giuseppe Soresi and the two young graduates who assisted him gave 167 lectures on topics ranging from the fight against phyloxera to bookkeeping and life insurance. To this we must add 44 courses given on winter evenings on the same topics, 13

²² [Failla and Fumi (2006)] and Miriam Olmi in [Zaninelli (1990)], both focused on Lombardy. Both studies focus intensely on sources internal to the *Cattedre* and no serious study has yet been undertaken to evaluate objectively the effectiveness of these latter.

²³ [Cattedra di Agricoltura per la Provincia di Milano (1904)], p.11: “unire e catechizzare i piccoli agricoltori”.

²⁴ [Segarelli (1 Ottobre 1921)].

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classes of sericulture held at the girls' school of Niguarda, 127 days spent in the markets of Codogno, Casalpusterlengo, Sant'Angelo Lodigiano, Lodi, Melegnano, Melzo, Abbiategrasso and Monza for offering consultations, 604 days spent in the countryside for “the whole complex work of assistance to the first establishing and good management of experimental fields, for the organization of demonstrations of agricultural machines, for consultations on the spot, to assist effectively agricultural cooperatives, to prepare exhibitions, and, in a word, for all that fine-grained activity of propaganda that the travelling chair carries out”²⁵. Attendance at the conferences reflected – in the eyes of agricultural technicians – the fortune of their “propaganda” and witnessed the appreciation given by farmers to their teachings.



Figure 3.1: *Giovanni Bizozzero (in the circle) of the travelling chair of Parma, amidst the farmers in Campora (courtesy of the Associazione Pro Loco di Campora).*

The experimental fields and experimental farms that the travelling chairs helped to establish and manage were intended to “persuade by force of an uninterrupted example, by the evidence of facts, the tenants of Upper Milanese to change their methods”²⁶. In the experimental fields farmers tried new varieties, pesticides or fertilizers, while experimental farms showed “all the beneficial consequences that follow (from the introduction of a new crop ordering and

²⁵ [Cattedra di Agricoltura per la Provincia di Milano (1909)]: “per tutto il complesso lavoro di assistenza all’impianto e al buon andamento dei campi sperimentali, all’organizzazione di prove di macchine, per dar consulti in luogo, per porgere una efficace assistenza alle cooperative agricole, per preparare esposizioni, per tutto quel minuto lavoro infine di propaganda che esercita la cattedra”, p. 12.

²⁶ [Cattedra di Agricoltura per la Provincia di Milano (1909)], p.12.

management method) for all enterprises in the course of crop rotation”²⁷. Experimental fields and farms not only demonstrated to farmers the effectiveness of the new technologies. On them, agricultural experts also continually verified the profitability of crops, machines, fertilizers, and rotations that had been devised elsewhere, under the conditions of soil and climate that prevailed in Lombardy.

The risk was all on the shoulders of generous landowners. Sometimes, in fact, experiments ended with a loss as in the case of the unfortunate landowners who agreed to try using cannel coal (It. *ampelite*) against phyloxera with no result, or who planted tobacco in experimental fields. Tobacco, so successful in Apulia, turned out to be catastrophically unprofitable in Lombardy. In these cases, the *Annuario della Cattedra per la Provincia di Milano* could only express the gratitude of the Chair for those who had ventured.

Travelling chairs, in Milan and elsewhere, also promoted the creation of cooperatives of farmers, dairy cooperatives in particular and agricultural savings banks. All these initiatives projected the small scale assistance to individual farms on a larger scale and required some kind of knowledge of economic phenomena and markets and considerable managerial ability.

The great number of initiatives and undertakings in which the Chair of Milan took part was reflected in the positions that the director and his assistants occupied. The case of the Chair of Milan, which operated in a very reactive economic environment is certainly peculiar, but it gives an idea of the variety of tasks assigned to such institutions and their employees. In 1908, Soresi was a member of an incredible number of commissions, juries, committees, which shows how public authorities and private associations alike deferred to his expertise. He was involved in the initiatives of the Società Agraria di Lombardia, in the activities organised by the powerful Federazione Italiana Consorzi Agrari of Piacenza, and he cooperated with the Prefect of Milan, the highest authority at local level and the representative of the central government, in the fight against illnesses of peasants and livestock.

In 1911, on behalf of the Società Agraria di Lombardia, he added to the list of his tasks that of Provincial Commissioner for Agricultural Statistics: in practice it was Soresi who materially compiled the made agricultural statistics concerning the province of Milan for the Ministry of Agriculture.

²⁷ [Cattedra di Agricoltura per la Provincia di Milano (1909)], p.16.

The war marked a turning point. The younger collaborators of the Chair were sent to the front, and Soresi was left alone to face familiar and new tasks. For the war effort the Chair promoted urban kitchen gardens and contributed with special competitions to the training of women in heavy agricultural works. Its most important tasks, however, were connected with ensuring the supply of food and horse power for the troops. The updating of agricultural statistics in 1915-16 contributed to this task.

The effort put by Soresi into making the requisition of horses and other livestock as rational as possible, preserving the best breeds, did not prevent a loss of trust in the institution of chairs in general. Farmers felt betrayed by the agricultural technicians who sided with the state against them. By the end of the war, for this and other reasons, chairs had probably lost a great deal of their appeal among farmers.

The case of Milan was indeed peculiar and it is interesting for us precisely because the *cattedra* there fully engaged in activities and interactions that elsewhere were attempted with less success. At the opposite extremity of the range of possibilities lay the travelling chairs in Basilicata and Calabria, provinces of the far South. In this area, travelling chairs were created by the central state in order to foster economic development. In 1902, the then prime Minister Giuseppe Zanardelli travelled to Basilicata on a mule and remained appalled by the utter misery of the province²⁸. In the following years, the Italian parliament passed its first laws for regional development. It was agriculture in particular that attracted the attention of the legislator.

Zanardelli and his aide Sanjust observed the vast expanses of land left barren because of extensive systems of farming. They collected complaints about unreclaimed marshes and malaria that plagued the area, and saw peasants cultivating their land according to “medieval” methods.

Agriculture should improve, was their conclusion, and unproductive soil should be transformed according to rational methods of farming. This transformation had to start with the farmers. New farmers, trained in more perfected agricultural techniques could be introduced from other more developed areas (*colonizzazione interna*, as it was called²⁹), and local farmers had to be guaranteed access to new techniques. Sanjust was assured by many of the people whom he

²⁸ For this episode see sec. 4.2 and [Corti (1976)].

²⁹ The “settlers” came mostly from areas where sharecropping prevailed, such as Umbria or the Marche, because, as autonomous entrepreneurs, they combined a variety of skills; see the experience recalled by [Rossi-Doria (1991)].

interviewed for his report that the farmers of Basilicata did not lack the will, but simply the know-how to embrace ploughs of metal and chemical fertilizers, that the state should provide as much training as capital. Know-how and assistance were to be provided by the travelling chairs which had proved so useful in the North. Due to the absence of strong agricultural associations and universities, the state decided to finance the creation of travelling chairs directly³⁰.

These new Chairs were, however, somehow foreign. The first years after their establishment therefore were a period of careful study and mindful examination of the uneven conditions of the physical environment, “while never neglecting to introduce and gradually popularize those agricultural practices whose effective usefulness is recognised in the art and industry of the fields”³¹. The exploration of the physical geography of Basilicata and Calabria ran parallel to the establishment of relationships with farmers, and the creation of mutual trust³².

This work could be very difficult: chairholders in Potenza and Lagonegro lamented the hardship of travelling on the non-existing roads, the long trips undertaken in order to inspect a field and advise isolated farmers. Silvio Laureti of Crotone (travelling chair of Catanzaro) stated that he rarely had the opportunity of meeting the same farmer twice in a year: due to the isolation of villages, he dedicated to each of them long but rare journeys. As soon as he arrived in a village he collected information from locals on the deficiencies of the agriculture there, then gave his conference in the evening, answered all questions, and spent the following days visiting the plots of farmers wishing to receive advice.

Nevertheless, life was relatively easy for some of the chairholders: the director of the travelling chair of Reggio Calabria, a coastal area surrounding a relatively populated city, could conduct his lectures and consulting sessions in the local dialect (he was certainly a local himself) and rejoiced to be living with his own people. But it could be very hard for others: Prof. Benedetto Bartolucci who held the Cattedra in Lagonegro, where 13 out of 39 municipalities lacked roads,

³⁰ Relazione Sanjust, in [Corti (1976)], pp.118ff. Legge 31 Marzo 1904, n. 140.

³¹ “Di tale multiforme condizione di ambiente fisico, le RR. Cattedre hanno dovuto farne palestra di ponderato studio e sennato sondaggio, pur non tralasciando d’introdurre e di far gradatamente accreditare quelle pratiche agrarie di effettiva e riconosciuta utilità all’arte e all’industria dei campi”, [MAIC- Ispettorato del bonificamento agrario e della colonizzazione(1908), MAIC- Ispettorato del bonificamento agrario e della colonizzazione (1910)].

³² On trust in Southern Italy, although for a different historical period, see: [Pagden (1990)].

described the “utterly miserable life [he led], only comforted by the idea of contributing to the moral and economic redemption of Basilicata”³³.

Isolation, moral and geographical, is mirrored also in the structure of the activities of chairholders. Bartolucci claimed that “the Chair’s propaganda [i.e., the lectures, experimental fields, etc.], given the lack of roads, the lack of a workforce, the moral prostration of the population, was confined to the distributions of seeds and fertilizers...”: lectures were excluded. But even those who were more successful at establishing contact with farmers, such as Oddo Romani in Potenza, acknowledged that lectures and classes were relatively rare (69 in 1908 compared to the 167 given by the *cattedra* of Milan in the same year), and classes only possible “where the environment was more favourable and allowed a more abundant use of words”³⁴.

For the chairs of Basilicata and Calabria, as for chairholders everywhere in Italy, example was the only way to persuade peasants: experimental cultivation with fertilizers convinced peasants that they could adopt mineral fertilizers (“so far unknown” in these regions)³⁵. Experimental fields and visits to the farmers’ fields (*consulti*) formed the main activity of the *cattedre* in Basilicata and Calabria in the early years of the 20th century. If this effort “could not turn around completely ex abrupto the agricultural physiognomy of Calabria and Basilicata” – so claimed the chairholders – “it certainly helped to transform a great many irrational agricultural practices, which clashed with a healthy rural economy, and to vivify and stimulate the hidden and sleepy energies of a great number of agriculturalists in both regions”³⁶.

Dispatched to remote peripheries, agricultural technicians intended to act as a transmission belt between the natural sciences and agricultural improvement; they saw themselves as agents of civilisation and progress. This action, however, could not be in a vacuum. It was aimed at

³³ “vita tristissima, che solo anima l’idea di cooperare alla redenzione economica-morale della Basilicata”, [MAIC- Ispettorato del bonificamento agrario e della colonizzazione (1910)].

³⁴ “dove l’ambiente è più favorevole, e permette più abbondante *uso della parola* (!), si sono anche cominciati dei brevi corsi di lezioni teoriche e pratiche”, [MAIC- Ispettorato del bonificamento agrario e della colonizzazione (1910)], p. 9 (my emphasis).

³⁵ Although even then, as an assistant to the chair of Aquila in Abruzzo complained to the commission of enquiry in 1907, peasants forgot to follow the right proportions between fertilizers and could be disappointed by the results.

³⁶ “Tale cumulo di attività varie e molteplice delle RR. Cattedre, se non ha potuto mutare ex abrupto la fisionomia agraria della Calabria e della Basilicata, ha certamente contribuito a far radicalmente modificare buona parte delle pratiche agrarie irrazionali, cozzanti con la sana economia rurale, ed a ravvivare e galvanizzare le latenti e sopite energie di gran parte degli agricoltori delle due regioni”, [MAIC- Ispettorato del bonificamento agrario e della colonizzazione (1910)], p.5

engaging local forces in the process of improvement, at persuading; it culminated in the creation of savings banks and cooperatives of producers for the purchase of fertilizers, seeds and machines that were only effective when farmers themselves changed their systems of farm management.

The success of the travelling chairs depended on a connection based on trust between agricultural experts and farmers. Only trust enabled the technology to be transferred. This trust had different components. First, it depended on the effectiveness of the technologies advertised by the *cattedra*. When a farmer used the fertilizers that it provided without following the instructions that came with them, and was disappointed by the results, he lost confidence and spread diffidence among his neighbours. As the assistant to the Travelling Chair of Aquila lamented, “those people were an obstacle to agricultural progress”³⁷.

Second, trust depended on the attitude of the Chair itself. As far as its staff showed solidarity with the community of farmers, trust was accorded to their proposals. The social tensions that multiplied after 1909 and exploded after 1918 saw a violent polarization of the relationships between landlords, large tenants, and the government, on the one side, and smallholders, daily laborers and sharecroppers, on the other³⁸. In the areas of sharecropping, above all, an institution such as the *cattedre*, financed by landlords and eminently intended to assist sharecroppers, became a victim of the political climate.

Concentrating on technical progress within the existing social structure, chairs were unable to answer the demands of rebellious farmers who asked for a change in their contracts and in the structures of property. The war often deepened the rift between agricultural experts and farmers, and it seems that the *cattedre* came to be seen in the countryside as agents of the upper classes. In the conflictual climate that preceded the Fascist take-over of 1922, Umberto Segarelli, the director of the Travelling chair in Terni, in an area where sharecropping prevailed, recalls the sharp criticism of a peasant after one of his conferences: “Dear Professor – the peasant said – I

³⁷ ACS, Giunta parlamentare d’inchiesta sulle condizioni dei contadini nelle Provincie Meridionali nella Sicilia, witness of Giuseppe Bellisari, b.5, f 6/3, verbale del 7 Ottobre 1907.

³⁸ On the Società degli Agricoltori Italiani, see [Rogari (1994b), Rogari (1998)]; on SAL in Lombardy, [Malatesta (1989)]; on Società Agraria di Bologna [Cardoza (1982)].

listened to your words from first to last, but I don't like you, because you have talked always about us peasants, and never about the masters, because they pay you..."³⁹.

In quest of a new legitimization, the chairs increased their dependence on the government. The Fascist regime centralised the chairs, regimented the agricultural experts in the Federation of Agricultural Technicians, and in 1935 the chairs were finally absorbed by the Ministry of National Economy and transformed into Provincial Inspectorates of Agriculture⁴⁰. This was but the last step of the progressive bureaucratization of local agricultural experts (mentioned in Chapter 2) that went hand in hand with the polarization of social relationships in the countryside.

3.3 Appraising the transformation

The sketch I made of the fields covered by agricultural technicians in a travelling chair was not intended to specify concretely the meaning of the expertise of agricultural technicians; it also showed the important role of economic constraints. We have seen in the work of Gaetano Cantoni how in fact the goal and reason for the existence of agricultural expertise was to make systems of cultivation more profitable. Oreste Bordiga, who had studied with Cantoni in Milan⁴¹, tried to conceptually separate agricultural economics from the remaining disciplines that concerned agriculture. Following Lecouteux, he defined agricultural economics as "the science of agricultural improvements under the constraints of economic opportunity"⁴². Agricultural economics took the definitions and principles of "pure" economics and muddied them in agricultural transformation, for the design and management of farm improvements.

The design and management of agricultural transformation required, first, economic analysis. The design of experimental farms, for instance, depended on the evaluation of the expected economic advantages of different combinations of productive factors, generically labelled land, capital, and labor, in relationship with the different crops and crop rotations. Agricultural technicians were also involved in the design and planning to transform existing farms or new farms installed in un(der)exploited areas.

³⁹ *L'Agricoltore del Nera*, anno I, n. 17, 16 Settembre 1921.

⁴⁰ [Desideri (1981)], Chap. 2.

⁴¹ [Musella (1994)].

⁴² [Bordiga (1888)].

In order to design improved farms, agricultural technicians had to face problems of two kinds. The first was the relationship between farm and markets, a connection that was characterized by prices and interest rates. The second was the evaluation of the economic prospects of different managerial solutions, something close to cost-benefit analysis. These two aspects were combined at the level of the farm's private economy and also at the level of the political economy of agriculture, as a sector. In both cases, the knowledge required was not limited to "general principles", but it included a great deal of local, particular information.

Vittorio Niccoli's communications to the National Agricultural Congress held in June 1906 make the approach of agricultural technicians to economics very clear. In his first communication, Niccoli tackled the broad topic of agricultural transformation. The problem was controversial, with very relevant political implications: when and how was it profitable to make extensive cultivation more intensive? The North/South divide was often interpreted according to the categories of intensive versus extensive agriculture.

The degree of intensity was given by the ratio of labor and capital to land. Niccoli began by analysing in very abstract terms the fundamental economic concepts of labor, land, and capital. His question was, however, how to choose in concrete conditions, whether to privilege labor-intensive or capital-intensive transformations. The choice depended on the relative abundance or scarcity of economic factors⁴³. Niccoli discussed two examples that he said were taken from his experience in designing estates.

The first one, "from a concrete project of mine, extending over 1000 hectares, of which about 200 hectares were irrigated", showed an estate that, after the building of farm extensions and the purchase of machines and livestock, incorporated land, farm extensions, and working capitals for a total of 2300 lire. This property yielded 190 lire (obtained by subtracting 230 lire of yearly expenses from a gross product of 420 lire). As a result, the return per unit of capital was $190/2300 = 0.08$, i.e. a return rate of 8%. In this property situated in the scarcely populated area surrounding Rome, the intensification was based on an increase of capital, since labor was the scarce factor there. Niccoli compared this Roman case to the case of another transformation

⁴³ Vittorio Niccoli, *Bullettino dell'Agricoltura milanese* numero 26 del 29 Giugno 1906

project that he had directed in Tuscany. This time, the intensification entailed an increase in the quantity of labor invested, but the return achieved in the end was the same (8%)⁴⁴.

His conclusion was pragmatic: “it is meaningless to discuss alternatives in the abstract; in the field of economics, either in the agricultural sector or in any other business, the fundamental laws are imposed by profit”⁴⁵. The formulas that Niccoli proposed for computing the profitability of agricultural transformations were the following. Let ΣC be the total capital needed for the transformation (including land, working capital and the cost of improvements), P the expected average gross product, S the expected expenses, M that part of S that is allocated for the wages of the workforce, and V the return per unit of capital. Then $P - S$ is the total expected return of the investment ΣC and $P - S = \Sigma CV$, thus implying that $V = (P - S) / \Sigma C$. The higher the V , the more convenient the investment.

In his second contribution to the Agricultural Congress, Niccoli discussed the case of Sardinia, where agricultural transformations were invoked to solve endemic poverty, as in the case of Basilicata⁴⁶. The transformation of the island would be brought about by the economically rational improvement of individual farms, according to local conditions. Political economy acted on a sum of private economies.

These two contributions help us clarify different aspects. They display a progressive shift from technical concerns and methods to agricultural economics. The first and most obvious step went from the management and design of an individual farm in terms of cultivation and agricultural improvements to the analysis of the economic factors involved (cost-benefit). The second step moved from the cost-benefit analysis at farm level to its consequences for the economic development of whole regions: political economy was analysed in terms of private economy (i.e. at the farm level).

The economic analysis directly related to what we could call the construction site of agricultural transformation. The reasoning of agricultural economists had two poles: the design (expressed by the forecast budget) and the transformation proper (the building, tilling, reclaiming, etc., that

⁴⁴ Niccoli, *Bullettino dell'Agricoltura milanese* numero 27 del 8 Luglio 1906. There is no need to assume decreasing returns, because the higher labor requirements corresponded to a change in the crops sown, i.e., for today's economic theory, a change in production function.

⁴⁵ “Discutere in tesi astratta è un fuor d'opera; nel campo economico, sia di fronte all'industria agraria, sia di fronte a tutte le altre, le leggi fondamentali non possono essere dettate che dal tornaconto” (28, 13 luglio).

⁴⁶ Niccoli e Clerici, *Bullettino dell'Agricoltura milanese* numero 29.

ended in the final balance). Agricultural economics thus evolved from a very practical, concrete expertise, the wisdom of a planner rather than the science of a theorist. The principles of theoretical economics were adopted opportunistically in order to apply them in agriculture.

The premise for the application of economic concepts to agriculture was the translation operated by appraisal and accounting. The farm, with its crop rotation, its pesticides and fertilizers (“the art of agriculture”) and the leasing contract binding the tenant and the landlords (a matter of law), etc., were translated into the figures of a balance sheet, in such a way that they could be ascribed to the three overarching categories of land, capital and labor. The close connection between agricultural economics, accounting and appraisal was obvious to the students of agricultural schools, since the three subjects were usually taught together. Niccoli himself occupied the chair of agricultural economics, accounting and appraisal at the Scuola Superiore di Agricoltura in Milan. He was succeeded by Serpieri in 1906, and soon afterward by Ernesto Marengi. The three of them were leading agricultural economists⁴⁷.

Accounting and appraisal formed thus an observational interface between economic theory and daily experience, and allowed a correspondence between elements of “pure political economy” and the cows, buildings and fields of the farm. Accounting and appraisal, as in the case of the *cadastre*, made farming legible to agricultural economists⁴⁸. Textbooks and handbooks, however (such as Niccoli’s *Manuale dell’agricoltore e dell’ingegnere agronomo*) could not classify all the different actual cases that occurred in practice. Appraisal and accounting required a direct experience of the processes of agriculture.

Niccoli’s career and intellectual path, from farm management to agricultural economics through accounting and appraisal, mirrors the complementarity between theory and experience and the observational framework that linked the two. It was the standard path followed by those who became agricultural economists until the third decade of the 20th century. This had been the

⁴⁷ On Marengi’s fortune, [CESET (1995)]. Marengi prepared three textbooks, one for each subject. Although he died before completing the third one, on agricultural economics, the books that he published on appraisal and above all on accounting became longstanding “classics”; Giuseppe Medici, in the aftermath of the Second World War, also published his three canonical textbooks on agricultural economics, accounting and appraisal.

⁴⁸ See [Scott (1998)], for *legibility*: “Suddenly, processes as disparate as the creation of permanent last names, the standardization of weights and measures, the establishment of cadastral surveys and population registers, the invention of freehold tenure, the standardization of language and legal discourse, (...) seemed comprehensible as attempts at legibility and simplification. In each case, officials took exceptionally complex illegible, and local social practices, such as land tenure customs or naming customs, and created a standard grid whereby it could be centrally recorded and monitored”, p. 3.

case for Pietro Cuppari and Bordiga in the 19th century, and would eventually apply also to Marenghi, and in part to Serpieri.

To a certain degree, Ghino Valenti was an exception. As mentioned above, Valenti was educated as an economist, rather than as an agricultural technician. He had been an agriculturalist himself, a circumstance that made him credible when talking on agricultural topics. He had managed the large estates that his parents bequeathed to him, and although his initiatives had ended in the loss of his land, he gained a reputation for his innovative and modernizing views⁴⁹. Valenti possessed a deeper familiarity with theoretical economics than his colleagues. It was possibly for this reason that Valenti specialized in the political economy of agriculture. He acted thus as the agricultural expert for the Italian government and for the leading associations of agriculturalists at the national level.

In the 1900s, on behalf of MAIC, he led the complete reorganization of agricultural statistics, coordinating the action of local agricultural associations, and of the best agricultural technicians (Oreste Bordiga, Vittorio Alpe, Arrigo Serpieri, Vittorio Niccoli, etc.). In 1912, Valenti joined the group of technicians who advised the government on the agricultural potential of the newly conquered Tripolitania and Cirenaica⁵⁰. From 1913, Valenti headed the national committee for customs duties, an interest group established by the Association of Joint Stock Companies. In this task he was again supported by a great many agricultural technicians (Alpe and Serpieri, Vittorio Peglion, Luigi Morandi, and others). During the war, the government called Valenti to work on the section “agricultural economics” of the Governmental Commission on food supply. Whether as an adviser to the central government or to interest groups, the economist from Macerata had specific competences which enabled him to broker between academia and politics, between knowledge and action.

Only Arrigo Serpieri, in the following generation, was able to reach a more powerful public role as an expert in agriculture. In the first years of the 20th century, the theoretical depth of Valenti had had a significant influence on young Serpieri. To the legacy of Niccoli, his teacher in Milan, Serpieri added a broader interest in economic theory. Although Valenti supported a labor theory

⁴⁹ [Giaconi (2003)], [Guidi (2001)].

⁵⁰ He described his findings in [Valenti (1912)].

of value⁵¹, he encouraged Serpieri to read the texts of Alfred Marshall, Vilfredo Pareto, and above all Maffeo Pantaleoni. His early works on farm appraisal were inspired by their ideas⁵².

Thanks to Valenti, as Serpieri himself acknowledged, he moved from agronomy to agricultural economics⁵³ and his “conversion” contributed in many ways to give agricultural economics the prestige of a self-standing discipline remote from the humble “industry” that Cantoni had praised. Agricultural economics still served practical purposes but was now entitled to “scientific”, disinterested observations, without any immediate relation to practical purposes.

Serpieri’s contribution, in fact, was not limited to his many studies and empirical investigations, but it entailed the creation of research institutions deemed worthy to become the site of such scientific observations. His efforts culminated in the foundation of the National Institute for Agricultural Economics (INEA) in 1926, which became the reference point for all professional agricultural economists, and of its regional Observatories⁵⁴. Serpieri’s pupils regarded him as the founder of a “truly” Italian national school of agricultural economics⁵⁵.

Notwithstanding his theoretical and research oriented interests, Serpieri was not a mere academician. Concrete transformation remained his aim, but on a much larger scale and with a much deeper involvement of the state than Niccoli or Valenti probably considered desirable. He established himself as the representative of agricultural technicians within the Fascist regime, was Mussolini’s adviser for agricultural policy and twice vice-minister for agriculture. He designed in particular the policy of total land reclamation (It. *bonifica integrale*), a huge project of land reclamation that the Fascist regime advertised worldwide as the sign of the demiurgic capacity of Mussolini’s Italy⁵⁶.

3.4 Conclusions: Observing and transforming

I discussed these agricultural experts at such length because they are the most important characters in this work. They were the bearers of an eminently practical knowledge whose

⁵¹ See [Guidi (2001)].

⁵² [Serpieri (1901), Serpieri (1916-1917)].

⁵³ [Perini (1932)], *Prefazione*.

⁵⁴ [Magnarelli (1981)].

⁵⁵ [Medici (1946)], and [Nou (1967)] and still [Di Sandro (1995)].

⁵⁶ See [Stampacchia (2000)].

function was to bring about transformations of the land, of the crops, of cultivation and management methods, of market relations (through cooperatives and savings banks). This knowledge was made up of a theoretical, scientific, or “general” component, which was explicit, linear, verbal or mathematical; and of an applied, experiential, or local component, which could be tacit or explicit. They both concurred to inform the action of agricultural experts.

My discussion of Cantoni’s ideas about the relationship between the science, art, and industry of agriculture intended to expose the view of their profession that the generation of Niccoli and Valenti received from their teachers, which consisted of three essential points: the confidence in science, the importance of adapting a disembodied science by means of practice, the weight of constraints if the science and art had to be useful. Transforming conditions, rather than knowledge per se, was the goal of this eminently practical discipline. Art and science were made useful either in the private estates that graduates in agricultural sciences went to administer or through the travelling chairs of agriculture. I described in so much detail the activity of the chairs because I wanted to give a full idea of the content of the agricultural experts’ expertise. They thought that their task was to convince and educate and that for this reason it was necessary to adapt their general knowledge to local conditions. The travelling chairs were therefore a site of observation and analysis that accumulated information on the agricultural life of their area of operation.

The action of agricultural experts at local level, their engagement in experimental farming, in the promotion of cooperatives for the purchase of fertilizers and the transformation of agricultural products through the dissemination of new technologies and techniques, also show the reader the training received by some of the main characters of my story. Although among the agricultural economists that I discuss in this and the following chapters only Soresi and Eugenio Azimonti had been the directors of a travelling chair, chairholders and their assistants shared their education at university with the big names of agricultural economics such as Niccoli or Serpieri, introduced above. The knowledge of techniques and technologies was an obvious part of this education. But the basic tools of agricultural experts included accounting and appraisal. These disciplines were essential for allowing agricultural experts to assess the economic viability of the transformations that they designed, or advised. They offered a fundamental framework of analysis. They were therefore both managerial technologies and techniques of observation. We shall see in the following chapters how accounting and appraisal entered the field-research of the agricultural economists.

Moreover, in this chapter I stressed the embeddedness of travelling chairs in their provincial contexts because this explains, to a great extent, why these institutions came to play such an important role in all the initiatives taken by government and agri-cultural economists to collect information about the economy of the countryside. The network of contacts of the travelling chairs proved essential in providing access to local information. The *cattedre* had a double nature: they depended on local forces and local organizations, but they also depended on the state. The expertise that they produced could therefore be mobilized at the same time by the government and by the associations of agriculturalists.

Finally, travelling chairs were the most obvious point of contact between the agricultural experts and society as a whole. Whether their efforts to modernize agriculture were successful depended on the specificities of each travelling chair and on the conditions that it encountered. It is relatively easy to attribute to the action of travelling chairs limits that reflected the difficulties of the Italian state in including the agricultural masses in the North and in particular the South of the peninsula.

Prisoners of a class structure that was able only to coopt and involve the upper strata of rural life, according to today's traditional interpretation, Italian institutions in general would only impose in the rural peripheries the centralist products of a "foreign history"⁵⁷. As has been argued with reason, the stress on technical progress rather than social change, as the revolutionary socialist movement gained momentum in the countryside, created a deep rift between agricultural technicians and the vast majority of the farmers whom it was their mission to assist.

This rift deprived agricultural experts of their embeddedness in local reality and induced the technicians to seek the support of the state and undergo increasing bureaucratization. It should not come as a surprise to us that agricultural technicians wholeheartedly welcomed the Fascist regime. But the regime strengthened the functions of control and inspection at the expense of the agricultural experts' mission to educate.

⁵⁷ The notion of "storia altrui" comes from [Levi (2006)]; for an interpretation of the limits of Liberal Italy see [Vivarelli, Roberto (1981)], and the introduction to [Corti (1976)], pp. XXII f.

4 Enquiries I: definition

Of the three forms of investigation listed by Ghino Valenti, the “father” of Italian agricultural statistics and the venerated master of a generation of agrarian economists, the *inchiesta*, the enquiry, represents for various reasons the oldest. This form of investigation derived in fact from a long tradition of administrative practices. Whenever central institutions wanted to collect information from their peripheral offices, the enquiry since the 18th century at least had been the most obvious procedure to follow. Enquiries on economic and social topics became more frequent in the 19th century. In the 19th and 20th centuries, from the celebrated British parliamentary enquiries to the German enquiries of the Verein für Sozial Politik, they played an essential role in influencing public opinion, parliaments, or cabinets. They were specific forms of investigation of social facts based on combinations of different sources. Not all of them proved successful in influencing deliberation, for political plots or technical reasons could undermine their effectiveness, but enquiries seemed to be a necessary source of information in 19th and 20th century Europe.

For the early 19th century, enquiries have often been included in the larger definition of statistics on a German or French model¹, but it was in the second half of the 19th century, by contrast with quantitative statistics, that enquiries assumed a more clearly defined specificity. European enquiries in the second half of the 19th and early 20th centuries have often been discussed in terms of their results, for social historians as a source or by political historians in so far as they reveal something about political debate and administrative structures, but they have rarely been analyzed methodologically, as a form of investigation of social facts together with statistics and monographs².

¹ For the celebrated French Napoleonic Statistics: [Bourguet (1988)]; for the Statistics ordered by Murat in Naples: [Lorenzo (1990a)]; a discussion of 18th and early 19th century statistics/enquiries in Italy: [Sofia (1988)], in particular the chapter on Galanti’s *Descrizione del le due Sicilie*, which was an enquiry as here defined.

² For example, the papers presented at a session introduced by Nadine Vivier at the 2010 Rural History Conference held in Brighton offered cross-national comparisons but avoided comparisons between different ways of observing and collecting information. Vivier also organised the workshop “Les enquêtes agraires: du national au local”, Université de Bordeaux, in May 2011, that will be documented in [Vivier and Marache (forthcoming (2013))].

ENQUIRIES I: DEFINITION

It is not easy to trace the common features beyond the very different historical experiences that went under the name of *inchieste*, from journalistic reportage, private enquiries, and the Italian parliamentary enquiries of 1877 and 1906 to the investigations carried out by the Italian administration itself. Enquiries in fact were not always promoted exclusively by the state and its institutions: a variety of institutions commissioned them, and the reports on the enquiries could address the most diverse audiences. Moreover, enquiries combined much heterogeneous material, including statistics and monographs (in sec. 5.4 below we see the importance of monographs), and this heterogeneity of the components makes the acknowledgment of enquiries a specific way of collecting and organising information even more complicated.

Giovanni Battista Salvioni restrained himself from giving a definition, in his article on enquiries, monographs and statistics, but affirmed: “the meaning internationally attributed to the *inchiesta* is nowadays that of an investigation, such that it covers a certain extent of territory or possesses a certain degree of detail. Above all, it must deal with practical aspects of political and social subjects”³. Despite the lack of a definition, Salvioni devised a classification for enquiries according to the matter under investigation and the institutions that promoted the investigation. Depending on the institution, enquiries could be classified as private or public, depending on topic, as electoral, political, administrative, social, etc. He concentrated on social enquiries as the most relevant, whether private or public, and continued by examining the opinions of other writers who had contrasted statistics and enquiries in different ways.

Enquiries, according to Salvioni, were not as reliable as statistics, i.e. the collection of quantitative information from a large and comprehensive mass of data (ideally the whole statistical population studied). Their advantages was that they were relatively cheap, and, in principle, could take advantage of people informed about facts in order to quickly gather the necessary information and give a meaningful overview of the matters chosen. For him, the main reason to investigate social realities by means of an enquiry rather than statistics was the reduction in the time and means available: the enquiry responded quickly and cheaply to specific questions of political significance. The very advantages of enquiries imposed obvious constraints: in order to be satisfactory for their instigators investigations must be hurried, and conclusions simple.

³ [Salvioni (1892)], p. 27.

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From Salvioni's discussion of Italian and German authors also emerged an ill-defined relationship between enquiries and statistics in the statistical and economic literature of the late 19th century. Enquiries were prevalingly considered a supplement or a surrogate for numerical statistics, based on qualitative evidence and well-chosen anecdotes. These were collected by means of questionnaires, where a core of qualitative and anecdotal evidence was often accompanied by statistics, administrative reports, etc. Questionnaires should make the informants aware of the information required and help them in ordering their answers, and they also guided the enquirers in making sense of the material collected, in reaching conclusions that actually said something to the committents of the enquiry.

The anecdotes and facts reported often concerned different places, and enquiries were supposed to bring them together into a general picture, valuable for understanding larger areas. Statistics, for Salvioni, summarized masses of information by means of mathematical averaging and a study of the distribution. Enquiries proceeded differently. Something of statistics – “a statistical quid”, as Salvioni says – entered the definitions of both forms of investigation, but the two differed in so far as enquiries focused on surveys of individual and special cases, and they attained numerically undetermined conclusions, something similar to what Andrew Mendelsohn calls “general observation”, a synthesis and a selection of observations of case stories, of local reports, carried out by “experts”, by practitioners, by knowledgeable people and made loosely combinable, thanks to the structure of the questionnaire⁴.

Peculiar to enquiries, even in the way that they used information of different kinds, was the attention paid to the position of the informants. While for quantitative statistics impersonality represented an ideal worth seeking, the reports, the answers to the enquiries' questionnaires, were valued precisely on the quality of the informants. Often, the institution that launched the enquiry relied for entire territories on the answers of a particularly well positioned informant. The quality, or position, of informants was a matter of political loyalty and knowledge of facts, good will (sincere or simulated) towards the enquiring institutions and familiarity with the topics investigated. A good informant had to be honest and knowledgeable: “la qualité de l'information, l'image de la situation existante, dépendent complètement des attitudes, de l'honnêteté et de l'objectivité des experts locaux”⁵. Therefore, the choice of the people involved in the enquiries had great importance. This was not the case for informants only, but also for those

⁴ [Mendelsohn (2011)].

⁵ [Tedeschi (forthcoming 2013)].

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who coordinated the enquiry and who “distilled” the information collected into the “general observations” of the enquiries’ reports.

The way in which the process of generalization was built imposed some limits to the number of possible informants. First, the quality of the informants would suffer following an increase in their quantity. Second, handling great masses of qualitative information in a way that was meaningful for the committents would soon have become an impossible task. As Paolo Tedeschi observes, in many cases “sont recensées les réponses d’une seule personne dont l’opinion devient le résultat de l’enquête pour le territoire qui lui est confié”⁶. The institutions that commissioned enquiries tried to neutralize the risks that were inherent to this way of collecting information, not only by carefully selecting informants and enquirers, but also by multiplying enquiries in competition with one another.

In this and the next chapter I try to single out the essential features of enquiries as forms of investigation of economic life in the Italian countryside. The material discussed in this chapter covers about thirty years of Italian history, from the Jacini enquiry of 1877 to the Faina enquiry of 1907. I am trying here to identify a typology that is general enough to encompass the variety of situations, giving more precision to Salvioni’s sketch. This will serve as a contrast to the other forms of economic investigation that I discuss in this thesis: statistics (Chapters 6 and 7) and monographs (Chapters 8 and 9). The conclusions of this chapter summarize therefore the common features of the enquiries discussed in the next three sections, proposing a general answer to the question: what is an enquiry?

In the case of Italy, the role of enquiries was particularly strong because of the combined French and German influence. They suited rather well the methodological principles and concerns of the *scienza dell’amministrazione* (science of administration), a school of thought in juridical and economic matters that had dominated the teaching of economics, finance and statistics in Italian universities since the late 1870s. Such a *scienza dell’amministrazione* considered social, juridical, and economic facts as inseparable, and claimed that the analysis of social phenomena should treat them together. The main representatives of the school, Angelo Messedaglia and Carlo Francesco Ferraris, were under the influence of German methods in the social sciences, and of German doctrines of state socialism, protectionism, etc. The Scuola lombardo-veneta of Messedaglia and Ferraris himself advocated the need for the state to “moderate the social

⁶ [Tedeschi (forthcoming 2013)].

machine” and harmonize the conflicting classes on the basis of a thorough understanding of economic and social dynamics⁷.

But the essential role in shaping the enquiry was played by the old administrative practice of interrogating local notables and local representatives of the state about their respective provinces. The administrative structure of the Kingdom of Italy, so closely modelled on French institutions, had in the provincial prefects the main providers of information for the central government, following a model that dated back at least to Chaptal’s *Statistique des préfets*. But this practice was older. Giuseppe Maria Galanti’s reports from the provinces of the Kingdom of the Two Sicilies in the 1780-90s reflect in their general lines the same approach that we see in Italian enquiries of the late 19th and early 20th centuries. In his travels through the Kingdom’s provinces, Galanti relied mostly on the information collected from local administrators, local notables, and selected informants. To this, he added his own direct experience as traveller and eyewitness⁸. While the elites of the civil society and the administration took upon themselves the task of representing the whole territory, the role of the investigator himself was to question and verify, by the selection of independent informants and his own critical assessment, the truth behind this representation.

Enquiries, whether public or private, had a strong political significance. They were as much intended to ascertain objective facts as to represent the collective wills and needs of populations and classes. The very form of the enquiry merged, as noted above, the collection of information with issues of representation. Those who responded to the questionnaires, inevitably did so as much because they wanted to inform the investigators as because they wanted to influence (or stop) the decision process. Therefore, in the context of enquiries, a peculiar divide between objective and subjective developed which contrasted with the faith in numbers that Salvioni for instance declared. Political opinions, suggestions to the government, requests – all were

⁷ Nicola Miraglia, quot. by [Mozzarelli and Nespor (1981)] p. 67, see also pp. 51 ff; For Austrian enquiries in 19th century Lombardy see again [Tedeschi (forthcoming 2013)].

⁸ For Galanti’s method on investigation see [Galanti and Placanica (1996)], p. 93: here the 18th century reformer depicted his method. He made use of a list of questions related to the political, economic and natural conditions of the province. He called this list his “*catechismo*”, because of the question-and-answer structure of the Catholic catechism. These questions were submitted to Galanti’s informers in large sessions, which were publicly discussed. Other informers were questioned privately, and yet others offered to send their memories and observations later. Interestingly, [Lorenzoni (1929)], p. 89, suggests inviting local authorities “ad un’amichevole riunione comunale, o separatamente in piccoli gruppi omogenei. Ne risulterà un interrogatorio collettivo con possibilità di correzioni reciproche, o in contraddittorio come si direbbe”. These “friendly reunions” should take place after the investigators had made a personal reconnaissance of the area.

subjective. Objectivity did not lie so much in the methods for collecting information as in the content of information and in the position of respondents. The most valuable information for the enquiry was, in any case, experiential and anecdotal. Such evidence was objective if it was reported without partisanship, in good faith.

The strategies of observation that the enquiries required are analyzed in the next chapter (Chapter 5) where I discuss a very complex case, the Faina enquiry of 1906, and show how its “packaging” conferred a mark of indisputability on the information about remote areas of the country that was invoked in the political debate. Here I apply a single scheme to three different enquiries, in order to display their common nature. The scheme analyzes the motives for each enquiry, its instigators or committents, its object, methods, and results.

4.1 The Jacini Enquiry

The motive: After the wars of the 1860s and the annexation of Rome in 1870, the parliament and the government of the newly created Italian kingdom faced an economic situation which was generically a cause of anxiety but, at the same time, to a great extent unknown⁹. The publication of the *Annuario statistico italiano* that began in the 1860s under the direction of Pietro Maestri encountered endless difficulties in assessing the productive forces of the country¹⁰. This is why in the 1870s the cabinet decided to carry out an ad hoc investigation of the manufacturing system. The cabinet’s envoys were despatched to the most productive areas to interview industrialists and inspect workshops¹¹. The situation was of course much more complicated for agriculture, due to the great number of small businesses, their variety, and their geographical dispersion. The council for agriculture, at the Ministry of Agriculture, Industry and Trade (MAIC) had promoted in 1866 the creation of local councils, the *comizii agrarii*, that should represent the agricultural classes within the Ministry. Such *comizii* were to be formed spontaneously by agriculturalists, i.e., in practice, large tenants and landlords. The result was geographically very

⁹ [Caracciolo (1959)], pp. 5ff.

¹⁰ [Marucco (1996), Patriarca (1998)].

¹¹ [Baglioni (1974)].

heterogeneous: *comizii* mushroomed in the agriculturally rich areas of Lombardy, Piedmont and Tuscany, but were rare and weak in the South¹².

Nevertheless, it was to the *comizii* that in 1868 Carlo de Cesare, a functionary of MAIC, addressed a 12 point questionnaire concerning the “state of agriculture in each province”: “Nowadays,” he claimed, “to know the state of agriculture of a country means to know the degree of its civilization”. Gaetano Cantoni, who set the ensuing *Relazioni* in order, grouped reports in 11 macro-areas that he considered homogeneous from the point of view of “topographic conditions, as well as moral and civil traditions”¹³. This was the beginning of what Ghino Valenti eventually called “*zone agrarie*”. In 1872, with the slogan of “Agricultural Italy is still unknown!”, about sixty *comizii agrarii* volunteered themselves for an enquiry on agriculture to be led by MAIC on the model of the industrial enquiry. It was naturally the *comizii* that the government asked for comprehensive statistic reports concerning the situation of agricultural production during the 1870s. The famous *Relazione intorno alla condizione dell'agricoltura nel quinquennio 1870-74* was based on the reports put forward by the *comizii*¹⁴.

There were much resistance, at the same time, to the idea of an enquiry. While industrialists were eager to get protective trade barriers, many agriculturalists, for whom free trade was comfortable enough, were afraid that the enquiry would serve only as a pretext for the government to intrude in economic affairs, regulating traditional land lease contracts and labor conditions. With the victory of Depretis' left wing party in the general elections of 1876, the parliamentary forces of those agriculturalists who wanted an enquiry on the model of that concerning the manufacturing sector temporarily merged with the leftist radicals who wanted to push the cabinet to do something for the miserable lives of agricultural workers. The parliament thus decided to promote a thorough investigation of the country's agriculture. The enquiry's program remained nevertheless open to productivist as well as social issues. It was the enquiring commission that eventually decided to focus on the problems of production and producers¹⁵.

The instigators: At first, the government offered to conduct the enquiry within the administration, but a parliamentary majority refused. According to them, the appropriate forum for analysing the nation's agriculture was not the administration but the assembly of the nation's

¹² [Corti (1973)]. It is noteworthy that the travelling chairs eventually spread in a similar way.

¹³ Cantoni *Relazione al ministro 1867-69*, parte I, p.3, cit in [Caracciolo (1959)], p.14.

¹⁴ an example in [Società economica di Capitanata (1874)]; on *relazioni* [Federico (1982)].

¹⁵ [Caracciolo (1959)], p. 27.

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representatives. The enquiry began as the Parliamentary enquiry on agriculture and the conditions of the agricultural classes. A special commission of twelve members was elected under the leadership of Senator Stefano Jacini. Jacini was a rich landowner from Lombardy who had served as the president of the Council of Agriculture at MAIC. From the Council of Agriculture, Jacini brought with him to the enquiring commission the Council's secretary who became the Commission's secretary. Despite the parliament's pronounced wish to keep the enquiry independent of the cabinet, the staff of MAIC offered significant support to the commission. The general director of MAIC, Nicola Miraglia personally engaged in the collection of data and treatment of the data collected¹⁶. Thus, at central level, the permanent structures of MAIC combined with the ad hoc commission: career functionaries cooperated with politicians.

The object of the investigation: The enquiry should fulfil different purposes. As a consequence of the long debate that had preceded its birth, the commission mandate was at the beginning ambiguously broad. There were two competing subjects of enquiry, the conditions of certain social classes and the structure of agricultural production. The leftist radicals, such as Agostino Bertani, were particularly interested in politicising the misery of the poor, and exposing the causes of the spreading "class struggle". But the conservative majority of commissioners resolutely refused to do this and marginalised Bertani forcing him to carry out on his own a separate enquiry on hygiene and poverty. The focus of Jacini's commission remained landowners and tenants, whose conditions immediately reflected the structure of farms and estates. As the landed elites wished it, rather than instigating class struggle by sensational data on poverty, the enquiry had to help parliament to "merely conciliate the interest of capital and labor, to increase the sum of agricultural productions, to physically and morally improve the man afield"¹⁷. The commission set itself to investigate production and its physical and economic conditions in each of the 12 areas (*circostrizioni*).

It is difficult to summarize what the real object of the investigation was. The basic element of the enquiry was a set of questions that commissioners had to answer. These questions were the same for all of them. They began with an introductory section that included a description of the geography and demographic trends of each area. A second group of questions concentrated on agriculture and the relationships prevailing between its economic factors (labor, capital, and

¹⁶ [Paoloni and Ricci (1998)], pp. 5-6.

¹⁷ "Unicamente a conciliare gli interessi del capitale e del lavoro, ad accrescere la somma delle produzioni agricole, a migliorare fisicamente e moralmente l'uomo dei campi", *L'Italia agricola*, editoriale of the 15.IV.1875, n.7, quot. in [Caracciolo (1959)].

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directive intelligence), a description of crops and their most dangerous diseases, a description of the related industries (wine-making, oil-making, alcohol production, etc.), of livestock, of crop rotations and irrigation systems, fertilizers, machines, and other technical aspects of farming. A third group asked for economic data such as the area's maximum, minimum and average gross and net product of the land, the import and export of products, the access to credit, the patterns of property of land. Relationships between proprietors and farmers, the forms of contract, the physical, moral and intellectual conditions of farm workers completed the topics covered by the enquiring commission¹⁸.

Answers to the questionnaire could include numerical statistics, be entirely qualitative, include reports from different sources, tables, maps, and all sorts of material. As we will see, the commissioners filled in the entries of the questionnaire by relying on the answers from a multiplicity of informants. This formed what Jacini called the *objective* part of the enquiry: the ascertaining of facts¹⁹. But the commission intended to base on these facts political recommendations and legislative responses to the demands of local agriculturalists. The arduous task of the commissioners consisted in this *subjective* part of the enquiry, as Jacini said. Objectivity and subjectivity do not mean the same here as they do elsewhere in this work.

The answers of the agriculturalists, functionaries, and *comizii* that were collected in the objective part were full of assessments that did not depend on any explicit, impersonal procedure. In the absence of regular, comprehensive, and consistent statistics of agricultural production, what was the meaning, for instance, of an "objective" assessment of the average gross and net product? Still, these assessments concerned facts, and were aimed at ascertaining them. However personal and non-standard their procedures, the observers were asked to be impartial. As the agronomist Oreste Bordiga puts it in his answers to the questionnaire: "if sometimes I drew from these data

¹⁸ This questionnaire has been republished by A. Caracciolo in the appendix to [Caracciolo (1959)]; Carla Catolfi in [Catolfi (1990)], p. 15 argues that the questionnaire followed "the classic scheme of 19th century regional monographs: natural conditions and agricultural areas (*zone agrarie*); crops and agronomic structures; the physical, social and economic conditions of the agricultural population". This might be roughly true, but I think it is much harder to group the questions, as they obviously overlapped continuously and, as Catolfi also remarked, the answers tended to reinterpret the questions. Here it is only important for me to show the breadth of the enquiry's objects.

¹⁹ [Jacini (1885)].

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some peculiar assessments, I always tried to be in these assessments precise and impartial. Truth above all, this is the maxim that inspired me²⁰.

Objectivity relied on the position of such informants, their knowledge of facts resting on their embeddedness in local life, and their good faith as ensured by their loyalty to the nation, their ambition to distinguish themselves as good observers, their aspiration to foster the development of their country, by offering the government the right information. Commissioners sifted these answers, and combined them into general observations about the areas assigned to them.

In the subjective part, instead of assessments of facts, Commissioners collected the requests, hopes, expectations of agriculturalists. This part paved the way for a political synthesis that was not supposed to be impartial. Translating the objective part into a good synthesis was the most difficult task. Jacini's final report should have been such as to impose its conclusions, since they stemmed from facts alone, and, at the same time, propose measures that responded to the wishes of agriculturalists: a summary of both the objective and subjective parts of the enquiry.

The investigation: Each commissioner was assigned an area called a *circoscrizione*. The twelve *circoscrizioni* roughly corresponded to Cantoni's eleven macro-areas: they grouped different statistical compartments (roughly coinciding with the current *regioni*²¹) according to a combination of administrative, agronomic, and historical criteria. For the compartments that were assigned to him, each commissioner could organise his work fairly freely, regarding the general lines set by the questionnaire. The commissioner's first duty was to travel through the area assigned to him, to get a personal impression of it (but commissioners were usually assigned their area of origin). In most cases, they tried to involve in the enquiry as many of the local elites as possible. Abele Damiani in Sicily and Ascanio Branca in Basilicata and Calabria, for instance, stimulated the formation of local committees of notables (scholars, functionaries and landowners) that collected information locally, more or less on the model of French statistics at the municipal level²².

The key support still came from the administration: prefects, tax officials, mayors, etc.. They contributed to the commissioners the bulk of the information that went to form the

²⁰ [Bordiga (1882)].

²¹ On the genesis of statistical compartments, see [Patriarca (1996)], p.189f.

²² [Paoloni and Ricci (1998)], pp. 13f.; on the role of French municipal notables in agricultural statistics: [Theodore and Volle (1977)].

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commissioners' reports. While prefects were routinely involved in statistical surveys, mayors, in small villages in particular, were almost invariably unable to comply consistently with questionnaires²³. Where they existed, the *comizii agrarii* played an important role which drew on the experience accumulated since the statistical reports of the 1870s and on the double nature of their public-private organs. In the area of the Marche, Senator Francesco Nobili Vitelleschi, the commissioner, involved in his work the young secretary of the *comizio* of Macerata, Ghino Valenti. Valenti built and directed a vast network of local committees for the enquiry, formed primarily by agriculturalists and government officials²⁴.

At the end of the work, when he published his final report, Jacini wrote that the objective part of the enquiry owed so much to the cooperation of "so many people outside the enquiring commission (...) that we can very well say that this part, maybe the most important of the Enquiry, is not the product of twelve men, but hoards all the knowledge and experience that contemporary Italy can offer on the essential problems of agriculture"²⁵. To the actors listed above within the state administration (mayors, tax officers, engineers, etc.) the contribution must be added of private individuals who voluntarily cooperated by sending tracts, which the commission called "monographs". Each monograph (in contrast to the monographs that we examine in later chapters) contained a presentation of the conditions of agriculture in a small area (usually smaller than a province), and answered the questions of the enquiring commission.

Local informants were crucial and their participation was assumed to compensate for the thin presence of the public administration in the provinces²⁶. As Jacini acknowledged, "the phenomena of rural economy possess, in each area, such a peculiar physiognomy, exclusively theirs, that is the result of thousands of different circumstances, in such a way that they easily deceive even the judgment of an agricultural economist (*economista agronomo*) if he is inexperienced in the place"²⁷. The different facts that formed "the agricultural organism of a territory" could not be investigated except by people who lived within such an organism and

²³ Some examples of the platitudes answered by municipalities to Jacini's questionnaires are in [Catolfi (1990)].

²⁴ [Paoloni and Ricci (1998)], p. 23.

²⁵ [Jacini (1885)], p.14: "La collaborazione di altre [persone estranee alla Giunta] riuscì così copiosa, che ben si può dire, quella parte, forse la più importante dell'Inchiesta, non essere soltanto l'opera di dodici uomini, ma racchiudere il sapere

e la esperienza che l'Italia contemporanea è in grado di fornire, riguardo all'importante problema".

²⁶ A problem often underlined for statistics, agricultural statistic in particular; see [Marucco (1996)] and [D'Autilia (1992)] for agricultural statistics in particular.

²⁷ [Jacini (1885)], p. 16.

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knew its peculiarities. Local experts were thus eagerly sought. We know for instance that in the area of Forlì, the commissioner Marquis Luigi Tanari referred first to the head of the local corps of civil engineers, Emilio Baldini. Baldini in turn asked the local librarians to indicate any young people who might be interested in taking part in competitions for the best monographs²⁸!

The participation of private individuals was very difficult to secure and always unevenly spread across the nation. The enquiring commission tried to stimulate cooperation by organising such competitions for the best monographs. A first competition for monographs was tried in 1876 and went almost unnoticed. Only three monographs were received. When the second competition was launched, it attracted in contrast a vast mass of heterogeneous pieces of work, that hardly provided data for this or that group of municipalities and could only make sense as part of a wider range of sources to consult. At the end of the enquiry, more than 500 individuals had sent such monographs to the commission, ranging from very confused and prolix enumerations of local beauty spots²⁹ to incredibly detailed studies including cartographic surveys and estimates of the yearly value of agricultural yield³⁰.

The function of this multiplication of sources was not only to provide the commissioners with information from local people, but also to give terms of comparison for the answers received. Together with problems of geographical completeness, the monographs and in general every answer to the questionnaire that the commissioners received posed a serious problem: how to evaluate them? Were they trustworthy? On the one side, the commission nominated juries of agricultural experts and officials of MAIC to judge the monographs. Most of them were initially judged inappropriate and insufficient by the juries that the commission nominated, because they did not respond to the points of the questionnaire or they seemed for some reason inconsistent and unreliable. They were often given prizes nevertheless, to encourage participation³¹. On the other side, only the critical weighting of answers against each other and against the experience of the commissioners seemed to offer any criterion of validity for the information collected.

²⁸ [Catolfi (1990)], p. 20.

²⁹ A monograph concerning the area of Reggio Calabria attracted particularly sarcastic comments from the jury, as it started with mythological accounts of the origins of the city and boasted the area's riches since the times of the Greeks and Carthaginians: ACS, Giunta parlamentare per l'inchiesta agraria e sulle condizioni della classe agricola in Italia, scatola 3 Fasc. 2.4, ins. 2 verbali 2a circ.

³⁰ I strongly suspect that this anonymous survey was written by Eugenio Faina, ACS, Giunta parlamentare per l'inchiesta agraria e sulle condizioni della classe agricola in Italia, scatola 12,5a circ, fasc. 67.

³¹ ACS, Giunta parlamentare per l'inchiesta agraria e sulle condizioni della classe agricola in Italia, scatola 3, fasc. 2.4, ins.1 Verbali e relazioni 1a circ.

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The enquirers would have liked the respondents to answer technical questions, such as those on surfaces seeded with different crops or the average size of properties, by including statistical tables. In fact, these pieces of information were computed yearly by the MAIC, but Jacini must not have trusted the MAIC figures. The enquiry also needed to function as a substitute for the statistics that the Italian state was unwilling to fund on a regular basis. Only in a few cases were the commissioners and their collaborators able to collect data with a degree of precision. In Marche, Ghino Valenti investigated patterns of land property and the surface seeded with each crop, according to the data made available by the offices that were responsible for the ancient Pontifical *cadastre*³². In other areas, the ancient *cadastres* (which had been prepared by the former Italian states before the Unification of 1861 and differed greatly from one another) were being integrated and updated by the Commission for the Adjustment of Land Tax of the Kingdom of Italy. Some monographs reported the Commission's data, but they were not uniformly available or accessible³³.

In general, the doubtful quality of data was known to the Commissioners. Consequently they often refused to express clear cut judgments on general questions, such as those the enquiry was supposed to answer (for instance, questions on the relative prevalence of small or large properties). Moreover, the sheer quantity of the answers available was a problem. The enquiry was formed by quantities of numbers and reports of different kinds, but all of them were rather juxtaposed than integrated with each other, obeying different criteria, methods, intentions. Extracting "general observations" from this mass of heterogeneous sources was not easy.

To summarize, the enquiry entailed a broad mobilization of local forces through official channels (as in the case of government officials), private relationships (as in the case of many landowners whom the commissioners personally contacted), and "public-private partnerships", as in the case of the *comizii agrarii*. Thus, the Jacini enquiry was also a test of the social fabric, of the forces upon which the Italian state could rely in each area of the country. It was as much a matter of establishing networks as of collecting answers.

³² The *cadastre* in fact reported for each municipality the list of proprietors in the municipality and the use of each plot of land. But cadastral maps reporting land use were available for only a few of the formerly independent Italian States and they all dated at best from the 1850s, being thus 20 years old at least; see [Valenti (1914)] and [Caracciolo (1959)], pp. 135-136.

³³ See the monograph by Giuseppe Cantù on Reggio Emilia, republished in [Badini(2001)].

The result: The enquiring commission met for 8 years, and published a great number of imposing volumes. The sheer mass of materials was such as to induce public respect. However, as Jacini wrote conclusively, only a few people during those eight years had taken the trouble of reading the materials of the enquiry as they came out. Depretis himself acknowledged in parliament that he had read only Jacini's final report. Valenti claimed in 1914 that if Jacini's voice had gone unheard this was not his fault but the fault of those who were unable to prize the treasure of his great knowledge and civil virtue³⁴. It is difficult nevertheless to avoid the impression that the lack of organic nature of the enquiry and the uneven validity of its parts – which was in turn the product of the variety of sources available for the different areas of the country – were among the main reasons for the lack of interest the Enquiry met with from the public. Valenti himself expressed this criticism in 1906³⁵.

The commission had been summoned to investigate in 1876, and Jacini's final report was presented eight years later. The time it took for the enquiring committee to complete its work was also another reason for the "coldness" of the public. In eight years new necessities and new political conditions had appeared (the trade war with France being only the most remarkable of these changes). Was the information collected by Jacini and his colleagues still politically meaningful?

4.2 Zanardelli and Sanjust in Basilicata

The motive: The second enquiry that I examine in this chapter is radically different from the first one with regard to its structure, but was very similar in its motivation. A heated debate had taken place in parliament in December 1901. This discussion followed the presentation of the results of another parliamentary enquiry on the still appalling situation of Naples, which revealed a variety of old and new connections between a number of city administrators and organized crime. Conservatives, headed by Sidney Sonnino, Luigi Luzzatti and Antonio Salandra, attacked the newly formed cabinet presided over by Giuseppe Zanardelli. The report of the enquiring commission did not spare the Minister of the Interior and Zanardelli's main ally, Giovanni Giolitti, accused of protecting the Camorra³⁶. The discussion was not limited to questions of

³⁴ [Valenti (1914)], p. IX.

³⁵ [Valenti (1907)].

³⁶ Quot. in [Dilio(1970)], p. 43; [Montalcini and De Marinis Errico (1909)], p. 414.

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public order, but extended to the economic situation of the South in general. Naples was the “capital of the South” and almost any discussion about the city involved a discussion about the former Southern Kingdom (and vice versa).

Luzzatti and Salandra proposed two similar motions. They asked the government to engage itself in fighting the poverty of Southern Italy and they requested the cabinet to specify (“before 20th December 1901”) the economic measures that they intended to adopt for the city of Naples, for the aqueduct in Apulia, and for the public works that they intended to carry out in the remaining provinces of the South³⁷. On 13th December, Zanardelli, whose parliamentary majority greatly depended on the support of deputies from the South, announced a program of tax exemptions and public works for Naples. Nevertheless, the situation of public order in the Southern provinces seemed to worsen, and on 14th June 1902 an MP from Basilicata thus summarized the spirit of the population in his constituency: “people began to say loudly: whatever has to happen, let it happen. We cannot be worse off: we cannot fear a deeper unease and worse neglect from the government”³⁸.

Moved by the attention of the public to the topic, pressed by the MPs elected in Basilicata, the old prime minister (Zanardelli was 76 in 1902) set out for Basilicata, a province “whose current conditions [he could] barely understand, so sharply [did] they contrast with its ancient fertility”³⁹.

The object of the investigation: As in 1876, the investigation of 1902 aimed at a compact picture of the areas and problems of the country that had attracted public attention. Zanardelli felt that the cabinet lacked sufficient information and could not simply rely for their decisions on material from the yearly reports of prefects⁴⁰. The objective of Zanardelli was twofold. He intended to investigate the most urgent problems of Basilicata, such as its isolation, its landslides, and its poverty, and to listen to the demands of local authorities and population. He thought that the things he saw and the materials collected by his collaborators would enable him to propose appropriate remedies for the difficulties of Basilicata. The object of the investigation was not limited to a specific sector, but embraced different aspects of the life of the region, although the strategy of the government focused on public works, regardless. Of course, beyond his journey

³⁷ [Montalcini and De Marinis Errico (1909)], p. 413.

³⁸ Quot. in [Dilio (1970)], p. 46.

³⁹ [Montalcini and De Marinis Errico (1909)], p. 426.

⁴⁰ On the statistics of prefects, see [Gambi (1980)].

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there was also the expectation of a political gain to be secured by spreading the image of a prime minister who took care of the problems of the country to the extent of travelling personally to its most neglected areas: the nation could see in innumerable pictures Zanardelli standing and saluting from an ox-cart in various villages of Basilicata. The enquiry itself, as much as its results, was a political move.

The instigators: Zanardelli's journey and the subsequent investigation, which was entrusted to Edmondo Sanjust di Teulada, were decisions of the cabinet. This was in fact the main difference from the Jacini Enquiry. This time, not parliament but the prime minister initiated the enquiry. The mobilization of the local branches of the state machine was thus much easier. The prefects, the tax officers, forest inspectors, and all the state employees were under the control of the cabinet. The mayors, who were elected locally, also had good reasons to show their zeal to the prime minister in charge or his envoys, who determined the allocation of so much public funding.

The investigation: The enquiry consisted of two elements: Zanardelli's journey and the reports written by Sanjust di Teulada. Zanardelli was not a technician (while Sanjust was an engineer), but his journey was an important part of the enquiry. Not only did it attract the attention of the public to the plagues of Basilicata, by bringing a few brave journalists into forgotten villages (thus building support for the legislative solutions), but – more importantly for us – it was the occasion for the prime minister to collect at first hand the complaints of municipalities and citizens, as well as their requests. The Central Archive of the State in Rome (ACS) contains a certain number of *memoriali* addressed to the illustrious guest by the municipalities covered in Zanardelli's journey, but mayors and notables did not limit themselves to handing in reports to the cortège of the statesman. They talked to him, they pointed at the miserable countryside, they dragged him into horrid huts where the peasants lived. As for the condition of the roads in the area, Zanardelli experienced those at first hand. When the railway came to an end, the train that carried him often gave place to the famous ox-cart⁴¹.

On 26th September 1902, after a journey of two weeks, the prime minister summarized in a speech in the provincial capital, Potenza, “the sad exceptionality of the region's conditions”: “I was driven for days” he said, “through a barren extent of naked mountains, with no production, no grass, and through equally unproductive valleys. We moved on for hours and hours with no

⁴¹ The crossing of the river Agri, despatches of news agency Stefani quot. in [Dilio (1970)].

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sight of a house, and the desolate silence of mountains and valley was only succeeded by the deadly plains where the rivers had broken the embankments, pushed away cultivation and turned into marsh". Then Zanardelli talked about the landslides, about the 21 municipalities that lacked roads, the municipalities isolated by bad weather. He went on to list the effects of this situation on demographic trends: notwithstanding a high surplus of births over deaths, emigration had depopulated the province. All the mayors – recalled the prime minister – mentioned the "contagion" of emigration, lamented the deserted villages, the neglected agriculture. The heads of the municipalities that had not been visited on the journey came to meet the old politician on the way, so that he could interrogate them on the conditions of their towns and villages. The *comizio agrario* of Matera lamented the appalling conditions of the peasant housing, the *sassi*. School teachers, doctors, school inspectors, presidents, the staff of charities and workers' associations were interrogated by Zanardelli "on facts and on their opinions concerning the remedies". They offered a great pile of reports that Zanardelli promised to read carefully once back in Rome⁴².

The Prime Minister's conclusions were that the most stringent needs of the population were a new railway (from Grumo to Padula), a priority on investments for roads, the reforestation of mountains, the regulation of rivers, and the completion of the new Italian *cadastre* in the former Southern Kingdom, so that the land tax could be made proportional to the land income⁴³.

If the prime minister's program turned out to be so strictly focused on public works, it is not surprising that on 3rd October 1903 he gave an engineer, Edmondo Sanjust di Teulada, the task of deepening the enquiry. Sanjust's report was divided into five parts: a general one set out the conditions of the province, physical, demographic, sanitary, and economic; the second part was dedicated to water resources; the third to roads; the fourth to agriculture; and the fifth summarized the possible lines of intervention. It was based on a multiplicity of sources. Meteorological observatories, Forest Inspectors, the Corps of Civil Engineers, were all required to contribute to the report. Social phenomena were investigated by means of a questionnaire sent to the municipalities of Basilicata. Sanjust himself inspected the places and held interviews with local authorities (for instance, the presidents of the *comizii agrari*). As Paola Corti noted, the main emphasis of Sanjust's reports – as the parliament and the cabinet expected – was on the

⁴² [Montalcini and De Marinis Errico (1909)], pp. 435ff.

⁴³ The provinces of the former Southern Kingdom, where no geometric *cadastre* from before the Unification was available, paid taxes that bore little relationship to the actual revenue of the land. Landowners hoped that the Italian *cadastre*, by taking into account the low productivity of the land, would lower their tax base.

transformation of soil and to the public works that were considered necessary to make Basilicata a safe, healthy and productive place⁴⁴. Ensuring the sewage services was a way of reclaiming land, protecting roads, and fighting malaria. Reforestation and the protection of the new forest would reduce the arable land in the short term, but in the long run protected the soil from erosion and landslides.

The results: While Zanardelli's speeches soon became classics and were published many times, the reports by Sanjust circulated almost exclusively within the cabinet. A special report on emigration compiled by Antonio Franzoni for Sanjust was even censored by Giolitti (who succeeded Zanardelli as prime minister) to avoid attracting excessive attention on its conclusions. However Sanjust had avoided contentious topics and focused on remedies that the Parliament could approve without much objection. The result was the law proposal of 27th June 1903 and the ensuing law of 31st March 1904, n. 140. This time, the enquiry had gone fast, formally inspiring the legislative process. The requested public works were to begin (at least on paper)⁴⁵.

4.3 Enquiries at the Società degli Agricoltori Italiani

The motive: The growing number of social enquiries (the Faina enquiry, the enquiries of the Società Umanitaria di Milano, etc.) indicates that the agitations of the rural subaltern classes, which expressed themselves in the form of strikes, sabotage, and the occupation of plots, stimulated a debate among the ruling classes in the early 20th century. Enquiries were also the symptom of a growing malaise in the landed elites who saw the attention of the State switching from them to the industrialists, while land taxes remained high and wages increased. The land leasing agreements, the economic condition of the peasants, but those of the landowners also, were elements of concern.

Enquiries were versatile, and could be very focused; they could be built in ways that allowed the voices of bearers of diverging interests to be heard (for instance by interviewing peasants and landlords or their associations) and hence especially fit for addressing social and economic

⁴⁴ [Corti(1976)], p. XXXI.

⁴⁵ Contemporary observers and historians alike have noticed how the special laws reinforced the discretionary power of the cabinet, which was in the position of denying or approving special funding for individual areas: [Corti (1976)], p. XX.

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problems with high political relevance. Moreover, they could be conducted without a massive structure of central and peripheral offices: mailed questionnaires or a good field observer could be enough. Finally, they could be rapidly completed and used in political debate.

Instigators: Enquiries, therefore, were highly appropriate for private organisations that could not mobilize nationwide such a vast array of resources as states could. The Società degli agricoltori italiani (SAI), which was the largest association of Italian agriculturalists, used enquiries in order to ground in positive facts its position on specific legislative proposals, in particular when members of the Society were not unanimous⁴⁶. The SAI, as we see in Chapter 7, below, also campaigned for statistics of agricultural production, but it could never have produced statistics on its own, without the support of the government. In terms of the resources of expertise that it could mobilize, the Society was relatively weak, even when compared with the most effective local associations. The kind of investigations that SAI commissioned reflects this relative weakness. Directing the scientific initiatives of the Society was the task of SAI's Secretary. The first secretary of the newly instituted society was Ghino Valenti, then professor of economics at the University of Rome⁴⁷. In 1898 Valenti was succeeded by Francesco Coletti, who directed three enquiries for SAI in the very first years of the 20th century. As a statistician, Coletti had been involved in the Jacini enquiry and would eventually direct the enquiry on the conditions of the peasants in the Southern Provinces and Sicily (1906-1910; see the next chapter)⁴⁸. In the early 1900s, Coletti was politically close to the position of the radical party of Francesco Saverio Nitti, but he had shown sympathy for the Socialist view when he was younger. Although Coletti's activity within the Società degli agricoltori italiani did not fully reflect the background of the radical party, such presuppositions should be taken into account and are especially significant for Coletti's role at SAI. His moderately progressive position determined his attempt to keep the enquiries tendentially neutral and open.

⁴⁶ On SAI, [Rogari (1994a)]; in a comparative perspective: [Fontana (1997), Malatesta (1997)].

⁴⁷ Valenti's role in the Società degli Agricoltori helps to explain why, when the Minister of Agriculture eventually asked him to direct the renovation of agrarian statistics, he decided to involve the associations of agriculturalists (members of the SAI) in the production of statistics, together with the *comizii agrarii* that had joined the Società degli agricoltori italiani (it is worth noting that Nicola Miraglia, who played an inspirational role in the establishment of the Società when he was General Director at the Ministry of Agriculture, was the president of the Committee for Agrarian Statistics in Valenti's statistical experiment in Naples); see Chapter 7, below.

⁴⁸ [Caracciolo (1959)].

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The object of the investigation: The three inquiries that Coletti directed for SAI concerned topics of great public resonance, which were debated in the parliament or formed the object of governmental activity: the variations in land rents in 1900, agrarian strikes in 1902, and contracts in agriculture in 1903. The proceedings of these inquiries were published on the Society's bulletin, but they were intended to reach a larger audience, which in 1900 was described as: "agriculturalists, cooperators, economists, politicians, and in general those with a voice in the country's public opinion"⁴⁹. On topics of great resonance within parliament and the press, the Society intended to present the position of the agriculturalists to the consideration of the public (a very restricted public by our standards: it should not be forgotten that in 1900 only about 3 million citizens had the right to vote and more than half the population was illiterate).

The investigation: The structure of this group of three inquiries is very similar. The Society mailed questionnaires to individuals or institutions that were directly affected by (or participating in) the phenomenon that the Society intended to study.

The enquiry on land rent and its variations, an issue with fundamental social implications, rested upon "the information and data provided by competent persons (mostly members of the Society) in a number sufficiently high as to probe the conditions of Italian agriculture and formulate a synthetic judgment"⁵⁰. Such "competent persons" answered questions "aimed at determining whether in the past twenty years the rents paid to the landowners (...) [had] decreased and by what proportion, which [was] the rate of return on investments in land, whether the price [per hectare] [was] higher for large or small plots, and whether capitalists or agriculturalists concur[red] in larger proportions to the purchase of land"⁵¹. Informants were asked to quantify the variation in land rent and the current rate of return on land investments and to identify who was buying the land and why. These questions had fundamental social implications and they would have been very difficult to answer otherwise, since statistics on land prices were proverbially elusive⁵². As Coletti summarizes it: "the increase or decrease of the monetary value of land, in general, can be considered a sure index of the economic and technical conditions of the class of landowners. The more or less vigorous trend toward ownership (...) is in itself an

⁴⁹ [Coletti (1900)], p. 67.

⁵⁰ [Coletti (1900)], p. 647.

⁵¹ [Coletti (1900)], p. 647.

⁵² In the same years, Achille Loria and Ghino Valenti contended whether there was or not an overvaluation of land, intended to prevent workers from acquiring land: [Valenti (1901)].

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effective symptom of the moral and economic environment where agriculture operates and develops”⁵³.

The 1902 enquiry on agrarian strikes ideally involved a larger number of informants. The questionnaire was sent to 2200 people including those in administrative authorities, to individual landowners, agricultural societies, rural trade unions, agrarian schools, etc. Only a very small number of them answered Coletti’s questions, but the Society could still claim that its inquiry was open, in principle at least, to the positions of both landowners and strikers. The aim was to determine factually the effects of strikes on production (output and technology). The SAI’s secretary claimed that only in this way was it possible to “test opinions” and that only “factual observations and opinions from one and the other side” ensured candour and allowed control and critique. Establishing facts was the first step towards the resolution of controversies.

In both cases, the results of the enquiries were outlined in the Society’s *Bolletino quindicinale* in an article by Coletti that summarized the whole work. Following this introduction, the answers were grouped according to the geographical areas they referred to and to the status of the responder. Tables of figures were not included, not even averages of the numerical data contained in the answers. The aim of the whole enquiry was actually the “general observation” that the Secretary disclosed in his introductory summary⁵⁴. A discursive form was particularly useful for the audience that the Society intended to reach: politicians, journalists, public administrators, and an informed and elite public opinion. Most of the readers would indeed be content with Coletti’s conclusions, without looking at the separate answers. But it was also a matter of scientific honesty. Answers were too scarce, they referred to myriads of local circumstances which did not add up to significant figures. Yet tables, averages or other “statistical syntheses” would have been meaningless, in Coletti’s eyes.

The last of Coletti’s enquiries for SAI, the 1903 enquiry on agrarian contracts (leasing contracts and crop sharing contracts) asked a range of institutions involved in agriculture for their advice on a hotly debated political topic: a law regulating land leasing contracts⁵⁵. The enquiry of 1903 confirmed the fundamental structure of the *inchieste* of the Società degli Agricoltori: no direct (on the spot) investigation and synthesis of answers to questionnaires sent by mail. Coletti

⁵³ [Coletti (1900)], p. 648.

⁵⁴ for the notion of “general observation”, see [Mendelsohn (2011)].

⁵⁵ This debate ended with Sidney Sonnino’s law on land leasing contracts, which triggered the Faina enquiry; see the next chapter.

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himself complained about this “flaw” in his enquiries, since “ordinarily, enquiries conducted by means of mail, according to scientific rigour, should be integrated, at least in some parts, with direct and personal interviews”⁵⁶. He justified his procedures by claiming that the Società degli Agricoltori collected only opinions and observations which should obviously be “examined and judged through the prism of the agrarian and social interests of the individual agricultural environments they came from”.

Coletti knew that those who answered his questionnaire lived in areas that differed greatly in the organisation of their agricultural production and land property. He knew that their interests and habits of thought differed accordingly. Their answers were assumed to reflect such interests and habits of thought. In making sense of the answers collected, the SAI had to take into account the position of the respondents, and the “environment” where they lived. Coletti assumed that he had set out enough information on the characteristics and interests that prevailed in each “environment” to offset the ensuing bias⁵⁷.

The results: The voluntary focus on opinions was not the only factor that imposed on Coletti a method which he seemed to regard as highly unsatisfactory from the point of view of “scientific rigour”. The nature of the topics themselves, always connected with parliamentary debates, required fast results such as only enquiry by mail questionnaire could ensure. Moreover, the Society did not command the resources required for longer investigations which could involve on-the-spot inspections. They could afford only the limited task of collecting the advice of some stakeholders over the legislative measures under discussion. The activity of the SAI could not answer the kind of detailed question on income distribution that Coletti himself, for instance, tried to answer in the parliamentary enquiry of 1906-1910⁵⁸.

Factual and material limitations determined the form of the enquiry. First, the value of the answers received by Coletti depended on the choice of the respondents. “Competent persons” could be reliable enough, but the answers that they provided could not be controlled and the criteria used could diverge. Second, spontaneous respondents would rarely go into much detail when answering a questionnaire in written form. A long questionnaire would have tired most of them and the accuracy of the answers would in many cases have been far from satisfactory.

⁵⁶ [Coletti (1903)], p. 94. In Chapter 6, below, I present different distinctions between direct and indirect investigations.

⁵⁷ On regional farm types, see sec. 5.3 below.

⁵⁸ See next chapter.

Third, questionnaires did not guarantee that answers were actually representative (in any of the many different ways that the concept of representativity can be interpreted)⁵⁹. According to Coletti, only direct inspection by instructed collaborators would guarantee the choice of representative objects of investigation and the application of the appropriate statistical methods.

4.4 Conclusion: what is an enquiry?

I think that a few clear elements emerge from the three cases examined. An enquiry, it seems, was initiated when a collective body faced problems that required additional information. Invoking the enquiry was in itself a political act: it showed an interest in certain topics, it was an expression of concern and revealed something of the intentions of the enquirer. In many cases, the political gains obtained by convening an enquiry could completely supersede the interest in the information collected. I call the collective body which convened the enquiry, the enquiry's "committents" or instigators. The committents differed greatly in the three cases examined. Salvioni, following Ferraris, classified enquiries into public and private, and the public ones into those promoted by the parliament (*parlamentari*) and those initiated by the government (*governative*). Jacini's and Zanardelli's enquiries fall respectively in these two categories. Coletti's enquiries for the SAI are an example of the private kind. All the cases examined belong to the class of social enquiries, "those that have some kind of connection with the expression of social questions (i.e., the internal organisation of industries, trends in salaries, manufacture, usury, popular and agricultural credit, workers' housing, strikes, trade unions, working hours of women and children and so on)"⁶⁰.

The information collected by enquiries had a twofold nature: they were facts or requests, they were objective or subjective. The enquiry was not intended only to ascertain facts, but also to let everyone involved express their demands. In the case of Jacini's and Zanardelli's enquiries, in particular, these procedures created a surplus of political representation, in addition to the procedures of the parliamentary regime. Jacini's commissioners listened to the voice of distant agriculturalists more or less directly, and not through the standard channels of their representatives in parliament. For this reason, the enquiring commission thought it was so important to keep the executive power, at least in principle, out of the enquiry: it would have

⁵⁹ See Chapter 8, below.

⁶⁰ [Salvioni (1892)]. p. 29.

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impaired their vision and the impartiality of the parliamentary debate. In the case of Zanardelli's journey through Basilicata and of Sanjust's reports that followed, it was the government, instead, that wanted to ascertain the conditions of the area *de visu*, in order to show the public that the state took care of its entire territory, that no part of the country was neglected.

The SAI landowners were if anything overrepresented in parliament, but they felt besieged by increasingly riotous peasants and replaced in the nurturing attention of the cabinet by vociferous industrialists. Coletti's enquiries had therefore a manifold meaning. First, they allowed the SAI's leadership to present its proposals as a scientific synthesis of opinions. Second, members of the organization seemed united in support of the proposal by the Society's leaders, thus increasing the impact of such proposals. Finally, the involvement of members in the enquiries was a strategy to show that the Society's central organs cared about the opinions of their members.

As for the methods of investigation, two were the most typical of the enquiries: questionnaires and visits. Social scientists of the late 19th and early 20th century distinguished therefore direct (the visit) from indirect (the questionnaire) enquiries. The parliamentary and the governmental enquiries combined both direct and indirect methods, while Coletti had to limit himself to sending questionnaires and waiting for answers.

Questionnaires could be addressed either to institutions (for instance, foreign or local statistical offices) or to individuals selected according to some principle (accessibility, willingness to answer, social class etc.). This variety was justified by the low rate of return expected (not everybody answered) and by the desire to gather as many sources, and listen to as many (possibly conflicting) sides as possible. The authority of the state no doubt increased the number of questionnaires answered in the case of parliamentary and governmental enquiries, but it did not necessarily increase their accuracy. Respondents answered accurately only when they had a motive, either private or political, that made answering interesting for them. Ambition was often one of these motives: Jacini himself, in his youth, became distinguished in Austrian Lombardy because of the reports he wrote for the Austrian government in the first half of the 19th century.

A cooperative attitude of the respondents towards the enquirers and towards the subject matter of the enquiry was essential. Coletti declared himself to be pretty confident in his ability to offset the influence of economic interests and prejudices in the answers he received, but this was mostly very difficult. To carry out their investigation, Jacini's commissioners mostly relied instead on a network of trustworthy officials and friends. Through them, they tried, with relative success, to involve others by means of prizes. Prizes should encourage participants to be careful

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in relating information: if not true, at least they had to appear trustworthy. The visit (and I will not investigate here the “prehistory” of this administrative practice⁶¹) allowed the critical assessment of facts and reports. It also created privileged and easier communication between enquirers and “enquirees”. Zanardelli’s journey is a clear example of this. A few days in Basilicata gave the head of the government a first glimpse of the gravity of the situation and put him in direct contact with local citizens and their concerns. Although Sanjust was despatched in order to collect further information, an outline of the measures that had to be adopted had emerged during the journey.

The enquiries discussed here lasted a few months, at most a few years. Neither the enquiring central structure, nor the local informants were exclusively or permanently dedicated to enquiries. Moreover, observations were not repeated over time. The Jacini enquiry remained an isolated unicum. The institutional structure that made enquiries possible did not constitute a “site of repeated observation and elaboration of information”. Observation was not supposed to be repeated over time, but was teleologically oriented toward a specific question of immediate relevance. Observations themselves were supposed to contribute to a general view, to the final report.

The result, the final summa of the enquiry, was a report, such as Jacini’s *Relazione finale* or Coletti’s articles on SAI’s *Bollettino Quindicinale*. It brought together all the various sources and formats of information that had been gathered during the investigation, it concentrated the different places and social classes concerned into a set of “general observations” and a few political proposals of more or less immediate practicability. The enquiries’ reports, as texts, share a style; they form, somehow, a genre on their own, with a peculiar structure. They obviously follow the structure of the questionnaires, usually moving from a general introduction to a combination of individual or local cases. Cases remain distinct, and are mentioned as episodes, illustrations, examples in support of the main argument or in order to signal local peculiarities. They gave empirical support to a synthesis that had to be both political and factual.

⁶¹ From the *missi dominici* to the Royal visitors of the Spanish Monarchy (for Naples see [Peytavin (1994)]), and the visitations of Catholic bishops after the Council of Trent, to the *commissario* of the Italian administration, the central powers always tried to get a grasp on the peripheries by means of visitors, inspectors, etc.

5 Enquiries II: The case of the Faina enquiry

In Chapter 4, I discussed the nature and definition of enquiries as a peculiar form of investigation. This chapter goes on to a detailed examination of the way that enquiries collected information and transformed information into evidence for political cases. Probably the most controversial enquiry of the Giolittian age was the Parliamentary enquiry on the conditions of peasants in the Southern provinces and Sicily, called the Faina Enquiry (1906-1909). This was initiated by the Parliament and focused on agriculture, as Jacini's enquiry had done, but, like Zanardelli's enquiry on Basilicata, it concerned a specific area of Italy. It represents a significant episode in the history of Italian agricultural economics: Coletti, Ernesto Marengi, Lorenzoni, among others took part in the work of the enquiring commission. Their activity as observers, as collectors of facts of the Enquiry, is here analyzed in some detail and with particular reference to the difficulties that they met. The collection of facts for the Faina enquiry, as for most enquiries of this kind, was subjected to three inter-mingling classes of problem, named here problems of indisputability, of remoteness, and of packaging. The solutions devised in 1906 represent at the same time a summa of the experiences examined in the previous chapter and an anticipation of topics to come.

First, let us consider indisputability. Ideally facts had to be so far beyond dispute that they could determine the outcome of the deliberation. How could facts be put above the disputes of politicians and parties? The Italian parliament resorted to specialists in data gathering in order to found its work on a solid basis: statisticians and experts of agricultural economy collected the information. Because of their disciplinary training they were not only more skilful at collecting information than – say – State officials, but they were expected to be more “independent” of political interests. Hence they could summarize the opinions of a variety of social actors, making the facts that they collected less disputable in the eyes of the public. Agricultural economists acted as experts in different ways, first, as experts in opposition to politicians in parliament; second, as members of a national and international scientific community distinct from the hyper-local perspective of peasants and landlords in the South; finally, as experts in agriculture and in techniques for collecting and handling information. I do not want to stress here the

penetration of a foreign and hostile expert rationality in the life of laymen, as Judith Pallot¹ does with the case of the “rationalization” of land holding in Russia under Stolypin’s reform. My desire instead is to show how agricultural economists were asked to act as a communication channel between different elements of Italian society, and hence their work depended on the trust they gained. Beyond the “postmodern” critiques on modernist attempts to create legible spaces for the purpose of domination ([Scott (1998)]), I want to show how information was exchanged in the actual field-work of an enquiry, with local agents contributing to shape the representation of their own life through the investigators’ expertise.

Second, let us consider remoteness. For facts on southern peasants to reach the study rooms of the educated public, they had to travel a long distance through barriers of language, class, and geography². This implied that enquirers had to travel the other way round into the southern provinces. In 1875, when three students from Pisa, Enea Cavalieri, Leopoldo Franchetti, and Sidney Sonnino, decided to make an enquiry on the conditions of the peasants in Sicily, they brought with them a battery of revolvers and rifles³. Zanardelli’s journey through Basilicata was fairly uncomfortable. Agricultural economists who took part in the Faina Enquiry travelled safely through the Italian countryside of the early 1900s, but their writings reveal how remote *Mezzogiorno*’s peasants appeared to the educated elite. Most reports transmit the same feeling that Carlo Levi described in *Cristo si è fermato a Eboli*⁴: investigators were overwhelmed by local specificities, by different and competing visions of society, or were met in contrast with the hostility of groups and regions that, for different reasons, refused to cooperate with them.

This is what I call the problem of remoteness. The task of agricultural economists who engaged in the Faina enquiry was to translate locally embedded knowledge into a framework that could be understood elsewhere, to sever its ties with a specific configuration of politics, geography, and routines in order to mobilize it for nationwide political and scientific debates⁵. At the same time, for this process to be successful, they had to engage local interests in the enquiry; they had to mediate between the distant ruling classes represented in the parliament and the needs, hopes and aspirations of the provincial population.

¹ [Pallot (2000)].

² On travelling facts: Introduction to [Howlett and Morgan (2011)].

³ [Franchetti and Sonnino (1926)]; on Italy’s *Mezzogiorno* as exotic Orient: [Schneider (1998)].

⁴ [Levi (2006)].

⁵ On mobilization: [Latour (1987)].

Third, let us consider packaging. The issues of mobilization and representation lead us to the third class of problems, that of “packaging facts”⁶. Only the facts that could be easily produced and easily read were politically relevant, for neither parliament nor the public opinion generally had time to examine an endless list of particular observations. As noted above, Jacini’s enquiry had precisely the problem of making a satisfactory synthesis, due to the heterogeneous and incomplete material accumulated for it⁷. Statistics (a large, comprehensible collection of observations) by means of averaging and graphs seemed to offer early 20th century positivists a good synthetic representation of facts⁸. But statistics were slow to emerge, and facts that were made known too late would have no effect. Moreover, they required permanent institutions and rarely reached an adequate level of detail.

The facts that the enquirers collected concerned the way of life of the peasants: their income, their labor participation, their patterns of consumption, their health, their propensity to crime, and their political associations. All these factors varied greatly across Southern Italy and were heavily affected by local contexts. In order to detach such local and varied facts from their context and enable them to reach the nationwide public opinion, they had to be recast into a packaging that preserved variety and specificity but that could also be handled far away from the places and the people described. Types were the available format in which to crystallize varieties⁹. If an individual case was not isolated but typical, it acquired the necessary strength to illustrate and support “general observations”.

In the tradition of agricultural economics, farm types were classes of farm that were similar in some geographical, dimensional, technological and juridical features, such as the extensive farm of Basilicata, or the Tuscan *podere*. Types presupposed structural differences imposed by natural (climate, altitude, soil) or social (contracts, labor conditions, technologies) constraints, not a continuum of variation. The concept had many intellectual roots and a plurality of empirical application in farm appraisals, tax surveys, farm management, etc.¹⁰ In order to study types, observers should select typical farms, working farms that were representative instances of the type. In this way it was possible for agricultural economists, by studying a single farm, carefully

⁶ I take this definition from [Howlett and Morgan (2011)].

⁷ [Valenti (1907)], p.6.

⁸ On the importance of Quételet’s average: [Porter (1986)].

⁹ [Desrosières (1988)].

¹⁰ It suffices to look at [Nou (1967)], Chapters 5, 6, and 8 on Thaer, Thünen and the Swiss school of agricultural economics in particular, to see how deeply rooted was the idea of structural differences among types of farms in agricultural economics.

selected so as to be typical, to study a whole class of farm for which no statistics were available. As a result, the use of types made differences easy to handle.

The following section describes the political context that led parliament to summon Faina's commission, the way that the work of investigation was structured and divided between a technical and a political part, the role of agricultural economists, the methods applied for the technical enquiry in order to deal with the three problems listed above.

5.1 The Faina Enquiry

On July 13, 1906, after long discussions in the two houses of the Italian parliament, the Senate finally passed a new law containing "Provisions for the Southern provinces, Sicily and Sardinia" (Legge 15 luglio 1906, n. 383). The law contained a series of tax reductions to stimulate the (fundamentally agricultural) economy of the dilapidated Mezzogiorno, together with a list of public works that were to be funded. The most controversial measure introduced by this law, was a complete revolution in land tenancy contracts. The law aimed to extend to the South the Tuscan sharecropping system (thirty years after Sonnino's journey through Sicily), replacing the huge variety of tenancy and lease contracts that were in use in Southern Italy. A vast coalition of interests opposed this idea, and although the law was approved, the application of the part that concerned land lease contracts was suspended, pending the results of a parliamentary enquiry that was summoned, immediately afterwards, by a second law voted in the Senate on 19th July¹¹.

The enquiring commission was "to enquire into the conditions of peasants, their relations with landlords, and especially into the nature of the land tenancy contracts (It. *patti agrari*) in the Southern provinces and in Sicily"¹². In fact, some commissioners wanted to turn the enquiry into a narrow discussion of contracts, while others expected an all-encompassing investigation into the conditions of peasants, the state of agriculture, the reasons for peasants' discontent, emigration, etc. The convergence of right wing opponents to the law (who wanted to gain time by means of a long enquiry) and left wingers (who hoped to direct the attention of the public to

¹¹ On the political manoeuvres that led to the laws of 1906, see: [Prampolini (1981), Rogari (2002)].

¹² The commission had 18 commissioners, 9 members of the lower house of the Italian parliament, the Chamber of Deputies, and 9 senators; Law quot. in [Rogari (2002)], p. 27.

the poverty of the Southern peasants) finally extended the commission's mandate and the enquiry's object.

The model for the enquiry that began in 1906, as with Jacini's enquiry on agriculture and Ellena's investigation into industrial potential, were British parliamentary enquiries: alongside a large mass of statistical data collected in various ways, a pre-eminent place was reserved for the declarations of various social characters, who testified before the parliamentary commission their views and opinions on the current problems¹³.

Testimonies in general show two dimensions: on the one side, they allowed enquiring commissions to listen to the wishes, expectations, and specific needs of certain areas, remote from the country's political centres; on the other, commissions listened to a vast range of classes and people, thus letting the country express its social diversity. Geographical and social diversity had of course different levels of importance according to the different topics of enquiry, but they both contributed to the political and informational meaning of the term.

When the commissioners first gathered in the winter of 1906-1907, after electing their president, Senator Count Eugenio Faina, they decided to split the workload in two: "the preliminary collection of material, i.e. documentable data, should be carried out by special technical delegates (TDs, hereafter); the parliamentary commission should for their part reserve for themselves, beside the task of control, etc., only the political work, i.e. the survey of the mood of the population, and the *desiderata* in so far as they address the State, of the different agricultural classes in the territories touched by the enquiry"¹⁴.

The commission's activities were thus divided into "political" and "technical". For each of the 6 regions of Sicily and the *Mezzogiorno*¹⁵, a sub-commission formed of three commissioners fulfilled the "political" task, while one of the seven TDs collected the "documentable data". This represented a clear, institutional division between the objective and subjective parts of the enquiry. Politicians should synthesize the demands of the population and eventually translate

¹³ On the Jacini enquiry see [Caracciolo (1959)]; on the industrial enquiry, see [Baglioni (1974)]; for the British influence on the 1906 enquiry, see: [Coletti(1906b)], pp.36-52.

¹⁴ ACS, Giunta parlamentare d'inchiesta sulle condizioni dei contadini nelle provincie meridionali e nella Sicilia, b. 5, f. 6, *Verballi della Giunta plenaria*, Verbale 2, 2 Febbraio 1907. On Faina and his family: [Facchini (2000)].

¹⁵ The current administrative Italian regions did not yet exist as such, but *compartimenti* existed as statistical units; see: [Patriarca (1996)] who discusses the statistical treatment of regional differentiation.

them into proposals; “technicians” should provide neutral and objective information that could offer the politicians grounds for their synthesis. This was considered all the more important because the data already available in official publications were regarded as old and unreliable, and statistics did not provide enough grounds for argument¹⁶.

5.2 The technical delegates

Francesco Coletti was chosen as the Commission’s secretary general with the task of writing the program and questionnaires for the enquiry¹⁷. Since Coletti was professor of statistics and demography at the University of Sassari, his nomination shows that statistics was awarded pride of place among the “techniques” that could provide objective and incontestable data. But Coletti was hardly an arid technician, without political connections. First of all, he was known to most of the commissioners as the former Secretary General of the Società degli Agricoltori Italiani. As many of the commissioners were also members of the SAI, they probably expected Coletti to understand the point of view of landowners (who strongly opposed the law on tenancy contracts), and also to be sensitive to the problems of agriculture in general. Moreover Coletti was close to the leader of radical (left-wing) opposition Francesco Saverio Nitti, also a commission member: Coletti had collaborated on agricultural problems with Nitti’s celebrated journal, *La Riforma Sociale*¹⁸. Coletti’s objectivity thus resulted from three elements: a methodology of investigation, a good knowledge of agriculture, and a political stance in between the different groups that formed the Commission.

Coletti and Faina, then, hired the TDs. Unfortunately it is not clear how the seven TDs were selected, but they had some characteristics in common. They were almost all scholars of economics/agricultural economics (with the exception of the rural sociologist Lorenzoni and the lawyer Enrico Presutti). Oreste Bordiga was by then already an established professor at the Scuola Superiore di Agricoltura (SSA) of Portici, teaching Agricultural Economics, Accounting and Land Valuation¹⁹. Also Ernesto Marengi, a graduate of the SSA of Milan, held the chair of

¹⁶ This point was raised by Francesco Saverio Nitti in the Committee’s meetings; on the inadequacy of official data on agriculture, see [Federico (1982)] and its bibliography.

¹⁷ ACS, Giunta parlamentare ..., b.5, f.5, *Adunanze del l’ufficio di presidenza*, Verbale 2, 24 Gennaio 1907.

¹⁸ Dizionario Biografico degli Italiani, s.v.

¹⁹ [Musella (1994)].

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Agricultural Economics, Accounting, and Land Valuation in Perugia²⁰. Eugenio Azimonti, after graduating from the SSA of Milan, had moved to Basilicata (in the far South) as the director of the Cattedra ambulante di agricoltura in Potenza²¹. Cesare Jarach was a graduate in economics whose main achievement had been an empirical study of the financial sheets of Italian joint stock companies; after the enquiry he became Faina's personal secretary at the International Institute for Agriculture²². Giovanni Lorenzoni was a sociologist, educated in Austria and Germany (his main book had been dedicated to the cooperative movement in Germany); as head of the Labour Office at the Società Umanitaria di Milano he had directed the SUM's social enquiries²³. Coletti and Faina entrusted these men with the technical enquiries: a short preliminary examination of the sources already available in Rome, the collection of information on the ground, on the basis of the program that Coletti had elaborated, and the writing of a synthetic report²⁴. This dichotomy (i.e., the elaboration of data/collection of information) is mirrored by the competences required for both TDs and the secretary general: familiarity with the methodologies of enquiries and knowledge of agriculture (method and content).

The enquiry's program was "to investigate in particular the relationships between land laborers and landowners". Hence, "it was necessary to examine both terms of this relationship, and reveal, together with the condition of workers, that of the proprietors, or, more precisely that of property, i.e., that of agriculture, which is the concrete expression of property"²⁵. The condition of peasants was deemed inseparable from that of landownership and the economic sector of agriculture, as a whole. The first two parts of the enquiry's program focused, therefore, on "land and agriculture" and "patterns of landownership", while the remaining five parts were devoted to the peasants. Part III investigated the different classes of smallholders and peasants according to tenancy and labor contracts. It inquired into the budget of peasant families, their income, wages, the distribution of revenues according to the different patterns of land tenancy and employment. Part IV concerned the standard of living, including the health and moral conditions of peasant life, as well as their demographic consequences. If part III discussed income, part IV investigated expenditures and consumption. Parts V and VI examined the peasant within a wider range of

²⁰ For Marengi's biography: [Gabba (1995)].

²¹ For Azimonti: [Musella (1995)].

²² [Forte (2009)].

²³ [Gioia and Spalletti (2005)]; On SUM: [Granata (2003)]; Lorenzoni gave an account of his enquiries for SUM in [Lorenzoni (1903)].

²⁴ ACS, Giunta parlamentare ..., b.5, f.5, *Adunanze dell'ufficio di presidenza*, Verbale 2, 24 Gennaio 1907.

²⁵ [Coletti (1906b)], p.56.

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relationships: part V investigated credit and charity; part VI the political grouping of peasants. Part VII was dedicated to emigration, probably the most powerful factor for change in Southern societies. Part VIII was to summarize the previous parts and explicate the relations between them²⁶.

This being the enquiry program, the TDs should proceed to fulfil it by their own direct field surveys (It. *rilevi*), and by means of questionnaires sent to individuals and institutions. Such alternatives were named direct and indirect enquiry. Documents (for instance, contracts) formed a third source of information. Matters of landownership (part II), for instance, were to be discussed in terms of total product, net income, and the rent of agricultural estates. These data could be obtained either through direct surveys and estimates of the fundamental parameters of individual estates (these were called “farm monographs” and formed a type of direct enquiry), or by requiring information from somebody knowledgeable and willing to answer, for instance an official of the Inland Revenue (indirect enquiry). Moreover, part III was to be based on a variety of sources: TDs should collect contracts and describe the most common for each area; they should also note family budgets and farm accounts, for which a direct survey of several families was integrated using the answers provided by local informants to the questionnaires. The combination of multiple sources was a characteristic of enquiries.

Already available statistics would have been of great help. Had statistics such as those of Belgium been available, the enquiry, for Coletti, would have been altogether unnecessary. But Coletti lamented that Italian statistics on agriculture “lacked reliable and homogeneous data almost entirely”²⁷. For practical as well as theoretical reasons, DTs should hence limit themselves, in their direct enquiries, “to the survey of typical instances of the various phenomena”: since it was and in any case impossible to examine all individual instances of a phenomenon, “it (was) necessary to concentrate on the various categories or degrees that are typical for a given phenomenon, and within these categories or degrees, it (was) necessary to single out and survey an average case”²⁸. The observation of typical instances (It. *tipico*) was regarded by Italian social

²⁶ [Coletti (1906b)], pp. 56ff.

²⁷ He was not alone in complaining: the Ministry of Agriculture Industry and Trade engaged in a complete renovation of agricultural statistics in 1907; see the already mentioned [Federico (1982)].

²⁸ [Coletti (1906b)], p.60.

investigators as the only legitimate alternative to a complete survey of the population which alone deserved the name of “statistics”²⁹.

5.3 The typical farm

Coletti placed the typical at the point where two ways of investigating social phenomena crossed. The typical was, first, the final result of surveys and elaborations: Adolphe Quételet’s average man was constructed by combining the average dimensions of human organs in a single individual and could be treated as the “type” of a nation³⁰. Thus, in Coletti’s view, “statistics survey statistical units. On their basis, they construct the datum. Out of a mass or series of data, statistics extract what is typical”³¹. According to the method of monographs popularised by Frederic Le Play, instead, the identification of typical cases preceded the collection of information. It was based on “prudent and careful inspection, together with the information provided by experienced and knowledgeable men, of those whom Frederic Le Play, called ‘social authorities’”³². The latter’s reliability derived from their lifelong exchange with the people observed and their good will in serving the cause of social peace.

Coletti believed that these two methods were not incompatible and derived his faith in the conciliation of Le Playan monographs and Quételetian statistics (based on a complete census) from Emile Cheysson. For Cheysson, while “the role of the monograph was to describe a subject (individual, family, workshop, commune, or nation); the role of statistics was to insure scientifically the subject’s typicality”³³. As Alain Desrosières points out, Quételet’s stress on the stable and essential nature of averages enabled Cheysson to assume that an individual that is close to the average in some significant features, could totally substitute its group for all features. In this way, monographic study fleshed out with details the generality of the enquiry, expanding in depth what the enquiry depicted in extension³⁴.

²⁹ For the conception of the “inductive method” that prevailed in Italy, see [Baffigi (2007)].

³⁰ [Porter (1986)], pp. 52f.

³¹ [Coletti (1906b)], p. 61.

³² [Coletti (1906b)].

³³ [Rabinow (1989)], p. 174.

³⁴ [Desrosières (1988)], p. 96.

Typical objects allowed generalization and satisfactorily represented a complex phenomenon. As Desrosières put it, “they depicted the characters of the story to be told”; they built the collective actors of the social drama³⁵. But they had to display such characters in their completeness, in their purest form (even when socially pathological). So for instance, Coletti recommended studying “complete” families with children of different ages, rather than families without children [(Francesco Coletti(1906a)], p. 124).

In empirical practice, this meant a two-step procedure, faithfully mirrored in Coletti’s instructions. Statistical information was required for a preliminary of types. In an area where most farms grew wheat extensively and a minority had orange and lemon orchards, for instance, at least two types could be identified beforehand on the basis of even rough figures of production. The TDs were compelled to begin their investigation in Rome by plunging into all the published sources available, to familiarise themselves with such general data. The next step was to choose the individual cases to encapsulate such types. This was considered to depend on a network of “experienced and knowledgeable individuals” who lived in the area. Coletti suggested that the TDs should “mobilize” such forces so that they could select the right family budget to choose, the right farm on which to study crop rotation, whose revenues to analyse, the right peasant house to take a picture of, etc.³⁶ This second step could not be strictly planned in advance. Only when they were on the spot, and in the presence of variable and unforeseeable local conditions, could the TDs select their typical cases. It was experience and skilfulness that would suggest them what to take in and what to leave out of the picture.

Unfortunately, the field notebooks that enquirers usually took with them in their journeys have not survived³⁷. We can get an idea of the social authorities whom the TDs might have turned to for selecting “typical” instances from the interviews carried out by some of the sub-commissions during their journeys (those collected for Abruzzo and Molise, Sicily, Campania, and Apulia are preserved in the ACS, Giunta parlamentare, various bb.). As noted above, however, sub-commissions had a different, “political” task and acted differently from TDs. Sub-commissions interviewed the authorities in charge of the different aspects of the life of the countryside, a sort of Foucaultian bio-power of notables. Medical doctors reported on health and hygienic conditions; judges, police officers, and King’s prosecutors on crime statistics and crime

³⁵ [Desrosières (1988)], p. 96.

³⁶ [Coletti (1906a)] *passim* and [Coletti (1906b)], p. 61.

³⁷ For notebooks: [Lorenzoni (1929)].

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determinants; notaries on trends in the land market; Inland Revenue officers (notably the engineers working for the Land Register) were asked for information on land rent and prices. Mayors presented schematic reports on their municipalities, touching on demographics, the municipality's balance sheets, schooling conditions, patterns of ownership, land and labor prices, peasant housing, health and hygiene, and emigration. While village notables dominated the interviews with the sub-commissions, they were not the only interviewees. A crowd of different economic characters, sometimes invited by the Commissioners, sometimes testifying spontaneously, also had their opinions recorded in the sub-commissions' proceedings: peasants, landowners, administrators of large estates, industrialists, craftsmen, etc. (even some women!).

Something more specific on the work of the TDs can be deduced from their own reports. Let us examine Eugenio Azimonti's report on Basilicata. Of the three sources of information that Coletti distinguished (questionnaires, documents, and field trips), the questionnaires were addressed to more or less the same types of person as those interviewed by the Sub-Commission. Only about a third of the questionnaires sent out were completed and returned. As for the documents, Azimonti found no material concerning the managing of agricultural businesses: "since nowhere could be found a systematic and orderly record of the facts about the administration of farms and estates"; if it had existed, it was nowhere disclosed. In the case of farm accounting, as for other topics, direct survey remained the only available source of information and Azimonti engaged in extensive surveys³⁸.

Unlike other TDs, Marengi in Calabria, Jarach in Abruzzi, or Lorenzoni in Sicily, who were unfamiliar and foreign to the region they studied, Azimonti knew part of Basilicata very well, since he had for some years been the director of the *cattedra ambulante* in Potenza (one of the region's main towns), a travelling chair that had been established after Sanjust's report. Azimonti thus personally knew a number of farmers, peasants, and landowners who could help. From an agricultural point of view, also, he knew his district very well.

Apart from Azimonti, who declared he could not separate the work he did for the enquiry from what he did for the *cattedra*, so closely related were they, the directors and staff of the *cattedre* were well placed to cooperate with the enquiry. They had graduated from Schools of Agriculture, just as most of the TDs of the Faina enquiry had done. Their job appeared to them the dissemination of advanced techniques (that circulated in the world of science, experiments, and

³⁸ [Giunta parlamentare d'inchiesta (1909a)], p. XIV)

academia) into often neglected corners of the country: “The professor of the *cattedra ambulante* accomplishes a pioneering task, wherever the word of science, for a number of recent or remote reasons, has not yet penetrated, there he is the pioneer of agriculture. He prepares the environment, he looks – as a friend and a counsellor – after the farmer and he suggests things to him that he would otherwise never know”³⁹. But such word of science would have been meaningless without the work done to adapt it to local contingencies and local practices. Adaptation involved experiments with crops or fertilizers, i.e., experiences, as they were called, but it also involved the selection of the best local practices. An anonymous director of a *cattedra*, for instance, gave a decidedly bottom-up interpretation of his teaching: “What else should we teach within our *cattedre*, if not the best of what we have learned (from the farmers)?”⁴⁰. The *cattedre* acquired over time an essential knowledge of the territory that they operated in, of its farmers and their habits, while preserving the ability to interact with the nationwide community of agricultural experts.

In general, TDs began the research of the “typical” from suggestions by directors of *cattedre*. In the small region of Basilicata, which had four *cattedre*, Azimonti often travelled with his colleagues and – in their districts – he relied on his colleagues’ recommendations when choosing the farms to study; they introduced him to peculiar traditions, put him in touch with relevant private individuals and vouched for him to generally diffident farmers. Without the mix of general notions of agricultural management (agricultural economics) and local, contextual knowledge that the *cattedre* represented, it would have been impossible for the TDs, who were often completely foreign to the territory and equipped with only scanty statistics, to identify within a reasonable timespan the typical families, typical farms, and typical villages for their surveys.

5.4 Observation: A farm monograph

To illustrate this point, let us examine what kind of observation TDs could perform thanks to the *cattedre* and the form they gave to such observations. In order to illustrate the conditions of agricultural business in Basilicata, Azimonti presented in his report to his readers a series of monographs on one farm for each prevailing type. The typology considered geographic factors,

³⁹ [Patrizi (May-June 1910)].

⁴⁰ Quot. in [Marenghi (1922)].

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farm size, and usual combinations of enterprises. It thus relied on data that could be extracted from published and widely available sources (maps, reports, harvest statistics for the prevailing crops) or that were macroscopically evident in the landscape as well as in the everyday life of the markets and people. The choice of the actual farms to be observed and the carrying out of the survey rather depended on personal contacts that only insiders could have made.

One of the farms described represented the type of extensive cereal farm joined with husbandry in the eastern zone of Basilicata. Clearly, this typology combines geographical elements with very broad characteristics relating to production and production patterns. I discuss this monograph in detail because it shows the sensitivity of the information that the investigation required (such as could never be attained without active collaboration from the farmer) and the way that the monograph was structured. In a farm monograph, the TD's ability to obtain information from the farmer preceded the framing of the farmer's information into basic categories of agricultural economics: the farm budget made the fundamental economic and technical features of the farm explicit.

The farm, owned by D.R., was composed of various plots totalling approximately 889 hectares; Azimonti records its climatic conditions, soil, distance from market and roads available. For each crop, Azimonti gives the acreage and rotation; for livestock, the number of each species and the surface dedicated to grazing. The livestock's most common diseases are reported. D. R.'s farm also included tools and machines that constituted the so called dead stocks. Fertilizers (in fact, their scarcity) completed the picture. All this was the farm's inventory. It must be noted that machines, livestock's diseases, species of herd, and different rotations were all much more familiar entities to the readers of the enquiry, than they are to us now. What readers wanted to learn from the enquiry was the peculiar combination of such elements that constituted a typical farm of Basilicata.

The farm consisted of its inventory, but also of workers. Azimonti discusses the budget (income and expenditure) of each category of workers, including the farm manager that is D. R. himself. Considerations on management led to the core of the farm monograph: the farm's cash flows, which Azimonti had to compute himself with the help of the owner and of an assistant to the

local *cattedra* since “there exist(ed) no bookkeeping whatsoever, Mr D.R. being almost illiterate”⁴¹.

Azimonti starts with the gross production of crops and husbandry, the only data available concerning the year 1905-06, when Azimonti himself recorded the returns. For crops, after subtracting the products consumed within the farm, Azimonti computes 644 hundred kilograms of hard wheat, 132 hundred kg of soft wheat, and approximately 200 hundred kg of lesser crops (beans, etc.). The yield of husbandry is computed more easily, by the number of lambs for sale (180 at 1.10 lire per kg), and wool (785 kg, at 265 lire per hundred kg), dairy products (cheese and ricotta, around 700 kg), kids (around 60 kids for sale at 1.20 lire per kg), old sheep sold (100 at 25 lire the pair), etc.

Once the gross product is known (note that the computation of the gross product value requires that prices should be known for wheat and other commodities), Azimonti lists all the deductions that have to be subtracted from the gross product value in order to obtain the rent, this being the remuneration of the services of the land. Among such deductions are: expenses for labor, including the manager’s wages (note that this is computed in any case although the manager coincides with the owner); returns on capital, i.e. the remuneration of the services provided by livestock, dead stocks (machines, seeds, fodder, manure) and circulating capital, as if they had been borrowed by the entrepreneur; amortization; taxes on rent (It. *imposta fondiaria*). In particular, the calculation of returns on capital (It. *beneficio industriale*) involved first an appraisal of all forms of stock (live and dead stocks), to the value of 57,175 lire). On this value an interest was imposed of 5%, resulting in a subtraction of 2858.75 lire from the rent⁴². On the circulating capital, represented mainly by cash payments for labor and amounting to 10,000 lire, Azimonti estimates an interest of 6%. The total deduction for remuneration of capital and stocks is thus 2858.75 + 600 lire.

In a good year such as 1905-06, D.R.’s revenues amount to 34,459.00 lire, while his expenses (including the remuneration of capital) reach 29,826.00 lire. What remains to D.R. amounts to 4,633.00 lire. By simply applying the equations of land valuation, imposing a standard interest rate of 4.50%, the returns on the value of land capital (approx. 90,000 lire) would be 4,050 lire,

⁴¹ [Giunta parlamentare d’inchiesta (1909a)], p. 311.

⁴² This 5% rate was the interest rate that the entrepreneur would probably have paid if he had borrowed the stocks.

i.e., the rent, which is what D.R. earns for owning the land. There are hence 583 lire that D.R. earns: his profit as an entrepreneur.

It is evident that this way of describing a farm originated in the principles of accounting and in the practices of land valuation (these two disciplines formed such a great part of our TDs' education). In the prevailing tradition of agricultural economic studies in Italy, on the analogy with German *landwirtschaftliche Betriebslehre*, agriculture consisted of farms and farms were fully described by their inventory and by "the proportions of the single constitutive parts and their reciprocal interrelations"⁴³. These proportions were expressed in terms of the distribution of the farm gross product among the economic factors of production⁴⁴. Vittorio Niccoli, who taught agricultural economics to both Marengi and Azimonti in Milan, published very influential sketches of regional farm types⁴⁵. Farm types thus acquired a substantial stability as entities that could be studied and observed.

Thanks to the concept of the typical farm, then, Azimonti's account of an individual farm acquired a wider significance, and was taken to summarize local patterns of production, for instance the interdependence of shepherding and extensive cultivation of cereals. Such monographs served, for instance, as the basis for Nitti's and Azimonti's own claim that latifundia functioned as complex productive units and could not be easily broken into smaller parts, a conclusion with strong political implications⁴⁶.

Observations of such significance rested on the fragile dynamics of trust: enquirers had to trust the local and contextual knowledge of their local guides (and, in the case of Azimonti's farm monograph, other agrarian economists working for the *cattedre*); the farmer had to trust the enquirer (and previously the enquirers' local guides) in order to disclose information that was so sensitive and could so easily be concealed. The same held for farm and family monographs: who

⁴³ [Cuppari (1869)], Introduzione.

⁴⁴ Factors of production were called *cooperatori* in the language of the manuals of agricultural economics: land, labor, capital, entrepreneurship, etc.

⁴⁵ [Niccoli (1898)]; Niccoli's handbook for agricultural engineers [Niccoli (1897)], ran into innumerable editions. It also contained directions for describing farms and exemplifies how the study of individual cases of farms as types was clearly part of the standard training of agricultural engineers, agronomists and agricultural economists. [Nou (1967)], Chapter 4, traces the origins of this way of investigation to Arthur Young and after him to Albrecht Thaer. The categories used in the calculations derive entirely from the Italian tradition of land valuation.

⁴⁶ [Azimonti (1921)]. The significance of such conclusions will emerge with particular strength after the Great War, when many suggested that landless peasants could settle in small farms on expropriated latifundia; see Chapter 10.

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would have let a foreigner enter the house to compute the value of the furniture without trust? In fact trust was only one aspect of the interaction between enquirers and “enquirees”. Peasants and farmers who decided to collaborate with enquirers were actually those who desired to be interviewed: they were eager to communicate. As Coletti puts it: “the enquirer needs to select a family *willing to be observed*” (my emphasis). The motives, obviously, could vary greatly: the pleasure of showing one’s own achievements⁴⁷, or the need for help. Arrigo Serpieri, for instance, reports that during his enquiry on the conditions of peasants in the area of Milan (carried out for SUM almost in the same years as the Faina enquiry in the South), as soon as they heard that somebody was investigating their conditions some peasant women rushed to invite him to visit their dwellings, to show him their appalling conditions, in the hope that their landowner would build new houses⁴⁸. Many requested an audience from the sub-commissions in order to complain about their problems and ask for help of some kind, so much so that the commission the even discussed the possibility that mayors might hide the arrival of the commissioners from the population to prevent complaints. This fear should make clear the meaning of that surplus of political representation recalled above: commissioners had a duty to listen to some of those who otherwise had no voice.

While Theodore Porter stresses the political conservatism that influenced Le Play’s method of monographic inquiries, his dependence on “social authorities”⁴⁹, I would rather highlight here the necessary interactions between local and foreign, between observed and observer inherent to this type of observation. Both social and geographical remoteness required guides and translators before TDs could overcome it and the literate, Italian speaking, university educated locals – when willing to cooperate – constituted the most obvious starting point of observation, just such as Neapolitan aristocrats had guided their European guests making the *Grand Tour* into the exotic Kingdom⁵⁰. As Azimonti writes: “Out of necessity, due to the illiteracy that is dominant among peasants, we were forced to ask the *galantuomini* for intelligence on the life of the peasants” ([Giunta parlamentare d’inchiesta (1909a)], p. XV), thus stressing the divide caused by literacy. But were the *galantuomini* faithful interpreters for the peasants? The TDs found, instead, their best supporters in the assistants and directors of the *cattedre ambulanti* and in the teachers of the schools of agriculture scattered about the South.

⁴⁷ [Coletti (1906b)] now in [Serpieri (1929)], p. 125.

⁴⁸ [Serpieri (1910)].

⁴⁹ [Porter (2009)].

⁵⁰ [Placanica (1987)].

The *cattedre* were able to translate the “word of science” into propaganda for the peasants⁵¹, but they were also able – at least in principle – to transform the tacit world of local agricultural practices into a language that could be understood by the general community of experts: accounting sheets, respective proportions of fertilizers, yearly rotations etc.⁵² Not to mention the translation – *stricto sensu* – from local dialects into Italian.

Observations such as those combined in a farm monograph contained a great deal of communication and translations, as I show; a mechanism similar to Bruno Latour’s mobilisation, but bidirectional, as the observed actively pursued their own representation⁵³. In the case of Southern Italy, in fact, for the mobilisation to take place, the distant periphery had to have an interest in providing information to the “centre of calculation”, otherwise data could be misrepresented or simply hidden⁵⁴. Consequently, the effectiveness of both direct and indirect enquiry varied greatly according to the interest shown by the observed populations. Marengi, for instance, regretted that in Calabria “the enquiry would have had more complete results, had public and private offices showed (...) more collaboration” “private individuals did not welcome the enquiry”⁵⁵. Azimonti complained that in Basilicata the collaboration of private individuals “was, altogether, very deficient and – so to say – offered unwillingly”, “the civilised strata (*ceto civile*) seemed not to acknowledge the practical utility of the enquiry and of collaborating with it”⁵⁶. In contrast, Lorenzoni praised the welcome offered by the Sicilian villages that he visited, and in particular the collaboration of peasants “full of trust and – so to say – of gratitude for the interest shown in them”. And he could not “recall without emotion the long evening meetings (...) when in an orderly way they without impatience or exaggeration, (...), described their

⁵¹ “Peasants need to see, or they won’t trust” is a common statement in the answers of *cattedre* directors to the enquiring commission.

⁵² [Collins and Evans (2002)].

⁵³ [Latour (1987)]; Investigation of agriculture has often been seen in terms of “quantification” and “mapping”, with statistics making the countryside “appropriable” for the State (unidirectional): for instance, James C. Scott stresses the top-down character of *cadastres* in continental Europe and South East Asia ([Scott(1998)]). In fact, a closer look at the way *cadastres* were actually made shows that local communities participated in the making of maps and the attribution of values; the landowners interviewed by the Faina Enquiry, for instance, almost invariably invoked the completion of the *catasto terreni* that they expected would lower the land tax to a more reasonable level.

⁵⁴ [Emmanuel Didier (2009)] stresses the importance of reliable information for American farmers against speculators, but see also, Marcel Boumans on deception: [Boumans (2012)].

⁵⁵ [Giunta parlamentare d’inchiesta (1909b)], p. XXVII.

⁵⁶ [Giunta parlamentare d’inchiesta (1909a)], p. XVI.

conditions ... ”. It was together with such peasants or with equally participative landowners that Lorenzoni visited cooperatives and estates⁵⁷.

5.5 Conclusions: communication, the typical and statistics

It might seem that the two aspects of observation that emerged from the discussion of the Faina enquiry, i. e., the role of a seemingly subjective element as the “typical”, and the importance of communication, are limited to that form of social investigation that went under the name of enquiry, and that positivist scholars such as Giovanni Battista Salvioni were confined on the edges of statistics because of its qualitative character⁵⁸. It was not so, as we can see in more detail in the next chapter: the most seemingly objective numerical statistics relied on the same elements⁵⁹. I mention only a few facts concerning Italian statistics of harvest as they were prepared after Valenti’s reform of 1910. The system for computing harvest was based, for each district, on the production coefficients and rotations of typical farms. Such typical farms were identified by the directors of the *cattedre ambulanti* and the coefficients were estimated by them as in Azimonti’s monograph discussed above⁶⁰.

The whole organization of agricultural statistics, moreover, depended on the collaboration of local associations of landowners: without their help and supervision, data on acreage and per hectare productivity could not have been updated⁶¹. Hence, also, in the case of statistics, the statistician’s ability to build a network and alliances within the population he has studied are a necessary condition of observation, as well as his own ability to identify what is typical.

There was no opposition between the subjectivity of the methods of enquiry and the indisputability of the resulting facts. The description of types was a reasonable way for politics and science to summarize variety. It was the expertise of TDs to combine consistently the answers to questionnaires (indirect enquiry) and their own investigations and travel impressions

⁵⁷ [Giunta parlamentare d’inchiesta (1911)], *Introduzione passim*.

⁵⁸ [Salvioni (1892)].

⁵⁹ I define here “objective”, and conversely “subjective”, following [Porter (1995)], as “knowledge based completely on explicit rules”.

⁶⁰ [Valenti (1907)].

⁶¹ For a list of the agricultural associations that took part in the making of the statistics: [MAIC (1908)].

(direct enquiry) that made the conditions of the poorest part of its population observable for the Italian state.

Questionnaires were answered by a variety of individuals, with different degrees of precision, dominated by diverging concerns, and referring to different experiences and places. They had to be merged into a unique text: “once the questionnaires were collected” – writes Lorenzoni – “we had to think how to summarize them: by municipalities first and by district afterwards. Neither of the two was an easy job. The questionnaires coming from the same municipality but from different individuals frequently diverged from one another. And the difference was not only merely formal or quantitative, but sometimes, although rarely, substantial. How to select?”⁶² It was a direct knowledge of places, direct observation of circumstances and surveys of typical instances of social phenomena (direct enquiry) that guided the selection of questionnaires and the judgement on their reliability.

In principle, the observation of a whole region – of all the farms, families, villages – could be acquired only through a continuous and comprehensive census, through statistics, but, since statistics were not at hand, the TDs of the Faina Enquiry travelled through almost a *terra incognita* of social phenomena. Only the observation of a few “typical” points (and not random samples) made generalization possible, on the basis of “typicality”, at a reasonable cost. The choice of typical instances out of necessity preceded the observation of them and was thus confided to the expert’s *coup d’oeil*. Although it depended on a complex interaction between different kinds of expertise: local and academic, tacit and explicit, methodological and agricultural; and different interests: the farmers’ and the enquirers’, the final decision fell entirely on the shoulders of the TDs.

The characteristics that in principle fitted the TDs to make the right observations and to giving to such observations their best synthesis were two: their university training (decontextualized knowledge, so to say), and their ability to translate such university training into local contexts. These characteristics they shared with their fellow graduates from agricultural schools, who worked in the *cattedre ambulanti*. In fact they belonged to the same group – that of agricultural experts–whose task was translating the expertise of local agriculturalists and farmers about contracts, techniques, technologies, and human factors, into the language of economic theory (capital, labor, rent) and vice versa. By so doing, the community of agricultural experts gave

⁶² [Giunta parlamentare d’inchiesta (1911)], p. XXV.

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stability and substance to agricultural types (types of farm, types of peasant family) which the government and the parliament could legislate for and which agricultural experts themselves could study in further investigations (as in the case of the statistics of harvest). If the political impact of the Faina was in the end rather limited, its volumes nevertheless offered for many years a reference point for every researcher interested in Southern agriculture.

6 Statistics I: measuring stocks, conjecturing

flows

The previous chapters introduced a threefold distinction between general observations that answered and summarized the questionnaires of enquiries, types that were described by monographs, and statistical series. At the end of the 19th century, statistics was characterised by its quantitative nature and by the large masses of observations that it operated with. Statistics of agricultural production were the most basic and important kind of statistics for the study of the agricultural sector and related social problems. Because of their importance, the statistics of agricultural production were simply called *statistica agraria*. Despite the efforts of the Jacini enquiry, enquiries were not the appropriate tool for collecting this kind of data. We have seen already that, at the time of the Faina enquiry, researchers resented the lack of satisfactory statistics on agricultural production. What they lacked was a comprehensive and repeated series of data on agricultural output that could provide a general framework for subsequent studies of individual agents of agricultural production (farms and farmers).

Repeated and comprehensive figures for agricultural output required, in contrast with enquiries, specifically dedicated structures. Briefly, they required statistical observatories. This chapter explains what it meant to observe agricultural output, and the next describes how observation was made possible by a network of observatories and observers.

Agricultural statistics were considered among the most difficult statistics of production. Alfredo De Polzer, in the manual of statistics that Corrado Gini edited in the 1940s, acknowledged that “from the point of view of statistical techniques, agricultural economy possesses very peculiar features that hinder the survey and make the interpretation of results difficult”. According to De Polzer, such elements are, among others, “the variety of crops cultivated, the division of productive processes among a large number of businesses of different size, the asynchrony of harvesting periods both of different products and of the same product across different regions of

the same country, or also the variability of products due to the effect of meteorological and cosmic [sic] factors”¹.

Since directly measuring production was impossible owing to the sheer number of farms that operated in the country, and since direct reports from producers themselves (such as are elicited by a census of population) would have been unreliable, statisticians were left with conjectural statistics, as they called them². An example from another economic sector, industry, should clarify here what they meant by conjecture. In order to compile the statistics of wool yarn production, the statistician Luigi Bodio adopted the following method. He knew the number of spinning mills of each type (although his figures were more precise for the big steam mills than for the small house mills). He then contacted the wool industrialist Alessandro Rossi and asked him for an estimate of the daily production of mills of each type. By multiplying the number of mills of each type by their daily production, Bodio achieved an estimate of the production of wool yarns that the mills could yield³. This estimate was a conjecture: it rested on a certain number of assumptions that had not been verified. Moreover the coefficients were not observed directly by the statistician but assessed by an expert informant. Conjecture enabled Bodio to move logically from stocks (of spinning mills) to flows (of production).

The basis for conjecturing production was the most observable and macroscopic of all data: the surface seeded with each crop. In place of the stock of spinning mills, agricultural statisticians resorted to the acreage dedicated to each crop. This formed the stock of the nation’s land. From different kinds of informants, they were then able to obtain rough coefficients of production per unit of surface and hence conjecture the yearly flow of production. This way of solving the problem was far from peculiar to Italy. Italians devised their system after a careful examination of international best practice⁴. Counting stocks was clearly very advantageous for statisticians. It was possible (at least in principle) to make a complete census of the surface under crop in a certain country.

¹ [Polzer (1942)], p. 5.

² [Valenti (1907)], p. 26. To us it seems that sampling could have probably suited better the demand for production data. A sample of thousands of farms is now used by ISTAT, the Italian bureau of statistics, for similar purposes. When random sampling methods were first presented at the International Statistical Institute, by Anders N. Kiaer in 1895, Italian statisticians generally rejected the legitimacy of the method.

³ [Favero (2011)].

⁴ [Valenti (1907)] discusses the proceedings of two congresses of the ISI held in St. Petersburg in 1899, and Budapest in 1903.

In the case of Italy, the adoption of conjectural statistics was made easier by the operations undertaken in 1886 by the Ministry of Finances for the making of the Italian *catastre* (*catasto terreni*, hereafter CT) in order to collect the land tax. The CT offered Italian statisticians the model for a different survey of the national land, this time only intended for statistical purposes and with no relationship with the land tax. This was called the *catasto agrario* (agricultural *catastre*, hereafter CA). Instead of an estimated rent for each crop, it recorded only the extent of surfaces under different crops and the product per unit of surface of a reference year. It contained, therefore, the essential ingredients of output statistics. For the years after the reference year, it was enough to record the small variations occurring in the surface and per hectare product to obtain a figure for the agricultural output. The CA offered a static reference point, while annual statistics traced the dynamics of production. As Nallo Mazzocchi Alamanni puts it, with a different metaphor, when he took over the task of directing the revision of the CA in 1929, the CA was for annual statistics what a still image is for a movie⁵. I discuss in sec. 6.3 below the administrative habits that went together with the CT to inspire the CA. In sec. 6.1 I sketch a short history of Italian agricultural statistics before the crucial date of 1906. In this year, the Ministry of Agriculture, Industry and Trade (MAIC) ordered a complete renovation of the statistics of agricultural production. The responsibility for this radical reorganization of the office for agricultural statistics fell on Ghino Valenti. In sec. 6.2, I examine the different options that Valenti took into consideration, and in sec. 6.5 his first attempts at building the faithful census of agricultural surfaces that was the CA.

6.1 Agrarian statistics before 1907

“Since the very first stages of existence of the Ministry of Agriculture, Industry and Trade – so Guido Cavaglieri wrote to the Society of Italian Agriculturalists (SAI) in 1900 – the Government was aware of the need to achieve an overview of the real conditions of Italian agriculture; they believed that it was first of all necessary to investigate which surface was dedicated to each crop, and which was the ordinary yield that was to be expected from them”⁶. Since the Unification of 1861, different systems had been tried. The estimates published in the first *Annuario statistico* by Cesare Correnti and Pietro Maestri were very rough approximations. The Second War of

⁵ N. Mazzocchi Alamanni, *Introduzione* to [Istituto centrale di statistica (1929-1939)].

⁶ [Cavaglieri (1900)], p. 894.

Independence had just finished and the South of Italy was still ravaged by the *briganti*. In 1866, the *comizii agrarii* were asked by the government to provide a yearly report on the conditions of agriculture. But the *comizii* were very unevenly spread over the territory of Italy and their reports therefore were unfit for comprehensive national statistics. In the 1870s, the chambers of commerce and the *comizii* contributed to *Relazione sul le condizioni dell'agricoltura in Italia*, four volumes that contained, province by province, details of the surfaces under crop, the average production per hectare and the total production of 13 crops⁷. The assessment of average production and of the surfaces under crop that were contained in the *Relazione* became the basis of yearly statistics.

After 1879, MAIC entrusted the compilation of the provincial statistics of agriculture to the prefects (*prefetti*). Following the French model, the prefects represented the central government in the 69 provinces of the Kingdom. As most of the action of the central government in the provinces went through them, they were also in charge of agricultural statistics⁸. As far as these statistics were concerned, the prefects cabled the data for their province to the Bureau of Agricultural Statistics established by the Directorate of Agriculture at the MAIC. In turn, the prefects relied on the data provided by municipalities.

Every year, they asked municipalities whether the harvest had been above or under the “average” and by what percentage. When they had collected these coefficients from all the municipalities, they computed their average and applied it to the provincial “average” given in the *Relazione sulle condizioni dell'agricoltura*. In this way, MAIC could compute the statistics of harvest (using the surfaces given in *Relazione* as the permanent basis)⁹. It is hard not to see that this method was very imperfect, and the statistical work, as a British newspaper put it, “was done in a very perfunctory way”¹⁰. Municipalities differed greatly even within the same province in size and agricultural vocation. What was the meaning of the average of the variations recorded within a province? Very little. The ministry soon realized this, and the Bureau of Agricultural Statistics began applying a special correction to the data of prefects. But it is not clear how the correction was applied¹¹. Facing all sorts of criticisms and protests, Minister Francesco Guicciardini was

⁷ [MAIC(1876-1879)]. On the Comizi, see [Corti (1973)]. On their French model and its function for statistics, see [Theodore and Volle (1977)].

⁸ On the Italian prefects in English, see [Randeraad (1993)].

⁹ [Cavaglieri (1900)] p. 895.

¹⁰ [Cavaglieri (1900)], p.893.

¹¹ for a general look at the pre-Valenti statistics of agricultural production, see [Federico (1982)].

urged to discontinue the publication of figures in 1898¹². Publication in a reduced form was resumed shortly afterward and at the beginning of the 20th century, the MAIC published in its bimonthly *Bollettino Ufficiale* four classes of data directly relevant to the statistics of agrarian production:

1. The Chambers of Commerce of each province reported the economic trends of the province (*Le condizioni economiche della provincia, Relazione della Camera di Commercio*), in agriculture, manufacturing and trade. The part dedicated to agriculture contained quantitative data on production and prices explained by discursive commentaries.
2. Every four months, the so-called Agrarian News (*notizie agrarie*) was published in the Bulletin. These short reports were provided (irregularly) by the prefects and contained exclusively qualitative information on three elements: the state of cultivation in the four preceding months, the economic and health conditions of the rural classes, the sanitary and commercial conditions of the livestock (“the state of the countryside, if it could not be said to be bad, was nevertheless not very satisfactory” we read in one of them).
3. Every ten days, some office inside MAIC (most likely the Bureau of Agraricultural Statistics) provided summaries of other reports originating from the prefectures. They contained qualitative and vague notions on meteorological conditions and the state of cultivations in Italy in general (with some hints of analysis on the scale of regions or compartments).
4. Every year, MAIC published draft reports (the *Notizie Approssimative*) on the totals for six products: wheat, wine, rice, corn, olive oil and oranges. They included figures of unitary yield and surface under crop by province and “agrarian region” (i.e. the usual statistical compartments, Piedmont, Liguria, Lombardy, the Veneto, Emilia Romagna, Tuscany, etc.). The figures of total production were given in hectolitres¹³.

In general, an examination of the *Bollettino Ufficiale* gives the impression that these reports, with the possible exception of the Approximate News, were irregular and far from systematic. It is

¹² [Cavaglieri (1900)], p. 893.

¹³ Around the early years of the 20th century, the Prefects were also collecting data on agrarian products for the Army Provincial Commissions for Provisions. The municipalities of each *prefettura* were asked to produce data on the surfaces under crops and total production in 100kg (quintali) together with information on local industries, combustibles, traders, etc. For an example (concerning the year 1903-1904), see Archivio di Stato di Roma, Prefettura di Roma, Gabinetto, b. 1085.

difficult, on the basis of the data published by MAIC, to compile a series for single provinces, since not all of them provided their data regularly. Moreover, the information seems rather difficult to compare across time for the same province and between provinces or regions. The problem is not that there were no numbers involved (in fact, qualitative labels such as ‘good harvest’, ‘bad harvest’, etc. were ordinarily employed within a system of numerical equivalences that allowed them to be turned into proportions with a reference value) but that the reference value was not consistent with the yearly variations recorded¹⁴. As for the figures contained in the *Notizie Approssimative*, most statisticians, in Italy and abroad, were not satisfied with these numbers, which not only came late but were likely to be deeply unreliable. Besides, they concerned too small a number of products, leaving uncovered products of great commercial importance, such as silk, beans of all kinds, fodder etc.

Such statistics were so limited in extension and so inaccurate that in the Parliament two of the MPs who represented the interests of agriculturalists, Paolo Casciani and Giambattista Miliani, could deplore the absence of official figures for agriculture. This is why, when the creation in Rome of the IIA put the reputation of the Italian government at stake, Minister Francesco Cocco-Ortu (1842-1929) in order to have reliable and up to date statistics of agrarian products, decided to rebuild the system as radically the state could afford¹⁵. To design the new structure, the minister decided to adopt a plan designed by the agricultural economist Ghino Valenti¹⁶ from the University of Padua.

6.2 The arrival of Valenti

In the 1880s, when still in Macerata, Valenti had contributed to the Parliamentary Enquiry on Agriculture, called the Jacini Enquiry (see sec. 4.1 above). The Commissioner for the central

¹⁴ See, in general [Ricci (1914)], pp. 197-199, and, for the case of Russia, [Stanziani (1992)], p. 77.

¹⁵ That the establishment of the IIA made the renovation of agrarian statistics a “matter of honour” for Italy, is a view too consistent with the rhetoric of Italy as the “smallest of the Great Powers” to be adopted uncritically. Nevertheless, Valenti, insists on the point: “the new ordering of the service of agrarian statistics, although invoked for a long time within the Parliament and outside it, since the time of the agrarian inquiry,(...), was only due to a feeling of national *amour propre*”, [Valenti (1919a)], p. 72.

¹⁶ F. Cocco-Ortu, a Sardinian lawyer, was Minister for Agriculture, Industry and Trade in the third cabinet presided over by Giolitti, between 1906 and 1909. His successor was Luigi Luzzatti in a new cabinet directed by the (more) conservative S. Sonnino. [D’Autilia (1992)], p. 13, seems to imply that the Consultative Commission was established by Minister Luigi Luzzatti in May 1910. This is not correct: the commission was already operating in 1907, as it is shown by the records of its meeting in [MAIC (1908)], fasc. I.

regions, Senator Nobili Vitelleschi, assigned to Valenti the task of writing a report on the Marche, Valenti's home region, because Valenti was then the secretary of the local *comizio agrario*. His investigations turned out differently from the reports that the commission had received from other compartments. Valenti not only coordinated the group of local informants, but himself wrote an interesting report that strictly followed "the norms established by Comm. Bodio", who was then the leading Italian statistician (and secretary of the Institut Statistique International). It is important to underline this early research done for the Jacini Enquiry, because it prefigured the way that Valenti decided to organize the activity of the office for agricultural statistics when he was nominated to lead it in 1906.

Valenti elaborated a "statistics of properties", based on the *cadastre* of the former Pontifical State and the data offered by the tax commission that the Italian state had established in the Marche for the CT. The CT offered two very relevant sorts of information. First, it kept records of the size of land properties in each municipality. This allowed the approximate number of landowners and size of properties to be calculated. This was a key piece of information for answering questions on small or large property, but it had to be compared with the public record of properties kept by notaries in order to have an overview of the properties of those who owned land in more than one municipality. Second, the CT attributed each plot to broad classes of productivity and land use. This was a good point to start from for a set of statistics of agricultural production.

In order to achieve his aim, Valenti divided the whole province of Macerata into groups of municipalities, called *zone agrarie*. There were four of these: the area of mountains (*zona appennina* or *Montagna*), the area of high hills (*zona sub-appennina* or *Alta Collina*), the area of lower hills (*zona delle colline* or *Bassa Collina*), and the area of plains (*zona delle vallate* or *Pianura*). In his correspondence with Nobili Vitelleschi, Valenti did not explain how he had drawn up the *zone agrarie*, he simply declared that he had applied a "synthetic" rather than "analytic" method¹⁷. It is evident, though, that the main criterion for the *zone agrarie* was topographical. But as they had to serve as the fundamental unit of statistical research it is likely that the topographic criterion was actually adopted because of its determining influence on

¹⁷ "Dirò solo che la divisione delle zone è stata fatta con criterio sintetico, non analitico, avendo riguardo alle condizioni prevalenti e trascurando le peculiarità e le eccezioni" letter of Valenti to Nobili Vitelleschi, in ACS, Giunta parlamentare per l'inchiesta agraria e sul le condizioni della classe agricola in Italia, scatola 12, 69.6.

agricultural production and patterns of land property¹⁸. In this research the CT and the agricultural zones were already playing a fundamental role, as they did eventually in the CA that Valenti created for the agricultural statistics of MAIC.

When Cocco-Ortu in 1906 assigned to him the task of reconstructing the office for agricultural statistics, more or less from scratch, Valenti first examined the different options that the most renowned experts of agrarian statistics had discussed at various congresses of the International Statistical Institute¹⁹. He tried to evaluate their respective advantages and their applicability to the case of Italy. The first question to settle was whether statistics were the right form of investigation. So far, monographs and enquiries had been the main instrument employed by the Italian state for understanding agriculture²⁰. Valenti underlined the differences between monographs and enquiries, on the one hand and statistics, on the other²¹.

In Valenti's view, neither monographs nor enquiries could adequately replace a permanently established statistical service, although both forms of investigations could complement general statistics. In his plans, the new service must rely on a stable structure at the central and provincial levels and pursue the highest degree of uniformity of data so that the series on crop production could stretch uniformly over many years and many different regions.

In general, the most important part of agricultural statistics was the statistics of plant production: wheat, barley, rice, grocery, fruit, etc. It accounted for the greatest segment of agriculture's gross product. The two key elements of these statistics were the measure of the acreage under crop and the unit yield. The assessment of acreage under crop involved the knowledge of the extension dedicated to the cultivation of the different agrarian products. The unitary yield was the product of each unit of surface (in acres or hectares) reserved for certain cultivations.

For each of these two figures two aspects were usually taken into consideration. The first was the basis of the statistics, its starting point. The second was the yearly variation. In the case of

¹⁸ The report was republished in [Valenti (1914)], *Introduzione* and *Allegati*; a direct trace of Valenti's contribution to the Jacini Enquiry is in ACS, Giunta parlamentare per l'inchiesta agraria e sulle condizioni della classe agricola in Italia, scatola 12, 69.6; see also [Giaconi (2003)].

¹⁹ [Valenti (1907)].

²⁰ We have seen in sec. 4.1 above, the importance of the Jacini Enquiry and the preliminary work done by the *comizii agrarii*.

²¹ [Salvioni (1892)], 95-107.

acreage, for instance, a particular year for which absolute figures were available was taken as the reference year. Once this basis was known in absolute terms, yearly variations could be more easily assessed, in practice, as fractions or percentages of the known base. The same held for unitary yields. Yearly figures were computed mainly as proportions of the average or of the normal yield²². So, for instance, a good harvest could be 110% of the average yield, a bad harvest 75% and so on. If the average unitary yield was known in absolute quantities, a good harvest could be converted into absolute figures. The same held if instead of the average year, the “normal” year was taken as the reference base²³. Both the problem of knowing the acreage and that of assessing the unitary yield had been widely debated among international experts of agrarian statistics²⁴.

The ISI debates mentioned two classes of method for obtaining the essential items of information: direct and indirect surveys (the meaning is in this case very different from the meaning of direct and indirect in regard to enquiries). When the investigators obtained the information from the farmers, they were employing direct methods. This was also called the “census method”, because population censuses were done in this way.²⁵ In 1898 Great Britain, for instance, about twelve hundred officers of the Inland Revenue were in charge of distributing statistical forms to the farmers. On these forms farmers would report acreage under crop, yield per acre and the number and productivity of their livestock. 97% of the occupiers of more than one acre of land and of the owners of cattle, sheep or pigs completed and returned the forms²⁶. Belgium, whose agrarian statistics enjoyed a great reputation, held general and annual censuses of agriculture. In the United States, for another instance, the census of the land stock was taken together with the census of the population, every ten years. Every subsequent year, the census data on the use of land were updated by means of a questionnaire that the Bureau of Statistics

²² The value of the yield in a “normal year” was a quantity determined by appraisers, rather than an observable one; it represented the product yielded by the land under standard weather conditions and standard management; for a discussion of “normality” conditions and appraisal see sec. 8.2.

²³ In his work on American agrarian statistics, E. Didier mentions the fact that it had been proven easier for farmers to indicate proportions rather absolute numbers: [Didier (2009)], p. 27. A typical mistake of data reports was to confuse the average year with the normal year and the latter with a good year (when no special meteorological event had damaged the harvest), see [Federico (1982)], p. 110n75.

²⁴ [Pilat (1899)], [Levasseur (1903)]. Pilat was the director of the Galician office of statistics in the Austro-Hungarian Empire while Levasseur, vice-president of the ISI, was a celebrated French statistician and a member of the Conseil Supérieur de Statistique since 1885.

²⁵ A. De Polzer thus defined direct methods: “the collection of data by means of declarations issued by producers” (“l’assunzione dei dati a mezzo di denuncie dei produttori”), [Polzer (1942)], p. 20.

²⁶ [Craigie (1903)], pp. 322ff.

sent to a restricted group of farmers. Farmers reported the (presumably) small variations that had occurred over the year in the productivity of land and in its use²⁷. Sending questionnaires to a more restricted range of people, for instance, by asking large farmers only (“because there is not a great number of them”) or experienced farmers, was still among the direct methods²⁸.

Statisticians agreed nevertheless that direct methods had significant shortcomings. The first was that farmers might tend to conceal the real figures and declare a lower total than they had secured. Fear of taxes was responsible for this. Valenti expected this effect to be especially important in the case of Italy “where farmers, tortured by taxes, see in any request [from the State] a means devised to make taxes heavier”²⁹.

Moreover, the practical difficulties of direct methods grew as the number of landowners and farmers increased, properties grew smaller and the average education of the rural population declined. Emile Levasseur, the famous French statistician, observed: “in a country where property is extremely subdivided, it is very difficult, it would even be impossible, in the present state, to distribute individual questionnaires”. And the Austrian Theodore Pilat acknowledged that “this system [a method that involved the direct questioning of farmers] is not feasible in those countries where the land is heavily fractionated and the rural population is not very well educated to compute exactly the surface under crop of their own farms”³⁰. Valenti points out that the Italian rural world was characterised by small properties and high rates of illiteracy alongside a general mistrust of state authority. Hence, he concludes “if Levasseur’s considerations hold for many foreign countries, they are much more valuable for Italy (...). If we adopted the same system followed in England (...) we could be positive that we would not collect a single trustworthy answer even on the part of the most enlightened people”. Valenti resolutely excluded the option of building his statistics on direct methods³¹.

In Italy, direct methods had, then, to be replaced by indirect methods. Indirect methods entailed that investigators should assess the relevant quantities by themselves. Indirect methods were not

²⁷ [Didier (2009)] apparently fails to acknowledge the importance of census data, and focuses exclusively on the assessment of yearly variations.

²⁸ [Levasseur (1903)], p.65. This seems to have been the way in which Russian statistics were constructed [Stanziani(1992)] and [Mespoulet (1999)], p. 588. It is worth noting here that questionnaires alone would have counted as an indirect method of enquiry, according to Coletti’s categories discussed in Chapter 4, above.

²⁹ [Valenti (1907)], p. 14.

³⁰ *Bulletin de l’Institut international de statistique*, tome XIII, première livraison, Budapest 1903, p.67.

³¹ [Valenti (1907)], p. 14.

ignored in European countries. In Great Britain in 1898, for instance, the average produce of crops (the yield coefficients) was ascertained by approximately 250 skilled estimators³². By categorically excluding direct investigations, Valenti was forced to adopt indirect methods not only for production coefficients (as in Britain), but also for the survey of surfaces under crop (the survey in Britain, as we saw, was obtained by direct methods).

At the international level statisticians agreed that the Continental *cadastre* (the fiscal land survey done for collecting land taxes) was an excellent starting point for indirect statistics of acreage. For Valenti, such international praise for the use of *cadastres* confirmed the value of the practices he had experimented with in the Marche during the Jacini inquiry. Hence, it was quite natural for him to look at the Italian *cadastres* that were made for tax purposes (CT and the previous *cadastres* of the former Italian states) to see whether they were a useful source of information for national statistics.

6.3 The Italian CT and its potential

It is conventional to start the story of modern Italian *cadastres* with the *catasto* of Milan that the Austrian administration of the Duchy of Milan began in the early 18th century. This *catasto* was a complete census and measurement of all the land parcels of the Duchy. The government of the Duchy intended to rationalize the land tax by precisely defining the tax base. The Milanese *catasto* provided a geometric identification of land parcels and was therefore the first example of what is called a geometric *cadastre*³³. Each parcel was reproduced on a map and described on a paper called a *cadastrino* or *sommarione*. The map and the *sommarione* were prepared by personnel who had been trained in a special school for surveyors³⁴.

The Milanese *cadastre* proved a very successful institution and became the model for similar systems all over Europe. Napoleon in particular disseminated the geometric *cadastre* outside Italy. In his time the *sommarione* included seven columns that carried the identification number of the parcel, the name of its owner, the denomination of the property, the quality of cultivation

³² [Craigie (1903)], p. 323.

³³ The alternatives to geometric *cadastres* were descriptive *cadastres* (*catasto descrittivo*) which contained descriptions only and allowed no precise identification of the properties.

³⁴ On the *cadastre* of Milan in the 18th century, see: [Carli (1815)] and [Pederzani (2008)].

(*qualità*), the disposition of the soil (*giacitura*), the class (*classe*) and the surface of the parcel. It is very important to understand these distinctions and the related terminology because they passed into the terminology of the CA and will occur repeatedly in this and subsequent chapters. The identification number allowed the *sommarione* to be linked to the representation of the parcel on the cadastral map. The quality of cultivation described in schematic terms some features of the land use, for instance, whether a parcel was sown with herbaceous plants or planted with trees. The disposition indicated whether the parcel was in the plains, on a hill or in the mountains (*Piano, Colle, Monte*). The classes of parcels were distinguished according to their fertility and productivity. The gross product was determined as a function of quality, disposition and class. After subtracting expenses, the appraisers determined the yearly rent³⁵. This rent and all the deductions were fictional measures. The gross product was evaluated at prices below market prices, and expenses were intentionally overestimated. Nevertheless the result gave an impressively precise and consistent image of agriculture.

During the 19th century, following the Napoleonic example, many Italian states formed geometric *cadastres* on this model. With the unification of Italy, the new country had a great number of different *cadastres* (some geometric and some merely descriptive). Such variety made it very difficult to apply a single and fair land tax³⁶. Consequently, after long debates, on 1st March 1886 a law was passed that initiated operations for the unified CT. The law promoter was the famous economist Angelo Messedaglia, a friend and inspirer of Valenti³⁷.

³⁵ [Catizzone and Di Filippo (2009)], p. 30.

³⁶ [Romani(1982)] on the *sperequazione* after the Unification, p. 224ff.

³⁷ Messedaglia was one of the economists of the Scuola Lombardo-Veneta, see: [Faucci (2000)], pp. 201f. On the economic conception behind the *cadastre*, see, first of all, [Messedaglia(1936-XIV)] and [Einaudi (1974)]. On the practice of cadastral estimation at the beginning of the 20th century, see [Niccoli (1927)].

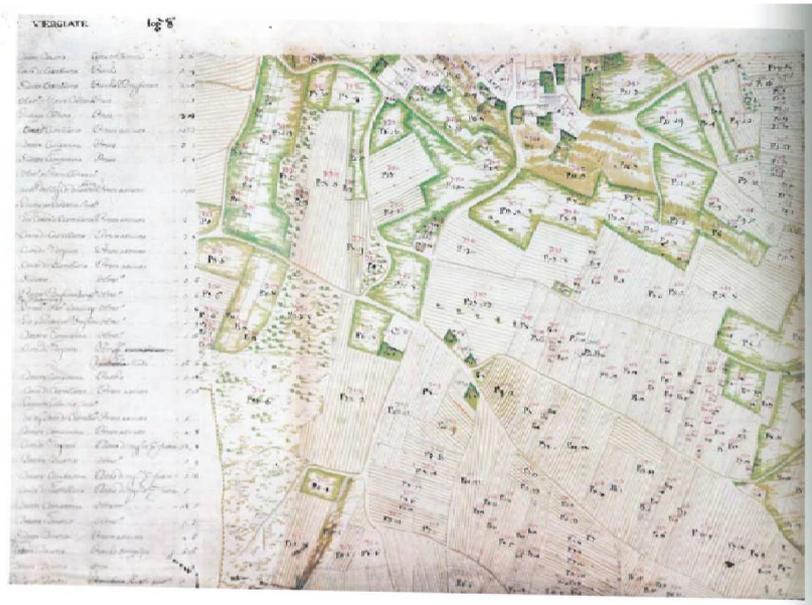


Figure 6.1: a map from the Milanese cadastre showing the parcels and some indication of the land use (from [Catizzone and Di Filippo (2009)])

The Italian *cadastre* that was implemented on the lines of the 1886 law followed rather precisely the Napoleonic model, and distinguished the qualities, dispositions and classes of the parcels. The local committees for the *cadastre*, appointed by the Ministry of Finance, began by establishing qualities and classes for their respective “cadastral constituencies” (*circondarii censuarii*). This preliminary operation was made possible only by the committee’s previous knowledge of the standard conditions of agriculture in the area. The committees had to be aware, for instance, of the most relevant qualities of the spread of cultivation in the area. The decision concerning the number of classes that had to be identified for each quality also depended on a preliminary acquaintance with the area’s soils. Where conditions were very uniform, a single class could be sufficient. Where, in contrast, the general conditions of the soil (its fertility and the labour that it required) were very variable, more classes were required. Classes were not uniform across cadastral constituencies.

Once qualities and classes had been established, the committee proceeded to survey the single parcels. The survey was done by means of the military maps provided by the Istituto Geografico Militare (IGM, the army ordnance). Land parcels were measured and mapped and assigned to the different qualities and classes.

This operation took the name of *classamento*. At the end of the *classamento*, land assessors attributed to each quality and class a certain yield per hectare, on the basis of their knowledge of local conditions. In order to estimate the revenue of each parcel, the Ministry of Finances formed

a table of prices of agrarian products for each cadastral circle. Land assessors then multiplied the yield per hectare by the surface of each parcel to obtain its product. This product, in turn, multiplied by the product price, yielded the parcel's revenue. The parcel's cadastral rent was computed by deducting some categories of legally fixed expenses from the revenue so obtained.

Especially complex was the assessment of the land's gross product. The reader must keep in mind that this was not a specific magnitude. The appraisers were not supposed to appraise a specific farm, with a specific management, with specific conditions for credit, and commercial connections. The *cadastre* concerned the land and the rent— so to say – regardless of the way that the property was administered. Appraisers assessed a hypothetical gross product, as obtained under standard conditions of management and techniques that prevailed in each “cadastral constituency”, i.e. the gross product of what they called an “ordinary farm”³⁸. For Messedaglia, this method of appraisal was meant to give incentives to those who managed their farms better and to punish the less efficient ones. It should be noted that, since classes were determined locally, rather than countrywide, effective management was also benchmarked against local conditions, rather than national conditions³⁹.

Considering the complexity of the undertaking, it is no surprise that the operations for the implementation of the law of 1886 proved slow and expensive. The CT was completed only in the 1950s and only thanks to aerial photography. From its beginnings, however, the CT was considered a source of invaluable information on Italy's agriculture.

In sec. 4.1 above, we touched on the way in which Ghino Valenti tried to use the *Cadastre* of the Pontifical State for the area of Macerata. In the early 1900s, now a professor at the University of Padua, Valenti took advantage of the operations of the cadastral surveys that were being made in the province of Padua to compile the province's agricultural statistics. When Cocco-Ortu summoned him to Rome, in 1906, he hoped that the new Italian CT, combined with the geometric *cadastres* of the pre-unitary states, would enable him to form a complete inventory of Italy's cultivation by surfaces and productivity. This inventory was to serve as reference for the annual statistics of agrarian products. He called this inventory CA to show that it was based on the cadastre. Although based on the geometric cadastre wherever possible, it is important to remember that the CA was not in itself a *cadastre* like the CT. *Cadastres* were driven by fiscal

³⁸ On the concept of the ordinary farm and its applications in land valuation, see Chapters 8 and 10 below.

³⁹ On the CT in Italy, see [Catizzone and Di Filippo (2009)].

aims and focused on properties and parcels. Valenti's survey served mere statistical purposes and distinguished, not properties, but masses of cultivation. Consequently, while *cadastres* assessed the rent of single parcels, the CA contained not monetary values but real quantities (surfaces and yields). Moreover, the *cadastre* recorded only generic qualities of land, while the CA specified the exact crops.

6.4 The case of Padua 1906

Let us examine in more detail Valenti's method for obtaining the surfaces under crops and per hectare yields from cadastral data. Theoretically, the *sommarione* of the *cadastre* already gave a rough account of the cultivation masses (under the label of qualities), but divided into individual properties. By using cadastral maps to guide the field inspection of the parcels, it was relatively easy to specify the qualities (that were too generic) into the actual crops, to determine, for example, that a parcel that appeared generically as arable land on the *sommarione* of the CT was actually sown with wheat and barley. The information about disposition and classes that the *sommarione* recorded were also useful in dividing the whole stock of land into subsets of roughly equivalent productivity. This was important since surveyors could more easily obtain the per hectare yields for the single classes and dispositions, supposing that each of them gave a more or less equal yield, rather than assessing an average value for a large territory where productivity and yields were likely to vary greatly.

In practice, the work needed for updating and detailing the data of the CT was more complicated than it might seem and less reliant on the CT alone. Surveyors needed information, such as crop rotation, that was not visible either in the CT or on a single inspection, but known only to the area farmers and landowners. Valenti was able to prepare the CA for the province of Padua in the year 1905 where he reported the crops and the fertility of land only thanks to the support of the local *comizio agrario* (an association representing Padua's agriculturalists) and of the local commission for the making of the CT.

Once completed, the CA offered, a reference term for the surface under crops and the unitary yield of the different classes of soil. By assuming this reference term, the making of annual statistics for subsequent years became significantly easier. For the annual statistics, instead of making the complete survey afresh (a new CA), it was sufficient that surveyors reported the variations that occurred during the year in the surfaces under crops and in the coefficients of

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indicates the classes for each quality. For some qualities, for instance, arable land, there are 5 classes (I-V); for others, such as permanent rice fields, there is a single class (*unica*). The third column (divided into hectares, ares and cent.) gives the surface according to the *cadastre*. These surfaces are obtained by summing up the surfaces of parcels belonging to different proprietors that the *cadastre* assigned to each quality and class. The 4th column gives the variations possibly registered during the operations for the *classamento* and in this case is blank.

Up to the fourth column all the data are taken from the *cadastre* and basically describe the situation of 1886. The fifth column, instead, gives the surfaces as the commissioner and his collaborator found them in 1905-1906, when visually inspecting the fields. Using the *cadastre* for preparing the CA figures on surfaces meant that Valenti and his team could break down the global survey of the provinces in a great number of smaller and much easier inspections of those individual parcels where variations had occurred since 1886. It was easier to identify small variations than to assess large surfaces anew. This fact made the *cadastre* so important for the CA and, in turn, the CA so valuable for statistics. The work of the commissioner was not limited to assessing the gross surfaces. The important number was the net surface. Columns 6 and 7 give the surface lost to borders, ditches, drainage etc. (*tare*). It had to be subtracted from the productive surface and the result of the deduction is given in column 8. Columns 9 and 10 represent the surface that is subtracted from the main crop because of arboreal cultivation existing on the same fields (as could be the case of a fig tree on the edge of a wheat field). This surface also has to be deducted from the surface dedicated to the main crop. Columns 11 and 12 give the quantity of fodder that is produced as a side product in the fields of other main crops. Finally column 13 reports the total surface reserved for the main crop once the data recorded by the *cadastre* have been corrected by the provincial committee and all the necessary subtractions have been made.

On the right of the main frame, we see the smaller “frame n.1”, Production of wheat for the year 1906. This smaller frame is the first of a series of 5 (the other four do not appear in the picture), each of which presents the data for a specific crop, out of those that rotate on the different soil qualities and classes (the rotation in use is noted at the bottom of the page). For wheat, for instance, we can read the cultivated surface (6 hectares and 50 ares in the case of arable land, class I), the yield per hectare (1,200 kg, 1 quintale= 100 kg) and the total production obtained by multiplying the cultivated surface by the yield per hectare (in the case of arable land, class I,

7,800 kg or 78 quintali)⁴¹. Coefficients of the yields per hectare were obtained from a number of local correspondents, selected from the few who volunteered. Although the commissioner and his collaborator would verify the likelihood of such numbers, it was crucial that they could rely on insiders and that they could apply such coefficients to all similar plots with a reasonable degree of approximation in the results.

Very similar forms were devised also for fodder plants (*Modello B*) and arboreal cultivations (*Modello C*)⁴².

The statistics for Padua had already appeared in the Agrarian News that the prefect of Padua published in the *Bollettino Ufficiale* of MAIC in 1907. The contrast with the reports coming from other provinces for the same year was striking⁴³.

6.5 The experiments 1907-1908

In Valenti's opinion, once the CA was completed, the computation of variations in surfaces and yields in the subsequent years became much easier. The completion of the CA on a national scale was to be the starting point of the statistics. But replicating what he had done in Padua was a vast and difficult undertaking. It required collaboration from all possible social forces existing in the local contexts that differed so greatly from province to province⁴⁴. Valenti and Cocco-Ortu therefore decided to try Valenti's method in a small number of provinces where for various reasons they could rely on local support. They called these pilot projects experiments. The minister was able to funnel into their experiments part of the funds from the MAIC's budget ("very modest funds and collected only by means of expedients" to a total of L. 40,000)⁴⁵.

The pilot projects served to check whether Valenti's method for constructing the CA was compatible with the different *cadastres* available in Italy (those made before 1886 in the former

⁴¹ Unitary yields are provided in hundreds of kilograms per hectares, i. e., only in terms of units of surfaces. This measure derives from the Italian 1886 *cadastre*. Alternative and widespread measures presented the unitary yield per hectare also in relationship with the quantity of sown seeds (the Tuscan *cadastres* for instance worked like this): [Marsili Libelli (1912)], p. 400.

⁴² [Valenti(1907)]. pp. 38f.

⁴³ *Bollettino Ufficiale* del Ministero di Agricoltura, fascicolo VIII, pp. 689f.; [Valenti (1907)], pp. 38ff.

⁴⁴ See Chapter 7 below for a more detailed analysis of the network that Valenti put in place.

⁴⁵ L. 14th July 1907, n. 535, "On the census of livestock and agrarian statistics".

Italian states), and in different social contexts. Experiments were carried out in cooperation with local agricultural associations and prefectures. Valenti directed the central office in Rome, while the minister nominated the provincial commissioners and the committees for 15 provinces.

The situation was far from being the same in the 15 provinces involved. There were dramatic differences in the strength of the state administration and of civil society, but, for the application of Valenti's technique, the most relevant difference followed from the fact that the CT begun in 1886 did not cover all of the provinces. By 1907, in fact, there were three possible situations with regard to the *cadastre*: out of 69 provinces in the whole Kingdom, only 27 could rely (but not always entirely) on the new CT, 23 had older geometric surveys from the pre-unitary states (but the Tuscan geometric *cadastre* was unsuitable for Valenti's aims)⁴⁶, 19 had only descriptive *cadastres* (without maps). Different operations had to be undertaken in the three kinds of province. In all cases, the basis for the survey was to be the municipal territory, which formed the basic unit for administrative purposes and also for the *cadastres*.

Where some sort of geometric survey was available that could be relied upon (CT or any geometric cadastre except the Tuscan one), special effort was put into updating the data, following the method applied in Padua⁴⁷. As central commissioner Valenti prepared the forms, he laid great importance on using only one type of form for all the provinces. Although in principle he acknowledged that better forms could be devised by single commissioners or by some local committees, strict uniformity was indispensable for the success of the whole operation. The forms were exactly the same as those we saw in the case of Padua. For each municipality, the commissioner was supposed to complete one form for each of three main groups of cultivation: form A for herbaceous cultivation (ranging from wheat to beans, corn and tomatoes), form B for fodder (spontaneous or cultivated), and form C for arboreal (trees and vines).

⁴⁶ The Tuscan *cadastres* (the former Grand Duchy had more than one *cadastre* for different parts of its territory) were geometric but it did not present qualities and classes. The parcels were appraised individually to avoid systematic errors; see: [Marsili Libelli (1912)].

⁴⁷ Also for this reason, landowners generally expected that the extension of the cadastre would result in many areas in tax reliefs: [Marsili Libelli (1912)]; Similar claims were also made by Southern landowners to the committee of the Faina Enquiry in Abruzzo and Molise. Since it was very difficult to reconstruct the 1886 situation after years or decades, it seems likely that in determining revenue and rent wide margins of bargaining were left to landowners and assessors.

Each form, A, B, or C, listed all the relevant qualities of crops and destination (non-productive, sown, arboreal, fodder, etc.). For each land quality, the commissioner distinguished different classes of land according to how productive the soil was and how easy to work. Once the classes had been designated, the commissioner assessed the surfaces belonging to each class for each quality⁴⁸. Different forms reported unitary yields for different qualities and classes. In this case, it was not the commissioner alone who filled out the forms. Special forms were distributed among the commissioner's correspondents to gather information. Finally, the commissioners copied all the data on a summarizing sheet⁴⁹.

The hardest problem was how to survey those provinces where no *cadastre* could be relied upon. This was a significant technical problem that had to be solved taking into consideration two major constraints: the survey had to be cheap and it had to be fast, or at least cheaper and faster than the survey that the Ministry of Finance had been carrying out for the CT since 1886. A solution came from Vittorio Niccoli who was in charge of the statistical operations in Florence. He devised a method for compiling the CA that was applicable where Valenti's was not.

In 1907 Niccoli, who taught in Pisa, had become a respected authority in the field of agricultural economics and appraisal (*estimo ed economia rurale*)⁵⁰. In the province of Florence, the surveys for the CT of 1886 had not yet begun by 1906 (they would start only in 1912) and the Tuscan *cadastre* of the 1830s, although it was a geometric *cadastre* based on maps, did not specify classes and qualities. It was thus meaningless for Valenti's CA. Niccoli, therefore, decided to bypass the cadastral surveys and start directly from the military maps of the IGM. Cartography already represented the stock of the country's land, but – of course – did not specify the details of individual crops.

These maps were available on a 1:25,000 scale and for certain areas a 1: 10,000 scale. The first problem was to know exactly the surface of each municipality. The maps came in sheets called *tavolette*. In order to calculate the measurement, the margins of each *tavoletta* and the municipal borders that they included had to be redrawn on a robust sheet of tracing paper. The surface could then be integrated either by means of the planimeter (Figure 6.3) or by counting the number of squares that the borders included on the grid of a sheet of graph paper (Figure 6.4).

⁴⁸ For the instruction, [MAIC (1908)] fasc. I, p. 18ff. On the summary sheet (Modello II see [Istituto centrale di statistica (1959)], p. 19; unfortunately I could find no example of this Modello II.

⁴⁹ [MAIC (1908)], p. 25.

⁵⁰ For Niccoli and appraisal techniques, see Chapters 3 and 10, and [Niccoli (1927)].

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Figure 6.3: Amsler planimeters (1870-1900) in use to the Italian Agency for the Cadastre, (from [Catizzone and Di Filippo(2009)]). Once the spike is fixed on the paper, the geometer follows the contours with the free arms. The wheels at the kink rotate with the movement and compute the area contained within the contours.

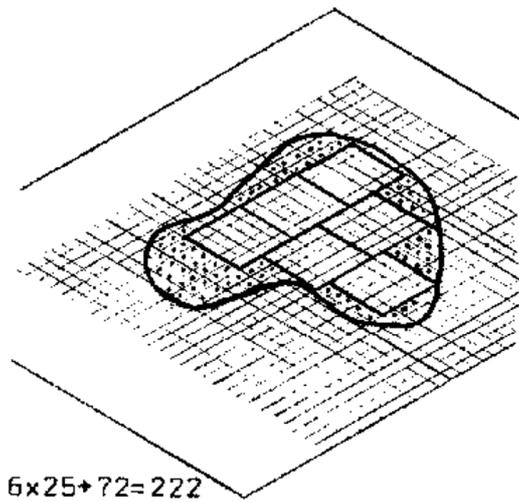


Figure 6.4: Integration by counting squares on graph paper, from <http://www.homepage.montana.edu/>

Once this preliminary operation had been completed, the territory of each municipality had to be divided into uniform areas according to their destination and cultivation. The maps already roughly recorded the cultivation masses and the disposition (*giacitura*) of the different soils⁵¹. The surveyors (the commissioner and his collaborators) had to directly register these rough distinctions by means of abbreviations and conventional signs on the tracing paper. Equipped with the tracing paper on which he had drawn the municipal borders, with the map and a notebook, the surveyor was now ready to leave for the fields.

It was important for him to acquaint himself with the places and the access roads, so that the operations could proceed smoothly and with the least effort. Wherever possible, Niccoli

⁵¹ For the IGM maps and the representation of agriculture on them, see [Farinelli (1976)].

suggested travelling around by bicycle. The survey operations proper should start from a high point: a hilltop or the top of a tower or bell tower (just like cartographic surveys!). From this vantage point, the surveyor would be able to see a large portion of territory, the limits of which had to be drawn on the tracing paper. Within this territory, the surveyor had to identify uniform areas for cultivation and with a productive destination. For each he had to indicate the proportions in which the different uses of land were represented, for instance: non productive 1/15; garden 1/10; sown with vines $\frac{1}{2}$; pasture the rest.

During the inspections, the surveyors had to ascertain the exactitude of the subdivisions already made on the tracing paper and to add more details. By means of a code of abbreviations, all the different qualities and crops had to be drawn and noted on the tracing paper. But the surveyor was supposed to supplement such subdivision with the kind of information that Niccoli attributed to agrarian economics proper: 1) the average ratio between the surface that was cultivated and the areas used by buildings, roads, bridges etc.; 2) the fertility of the soil; 3) the cultivation and its rotation; 4) the average numbers and types of plant for arboreal cultivation (vines and olive trees in particular). All these data should be noted on the field-book, at least one page for each class of each quality.

In fact, the surveyor did not observe elements 1-4 over the entire area. He looked only at specific parcels and farms that he characterised as “typical” and representative for the area. A number, marked on the notebook and repeated on the tracing paper, showed where “the parcels that were assumed to be of average type [*tipo medio*] and which the notes actually refer to” were located in the map. This allowed the accuracy of the surveyor to be checked. It should be noted that, as Niccoli often repeated, the whole survey operation should not aim at accuracy in its details, but in the general picture. General accuracy, rather than local exactitude was the underlying principle of the entire CA: Valenti and the other experts who participated in the CA were confident that errors would become harmless by the Law of Large Numbers once local data were aggregated in the *zone agrarie* and the provinces⁵².

Once all these field operations were completed, the surveyor had two more things to do at his desk: 1) integrate the surfaces of the cultivation masses; 2) compute the actual surface destined to bear each crop and their annual average productivity for the different cultivation masses. While the first operation was easily done, as we have seen, by applying a millimeter grid on the tracing

⁵² [MAIC (1908)], p. 32.

paper (in fact, instead of graph paper, Niccoli suggested using special glass slabs where grids had been drawn), the second operation was done on the basis of the notes on agricultural economics (1-4 above). These, and in particular the information on the sequences of the crop rotation and the coefficients of production, referred to typical farms.

This meant that surveyors, agronomists and appraisers had to possess a context-dependent knowledge of the local conditions for agriculture in order to estimate the figures for qualities, classes and unitary yields. The stock of land could be measured by substantially relying on the knowledge accumulated in geographical maps, but in order to apply the coefficients and conjecture the yearly flows of agricultural production, it was necessary to partition this stock into groups of areas where the same rotation was applied and into classes of equivalent productivity⁵³. This part of the work could be done only by expert agricultural economists.

As Niccoli explains, for the case of Florence, the achievement of production figures was “facilitated, (...), by the close acquaintance of the surveyors [sc. Niccoli himself] and his main collaborator dott. Tito Pestelli with the way that properties are managed in Tuscany”. Such prior knowledge of local conditions, acquired through many years of fieldwork experience, allowed the agrarian expert to identify “some typical farms”, where he could study “the annual average subdivision of the land into different crops”⁵⁴. The relevant experience here exceeded all the experience of people and places and was greatly enhanced by constant contact with farmers. This is the reason why associations of agriculturalists and first of all the holders of the travelling chairs of agriculture played such a prominent role, as we find in Chapter 7, below.

Whether the availability of cadastral data induced the commissioners to apply the method devised by Valenti or the one devised by Niccoli, the classes of equivalence that were drawn by the agricultural economists in the stock of land of each municipality were generalised into what Valenti called “*zone agrarie*”. An “agricultural zone” (*zona agraria*) was a group of municipalities that shared similar conditions of soil disposition (*giacitura*). These municipalities shared some common patterns of agricultural exploitation, such as the same crop rotation and the same techniques, the same requirements for fertilizer, the same machines, the same contracts, etc. In principle, a typical farm was typical for a whole *zona agraria*.

⁵³ For the concept of classes of equivalence: see [Desrosières (1993)].

⁵⁴ [MAIC (1908)], p. 34. Niccoli’s system was presented to the consultative commission on 5th November 1907. Niccoli also gave a practical demonstration of the system on 11th November 1907, p. 346.

6.6 The Agricultural *Cadastr*e Nationwide 1909-1910

The pilot projects demonstrated that the agricultural *cadastr*e, a huge inventory of the whole stock of Italian land, classified according to crops and fertility and coupled with the production coefficients of each category of land, was feasible. On 1st April 1909, King Vittorio Emanuele III signed a Royal decree which charged the Bureau of Agricultural Statistics (Section III of Division VII of the General Directorate of Agriculture) with the task of extending the CA to the whole kingdom. Between 1907 and 1910, the CA for the whole of Italy was completed (in the next chapter, I discuss the network of observers and supporters that made this extension possible). Once the CA was completed, the Bureau of Agricultural Statistics at MAIC could determine the figures for agricultural output. The agrarian year 1910-1911 was the first year when the figures for agrarian production were computed using the data of the CA, then stretching over 695 agrarian zones and 69 provinces.

For the years after 1910, the commissioners recorded the changes occurring through the year in the surfaces dedicated to each crop and in the productivity per hectare. He did not remark all the changes, but only those that had a permanent and systematic character. Small changes, in fact, due to their idiosyncratic and accidental character, had a very high probability of being offset by other changes intervening elsewhere in the same area⁵⁵. It was enough to update the distribution of crops in the different surfaces and the yields per hectare; thanks to the coefficients of typical farms, the figures of total production for an “agricultural zone” could be easily conjectured.

The more stable the agricultural world, the more accurate was this conjecture. Smaller variations could be assessed more easily. At the beginning, the CA should have been wholly renewed every five years, but the outbreak of the war in 1915 imposed an indefinite deferral of a new CA. But the system seemed to work fairly well for a while, and Valenti and his collaborators congratulated themselves enthusiastically: “We remember (...) that when the International Institute of

⁵⁵ In any case, agrarian statistics were considered generally less accurate than other statistics, L. Bodio for instance claimed at the meeting of the Consultative Commission, on 10th February 1907, [MAIC (1908)], p. 340. For the lower degree of approximation in agrarian statistics, see also [Polzer (1942)], *cenni storici*.

Agriculture received the first incoming results produced by the new agrarian statistics of Italy, many said: Italy, which used to be in the last place, has now taken over the first one”⁵⁶.

The figures and their analysis were published, together with other related inquiries, on the new *Notizie periodiche di statistica agraria*, a series published from 1911 to 1926⁵⁷. In 1911, MAIC began publishing the CA itself, with the volume dedicated to Lazio, Umbria, and the Marche, Valenti’s home region. The CA sheets (*Figure 6.5* and *Figure 6.6*) presented the data for the surface under crop in the year 1910 and the figures for the unitary yields of the previous years. Moreover, the CA also recorded the unitary yield that the land appraisers attributed to each quality and class as its potential in normal conditions of climate and land management (called the normal value). Valenti would have liked to publish the 12 years average value of the yield rather than this potential yield (which was a theoretical value), but the available historical series was not long enough and the normal value was considered the best solution.

Agrarian zones constituted the first level of data aggregation in the CA. There had been intense discussion among statisticians on whether to provide statistics for administrative (and consequently “artificial”) units or substitute “natural regions” for them, as proposed by the Bavarian statistician G. Mayr. Agrarian zones were a sort of compromise between the need to rely on the administrative grid of the state and the wish to describe authentic conditions⁵⁸. Agrarian zones came to represent the basic units of Italian agriculture in terms of productive conditions. It is not clear, however, if they were formed before the statistical data were available (thus through the acquaintance the surveyors had with their territories) or after the statistics were made and hence on the basis of the statistical data themselves (grouping, for instance, all the municipalities which shared land qualities in the same proportions). In any case, it was the agrarian zones established by the CA that became the basis for research in agricultural economics⁵⁹

For each province the agrarian zones combined according to their prevailing geographical character to form three different agrarian regions corresponding to the three possible dispositions of soil (*giacitura*) recorded by the *cadastre*: mountain, hill, or plain. Data were

⁵⁶ [Valenti (1919a)], p. 73.

⁵⁷ The *Notizie periodiche di statistica agraria* were originally published by the MAIC. In 1923 they migrated together with the service of Agrarian Statistics to the new Istituto di Economia e Statistica Agraria.

⁵⁸ A trace of this debate can be found in [Levasseur (1885)], p. 242.

⁵⁹ See for instance, the very influential [Serpieri (1929)], which I discuss in chapter 10 below.

eventually summarized for the whole province. When the CA was generalized, the provinces were aggregated into the usual statistical compartments, the progenitors of the current administrative regions (Piedmont, Lombardy, Liguria, the Veneto etc.). This presentation on multiple layers had many advantages over the presentation by provinces usually offered by the *Notizie provvisorie*. The CA contained more detailed data. The subdivision in agrarian zones showed the inner variability of each province in terms of agricultural economy⁶⁰. The partition by *zone agrarie* corresponded roughly to intuitive realities (the mountains of Pistoia, for instance, or the low plains of Bassano) that were already part of the basic geography of agricultural economists and state administration. Statistical figures were thus significant for approaching issues of policy, such as the “depopulation of mountainous areas” or “southern latifundia”⁶¹. The aggregation of data into huge statistical compartments followed, instead, representational practices deeply rooted at the political level. The compartments reproduced to a great extent the borders of states and provinces that preceded the political unification of Italy.

The numbers contained in the CA, and hence the figures provided yearly by the MAIC, were conjectures. If we deconstruct, as this chapter attempts to do, the statistic conjectures, we can see that they rested on a multi-layered process. The first layer was constituted by the cartographers and their knowledge of the territory. This ensured completeness. The ancient practices of cadastral surveys, with their numerous staff, formed the second level. They divided the total surface of geographers into agricultural categories of class and quality. Then, agricultural economists disaggregated and recombined cadastral data to produce a still image of land, partitioned into specific crops.

The importance of appraisal techniques in the second and third layer of observation must not be underestimated. Both the CT and Niccoli’s surveying method are based on them and this implies specific expertise, training and recruitment patterns for the surveyors, but it implies also a specific concept of value. Value in itself does not enter the CA, which contains almost exclusively real quantity figures. But the conception of value, as dependent on a potential and steady element rather than on contingent market prices, influences, as we will see in sec. 8.2 below, the very idea of typical farms and potential unitary yield. It also mirrors the rigidity of the CA itself: a complete inventory, framing all annual changes presupposes the expectation that the countryside will undergo only small changes.

⁶⁰ G. Valenti, *Introduzione* to [MAIC (1911)].

⁶¹ These would be the object of the policies of an ad hoc vice-minister.

Appraisal techniques entailed the idea of a typical or normal farm. We have seen that “types” entered our discourse twice. On the one hand, Valenti argued that monographs needed preliminary statistics in order to identify types. On the other hand, we saw that the entire CA rested on the preliminary identification of typical farms⁶². This is hardly contradictory, in fact. Agrarian statistics had to start somewhere, and they started with the experience of the practitioners in the field: agronomists, agrarian economist, rural engineers. The CA was realized by involving in its making people (almost invariably men) who possessed a robust knowledge of local conditions. Such an experience, in turn, was validated by the consensus reached among local notables within the provincial committees. This was done on the basis of experiential and localised knowledge, the typical farms enabling them to generalize observations of cases. The process of observation, therefore, was coordinated from the centre but was fundamentally local. Agricultural economists needed the help of a whole network of local informants, mostly farmers, and farmers’ organizations. Such a network is the object of the next chapter.

⁶² A contradiction of this kind is actually reminiscent of the dicta of double-headed Janus in [Latour (1987)] in particular where the “science-in-the-making” head states that “the machine (in our case the statistical service) will work when the relevant people are convinced” (p.10).

STATISTICS I: MEASURING STOCKS, CONJECTURING FLOWS

14

REGIONE DI MONTAGNA

I. — ZONA SUBAPPENNINICA

GIACITURA: Monte, colle, piano.		Superficie della zona e sua ripartizione				
ALTIMETRIA: 50-1420.						
NATURA DEL TERRENO: Marche intercalate a strati di arenarie tra Castel delci e Pennabilli e ad ovest di Sant'Agata. Calcarei marinosi compatti arenacei, intercalati a straterelli argillosi al monte Carpegna e sotto Maiolo e San Leo. Argille scagliose intercalate a calcari arenacei e con piccole fessure carsioniformi ad est di Castel delci, lungo le falde del monte Copfelo ed a nord di Maiolo. Marche più o meno argillose con straterelli arenaceo-sabbiosi attorno a Pennabilli, a Talamello, a San Leo e sulla cetta del monte Copfelo.		Seminativi . . . semplici	Ettari	13 809	21 322	Per cento 38.8
		strati e pascoli permanenti	7 513	6 418	21.1	
		Culture specializ. di piante legnose		76	0.2	
		Boschi compresi i castagneti		7 781	21.3	
		Incolto produttivo				
				36 697	100.0	
		Superficie agraria e forestale . . . Km. ²	355.97		90.4	
		Id. improduttiva	37.60		9.0	
		Superficie territoriale	393.57		100.0	

Qualità dei terreni e delle colture	Superfici				Denominazione dei prodotti	Unità di misura	Produzioni normali			
	integranti la superf. agr. e forest.		ripetute				dei terreni più produttivi	dei terreni meno produttivi	dall'intera superficie coltivata	
	Ettari	per cento della superficie in rotazione o forestale	Ettari	per cento della superficie in rotazione o forestale					per ettaro	complessiva
Pianta erbacea nei seminativi.										
Fruumento	9 618	49.1	27.0	..	Granello	Quintali	20	3	7.6	73 202
Segale e orzo	82	0.4	0.2	..	Id. . . . .	"	..	..	6.0	342
Avena	251	1.3	0.7	..	Id.	"	10	4	6.6	1 672
Granturco	2 810	14.3	7.9	..	Id.	"	20	5	11.7	32 781
Fave	222	1.1	0.6	..	Semi . . . . .	"	..	..	9.2	2 037
Fagioli intercedari . . . . .	..	..	..	525	Id. . . . .	"	..	..	1.1	616
Patate	398	3.1	1.7	..	Tuberi	"	130	40	85.7	51 230
Canapa	15	0.1	..	..	Tiglio . . . . .	"	..	..	4.9	73
Lino	19	0.1	0.1	..	Id. . . . .	"	..	..	3.5	67
Id. . . . .	..	..	..	19	Semi . . . . .	"	..	..	4.0	73
Lupinella	1 196	6.1	3.4	..	Fieno	"	40	15	23.3	27 867
Sulla	305	1.6	0.9	..	Id. . . . .	"	..	..	25.0	7 625
Trifoglio	341	1.7	1.0	..	Id. . . . .	"	..	..	28.6	9 770
Medica	319	1.1	0.6	..	Id. . . . .	"	..	..	35.4	7 760
Lupinella, sulla, trifoglio e medica . . . . .	..	..	..	492	Semi . . . . .	"	..	..	1.8	896
Erbei misti	6	..	..	..	Erba rasguagli. a fieno . . . . .	"	..	..	25.0	150
Erbei intercalari . . . . .	..	..	..	272	Id. . . . .	"	..	..	12.0	3 261
Pascolo nei seminativi a riposo	3 927	20.0	11.0	..	Id.	"	20	..	13.9	54 585
Orti	7	..	..	..	Ortaggi	Litre	..	..	2000.0	14 000
Tare	473	..	1.3	..	Fieno	Quintali	..	..	8.8	4 173
Id. improduttive	561	..	1.6	..	..	..	..	..	..	..
Spazi improduttivi sotto le arborature	672	..	1.9	..	..	..	..	..	..	..

Ripartizione dei seminativi

	Ettari	Per cento		Ettari	Per cento
Coltura dei cereali	12 761	65.1	Seminativi a colture in rotazione	19 609	92.0
Id. delle piante da foraggio	2 067	10.5	Id. a colture permanenti	7	..
Id. delle piante industriali	34	0.2	Tare e spazi sotto le arborature	1 706	8.0
Altre colture	827	4.2			
Riposi con o senza pascolo	3 927	20.0	Superficie dei seminativi	21 322	100.0
Superficie netta dei seminativi	19 616	100.0	Colture intercalari e di successivo raccolto	797	3.2

Figure 6.5: CA sheet for the Agrarian zone: Subappenninca dell'alto Col Marecchia in the province of Pesaro Marche (left a double page)

7 Statistics II: Stakeholder statistics

The Italian agricultural statistics of 1910 were the final results of a general mobilization of agricultural élites. It was the political representatives of agriculturalists who demanded in parliament, year after year, that the Ministry of Agriculture, Industry and Trade put aside part of its budget in order to finance agricultural statistics. But the organizations of agriculturalists also mobilized the expertise that statistics required. Valenti himself occupied his position because of his connections with these organizations. Even more important, agriculturalists, through their local associations, also provided the local expertise that, as noted above, Valenti's project needed. The organizations of the landed élites compensated for the proverbial lack of administrative branches concerned with peripheral agriculture¹, which would direct the whole effort and determine its general lines.

The reorganization of the Bureau of Agricultural Statistics that Valenti and Cocco-Ortu carried out was influenced by two tendencies that dominated Italian statistics after 1901, when Luigi Bodio left the General Directorate of Statistics. One tendency was to spread statistical knowledge within the administration, to create independent statistical offices in the different branches of the administration, and to weaken the General Directorate of Statistics². From this trend arose the specialized and autonomous character of the Bureau of Agricultural Statistics under Valenti. In contrast with the recruitment habits of the Italian ministries of the early 20th century, still staffed with generic and non-specialist functionaries, the autonomy of the Bureau of Agricultural Statistics meant that those in charge of statistics had to be specialized experts of agriculture³.

The other trend, instead, was toward a greater participation of civil society in the production of statistics, either directly (as is the case of the enquiries of the Società Umanitaria di Milano, SUM), or through collaboration with the statistical offices of the state. The autonomy of the Bureau of Agricultural Statistics was, therefore, justified at the same time by the need for specific expertise in agriculture (rather than in statistics) and by its function of connecting the Ministry with the agriculturalists. Agricultural experts who were materially in charge of the compilation

¹ [D'Autilia (1992)].

² [Marucco (1996)] and [Favero (2001)], pp. 170ff.

³ [Desideri (1981), Giuva and Guercio (1992)].

of data were as much the representatives of an abstract methodology of investigation as were the agents of the landed élites and the state.

As in the case of the Milanese *cadastre* of the 18th century, the statistical surveys of the CA were conducted “at every stage with the contribution and guidance of those who could have a legitimate interest in the operation”, which meant of course prominently the landed classes⁴. In relation to current theories of participative democracy, I have called this approach to gathering statistics ‘stakeholder statistics.’

The name is somewhat ironic. In the theory of participative government, stakeholders are convened in order to participate in the decision process, usually considered to be an inclusive process. In the case of my stakeholder statistics, it must not be forgotten that the stakeholders were mostly landowners and large tenants who controlled the organizations of agriculturalists: it was their properties and businesses that were at stake. They expressed a demand for statistics, but also a certain lack of trust towards the government, and the will to participate in the making of statistics.

The existing Italian literature on the country’s statistics has stressed the weakness of the Italian state, and has discussed the deviations from a centralised prototype of statistical activity as deficiencies of the Italian administration⁵. The dominating historiographical model has been that of “statistical observatories”⁶, which marked at the same time the centralisation of data and the growth of autonomy for statisticians within the administration. According to this view, the creation of the Istituto Centrale di Statistica (ICS, now ISTAT) in 1926 marked the beginning of a more efficient statistical service in the country. Statistics of agriculture were also taken over by the ICS, with the organizational changes that we examine at the end of this chapter.

The participative model and the ICS responded to different needs. Stakeholder statistics cannot simply be motivated with the weakness of the central administration. In the devolution of the most important tasks to local forces we should not see merely a resigned expedient for gathering data, after macroscopic mistakes had discredited the figures of the prefects. The first director of the revitalized Bureau of Agricultural Statistics, instead, expressed a fully- fledged “ethic of

⁴ [Messedaglia (1936 XIV)], p. 33, on the *Cadastre* of Milan.

⁵ [D’Autilia (1992)][Marucco (1996)].

⁶ I refer again to [Porter (2007)].

producers” and a consistent vision for the civil service. He accused the central administration of being hypertrophic and remote from the interests of the productive classes⁷.

The direct involvement of local productive classes in the making of statistics was therefore a step towards *discentramento* (decentralisation), which brought producers and the administration closer. Moreover, it was an alternative to the wide range of projects that circulated in those years concerning the representation of the agricultural classes⁸. Agriculture and agricultural statistics required proximity and fine-tuned adjustment to local peculiarities. Participative statistics mirrored the desire that the new agricultural statistics should be sensitive to the “many agricultural Italies” whose existence Stefano Jacini had emphasized.

Unfortunately, the *discentramento* that dominated the making of CA in 1910 is reflected in the geographical dispersion of the relevant archives. I decided therefore to focus on a few well preserved archives, in particular, those of the Società Agricola di Lombardia (SAL). My reconstruction of the network behind the CA of 1910 is based mainly on the material preserved there and on the published sources. They were especially valuable because the archive of MAIC at the ACS bears no trace of the Bureau of Agricultural Statistics and the same holds for the archive of ISTAT.

7.1 Lobbying for statistics

The allocation of funds from the budget of the Ministry of Agriculture, Industry and Trade to Valenti’s experiments and eventually to the nationwide reorganization of the service of agricultural statistics was not easy to arrange. Behind the agricultural *cadastre* of 1910 and the ensuing statistics of agricultural production, we can easily see a relatively compact group of interest. Since the parliamentary debates on the allocation of funding to agricultural statistics did not stimulate many interventions, the names of those who intervened are significant.

In 1907, when Cocco-Ortu proposed the use of part of the budget for the statistical experiments, the Hon. Giovanni Battista Miliani, an MP, praised the initiative of the government in renovating agrarian statistics by arguing that the new statistics would finally allow the nation’s agriculture to

⁷ [Valenti (1919c)] and [Desideri (1981)], pp. 26-28.

⁸ On Maggiorino Ferraris’ proposal see [Rogari (1998)] and [Musella (1984)], p. 77f.; Alessandro Garelli supported diverging ideas in [Garelli (1905)] at the Congress of *comizii agrarii* that took place in Cuneo.

“get to know itself”. Hitherto, lacking statistics, the MAIC had been something like “a private firm without its inventory”. When negotiating trade agreements with other countries, Italy had been “in a condition of inferiority with respect to other countries”⁹.

The year after, when parliament discussed the allocation of 500,000 lire, not a small sum for MAIC, in order to implement the agricultural *cadastre* nationwide¹⁰, the member advocating the law in the Chamber of Deputies, On. Casciani, claimed that “no country could have a beneficial economic constitution without knowing with the closest possible approximation the extent of her industrial and agrarian production”. Such knowledge was necessary not only “in order to assess the sum of the annual production which forms the stock of the nation” but also in order to compare it “with the needs of internal consumption and the demands of the international market to which our product can be easily and profitably sent”. While the government provided more or less reliable statistics of industrial production, Italy “did not yet possess agrarian statistics compiled with rigorous methods that enable us to know with any degree of exactitude that such investigations permit the extension of various crops, their total and per hectare production, the distribution per region, or the ways they are affected by new methods of cultivation and meteorological vicissitudes”.

The need for new agrarian statistics could not be contested: “in the rapid economic transformation that our country underwent in past years, knowledge as accurate as possible of the different trends of our agrarian production is indispensable”. Casciani underlined the fact that agricultural statistics allowed people to compare demand (domestic and international) and supply: for which products there was excessive production, and which products could be encouraged. “Agrarian statistics can offer useful elements to impress on national agriculture a direction more responsive to the country’s economy, and to signal to the government in which branches of agrarian industry, which regions and by which means, its action has to be intensified”¹¹.

In 1908, Miliani and Casciani joined the Agricultural Parliamentary Committee; behind their lobbying we can see the groups of Raineri’s Federazione Italiana dei Consorzi agrari and SAI.

⁹ Camera dei Deputati, *Atti parlamentari*, 1 tornata del 12 Giugno 1907, p. 15750.

¹⁰ In June 1908, Cocco-Ortu, the Treasury Minister Carcano and the Minister for Post and Telegraphs Schanzer presented the measures that became the Law 2.VII.1908, n. 358. The law was promoted in the Senate by Di Collobiano, Bottoni, Colonna Francesco, Sonnino, and Mosso, see [MAIC (1909)].

¹¹ P. Casciani, Relazione del la Giunta generale del bilancio sul disegno di legge “Provvedimenti per la statistica agraria, presentata al la Camera dei deputati nel la seduta del 15 Maggio 1908, in [MAIC (1908)] fasc. II, pp.28f.

The leadership of SAI and the Society's president Raffaele Cappelli also used pressure to obtain new and more sophisticated agricultural statistics. From the new statistics, SAI leaders expected much: full knowledge of Italy's production would enable the government to fine-tune its policy of tariffs (a highly relevant issue in those years, given the growth of protection for sugar, the crisis of traditional markets for vine products, the threat of Australian and South American grain), but it would also inform agriculturalists of the general trends of the market. Moreover, statistics that showed the yearly product of agriculture could be translated with relative ease into statistics of the contribution of agriculture to the national income and wealth and thus show the importance of agriculturalists in the life of the nation, an importance that was more and more frequently called in question during the rapid industrialization of the early 20th century¹².

The decisive step in SAI's campaign for agricultural statistics was the creation of the International Institute of Agriculture (IIA). The IIA was the first international institution of its kind, the progenitor of the United Nations' Food and Agriculture Organization (FAO). Although the idea of the organization had been conceived by an American, David Lubin, it was Faina and Cappelli who actually persuaded Vittorio Emanuele III to finance its establishment and support it diplomatically¹³. While Lubin was an enthusiast, Faina and Cappelli imagined the IIA as a sort of "International of agriculturalists", by analogy with the Workers' International¹⁴. To be specific, the tasks attributed to the IIA by the international conference that instituted it related mainly to statistics. Article 9 of the convention signed by Italy and the other member states on the 7th of June 1905 contains the following:

L'Institut, bornant son action dans le domaine international devra: a) concentrer, étudier et publier dans le plus bref delai possible les renseignements statistiques, techniques ou économiques concernant la culture, les productions

¹² Garelli, for instance, in the *Relazione* quoted above ([Garelli (1905)]), justified his claim of a prominent role for agriculturalists by arguing that landowners alone owned more than half the wealth of the country. Corrado Gini computed national income on the basis of the figures of agricultural production that were communicated to him by Ghino Valenti and his collaborators Pietra and Gervaso, [Gini (1914)], pp. 3f.

¹³ [Tosi (1989)].

¹⁴ In 1905 Antonio Agresti published a book with the title: *L'Internazionale Verde, ossia l'Istituto Internazionale di Agricoltura proposto da David Lubin e iniziato dal Re d'Italia*, quot. in [Rogari(1984)]. As appears from the documents preserved in the FAO archive, Faina and Lubin struggled for control over the newborn Institute. The Italian prevailed and placed Italians in all the relevant positions. In particular, Umberto Ricci and Carlo Dragoni entered the IIA statistical service. In fact, the IIA functioned for Italian statisticians and agricultural economists as a *trait d'union* with international debates.

tant animales que végétales, le commerce des produits agricoles et les prix pratiqués sur les différents marchés¹⁵.

Obviously, it would have been embarrassing for Count Faina, had Italy been unable to provide reliable statistics for this. At this point, the reorganization of the service of agricultural statistics was as much a matter of interest for Italy's landed classes as it was a matter of international prestige. In a sense, Cappelli and Faina had maneuvered the Italian government into spending money for statistics¹⁶.

7.2 Valenti's network: devolution

If the associations of agriculturalists had manifested a decided need for new statistics, their leadership was well aware that the associations feared that the state might use the information for tax purposes or in some other way against the interests of agriculturalists. The choice of Valenti to lead the Bureau of Agricultural Statistics was reassuring for them¹⁷. Valenti had been the Secretary General of the SAI in the crucial years of its foundation, between 1896 and 1898¹⁸. Clearly he was well acquainted with the SAI's leadership. The minister selected him from outside the ministry. For the agriculturalists' bloc, putting Valenti at the head of the Bureau of Agricultural Statistics was a successful move: they knew him and they trusted him. But SAI was not Valenti's only connection with the associations of agriculturalists. In Macerata, as we know, he had presided over the local *comizio agrario*. In Padua, Valenti counted on the *comizio agrario* for his experiment, in particular on its secretary, Professor Luigi Basso, who was an agronomist¹⁹.

¹⁵ Camera dei Deputati, *Atti parlamentari*, 1 tornata del 2 Luglio 1906, p. 9524.

¹⁶ Cocco-Ortu set the deadline of 1st January 1909 for Valenti to complete the AC and begin the statistical service: "This deadline is also imposed by the circumstance that the International Institute of Agriculture will then gather and it would be appropriate and decent if Italy could present in that occasion its completed AC and the survey of the harvest for 1908" (questo limite ultimo è imposto anche dalla circostanza che allora si riunirà l'Istituto Internazionale di Agricoltura a cui sarebbe opportuno e decoroso che l'Italia potesse presentare il suo Catasto Agrario completo e il rilevamento dei raccolti pel 1908), from the summary of a meeting that took place at MAIC on 19th September 1907, Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907".

¹⁷ The Bureau was formally constituted by Ministerial Decree on March 6, 1907 with the name Ufficio della Statistica Agraria, Sezione III, Divisione VII of the Direzione generale dell'Agricoltura: [Giuva and Guercio (1992)]. Valenti introduced to this office his collaborator G. Zattini, who had been hired in 1907 as inspector for drainage; hence, he belonged to a different directorate [Serpieri (1926)].

¹⁸ [Giacconi (2003)].

¹⁹ [MAIC (1908)].

In 1903, he had been sent to Ravenna in a failed attempt to moderate the fulminating Società Agraria di Ravenna.

His experience in Padua suggested to him something that he called “discentramento”, i.e. a decentralized structure for the statistical survey. To the representatives of agricultural institutions in Milan, the new central commissioner for agricultural statistics explained that “from an administrative point of view, agricultural statistics need decentralization, as he thought the system of centralization wrong”. At the same time, Valenti’s *discentramento* responded to the requirements of data gathering, the fears of agriculturalists, and the budget constraints of the government.

According to Valenti, the very nature of agriculture imposed a decentralized action, in contrast with the practice followed for other statistics: “since we deal in this case, with facts that vary essentially, not only in time, but also in space, and that are subordinated in essence to special, natural and economic conditions of place, not only the collection of data, but also the greatest part of the processing of such data must be carried out by local offices”²⁰.

Valenti thought it necessary to invert the model of the General Directorate of Statistics, with a heavy head in Rome and no employees in the provinces. He was aware that it would have been impossible for him to get anything better than the statistics of prefects, unless he could rely on more qualified observers on the ground. Valenti’s observers had to be selected farmers and agricultural experts acting locally²¹. Moreover, while the General Directorate received raw information from local branches of the administration and then elaborated it statistically, Valenti designed his system in such a way that data were processed locally, at provincial level, and the central Bureau of Agricultural Statistics simply fixed the guidelines and assembled the results of provincial activity.

Discentramento also soothed the farmers’ anxieties of an inquisitive central state. Information provided to this distant, “Roman” entity could not be controlled by farmers, and it could be used

²⁰ [Valenti (1907)], *Ordinamento amministrativo del servizio*, p. 19.

²¹ On the decentralization of Italian statistics during the Giolittian period, see [Marucco (1996)]; see Valenti’s position on the problems of the administration in [Valenti(1919c)]. Valenti was in favour of a certain degree of decentralization in order to strengthen the MAIC and allow it to connect with the vital forces of society. This decentralization ought to be accomplished on one side by equipping the local branches of MAIC with technical personnel, and on the other by involving social forces, [Desideri (1981)], pp. 26 28. It is clear that the renewal of the agrarian statistical service follows these lines.

for threatening, tax related purposes: “[Valenti] wants in this way to avoid the inconveniences that are brought about by the distrust of agriculturalists: it is necessary to inspire trust in order to collect reliable data”. The solution devised by Valenti and the associations of agriculturalists was “to entrust the survey in every province to a commissioner from the government and keep the information collected within the province (...). To the Ministry the commissioner would send only the overall results”²².

Finally, there were financial reasons for this “devolution” of statistical activities. By transferring the weight of statistical surveys to the shoulders of local forces, Cocco-Ortu was free to present the parliament with a plan that entailed little permanent cost for the Ministry: Valenti imagined that the central office would consist of few “clever and proactive agents”, rather than a plethora of employees. The core costs of the work would be divided into a number of contributions to single local institutions, making it much more difficult for the conservative sectors of the majority that supported the cabinet to point accusingly at the expansion of the state machinery²³.

In practice, *discentramento* meant the creation of a network of local statistical centres, close to the farmers whom they had to observe. The documents concerning the establishment of the agricultural *cadastre* 1910 that are preserved in the archive of the Società agraria di Lombardia witness that Valenti spent the year 1907 in frequent journeys across Italy in order to make contact with the most influential groups of agriculturalists. He travelled between his own city of residence, Padua, the Ministry in Rome, Udine (where the Associazione Agraria Friulana had conducted a second experiment along the lines he set) and some of the other centres where agricultural associations were active and willing to take part in his project²⁴.

For his “experiments”, Valenti enlisted the *comizii agrarii*, chambers of commerce, and other associations (Ortoagricola in Turin, Agraria Lombarda and Umanitaria in Milan, Friulana in Udine, Georgofili and Orticoltura in Florence, Proprietarii e Agricoltori in Naples)²⁵ in the

²² Report of a meeting between Valenti, Alpe, Serpieri, Soresi and others: Verbale del l’adunanza tenutasi il 3 febbraio 1907 presso la Società Agraria di Lombardia per istituire un esperimento di Statistica Agraria nel la provincia di Milano, Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907.

²³ The Ministry of Agriculture represented for old style free-tradists the epitome of state intervention in economic matters. They had obtained Ministry’s cancellation in the 1870s, [Caracciolo (1959)].

²⁴ The documents contained in Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907, confirm these journeys.

²⁵ [MAIC (1908)], fasc. I, pp. 7-14.

Provincial Committees for Agricultural Statistics. The associations represented the stakeholders of agricultural statistics and could mobilize the best local experts in agriculture.

In February 1907, for instance, the *Annuario della Cattedra d'Agricoltura* in Milan, announced that “His Excellency the Minister of Agriculture, Industry and Trade, the Honourable Cocco-Ortu has decided to restructure the service of agricultural statistics in a way that responds to the needs of the national economy and therefore he has taken into consideration a study that was presented to him by Professor Ghino Valenti”. Valenti had arrived in Milan from Padua with Luigi Basso and on 3rd February he had met in the headquarters of the Società Agraria di Lombardia with Vittorio Alpe, professor at the Scuola Superiore d'Agricoltura and vice President of the Society, with Carlo Stabilini of the agricultural syndicate of Milan, Arrigo Serpieri who was then professor of agricultural economics at the Scuola Superiore, Giuseppe Soresi, who held the Travelling Chair, Umberto Zanoni who directed the section of Gallarate of the Travelling Chair, Giovanni Schiavi of the Società Umanitaria, and Guido Barocco, who was the technical secretary of SAL. The result of the meeting was the constitution of a provisional committee that would eventually evolve into the definitive one²⁶.

At the Società Agraria di Lombardia, Valenti met the actual decision-makers for agriculture in Lombardy. They represented influential economic groups, but they were also some of the best experts in agriculture. As noted in Chapter 3, above, some of these associations were at the heart of a number of initiatives (*cattedre*, consortia, syndicates, agricultural schools, etc.). For agricultural statistics, the associations involved in the “experiments” mobilized the experts who operated in these initiatives. In more than half of them, the commissioners were academics (Padua, Ferrara, Florence, Naples) and directors of the travelling chairs of agriculture (Milan, Turin, Bari, Ancona). Teachers at the Royal Schools of Agriculture, technical institutes for agriculture, etc. were represented in all committees. Many of the most renowned agricultural economists and agronomists (Vittorio Alpe, Eugenio Azimonti, Oreste Bordiga, Nicola Miraglia, Vittorio Niccoli, Arrigo Serpieri, to cite only a few) decided to join the project. Valenti also recruited the most attentive landowners and agricultural technicians working for the associations.

²⁶ *Bullettino dell'Agricoltura*, Numero 6, anno XLI, 8 febbraio 1907, see also Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907, N 139, pos. 11 of the 1st of March 1907 to the Camera di Commercio di Milano.

The result was that Valenti occupied the centre of a network with two layers. The first layer was – so to say – political: the associations of agriculturalists. The second layer was technical: agricultural experts, in particular those who cooperated with the associations, for example, Basso in Padua, Serpieri, and Soresi in Milan, Vittorio Niccoli in Florence, etc. These two layers were echoed by the twofold institutional arrangement that Valenti proposed for his experiments in the provinces. The office of the provincial commissioner for agricultural statistics was a technical one, related to the actual survey. The provincial committee was composed of different institutions: associations of agriculturalists, local administrations, and other groupings of economic interests. The stakeholders, i.e., the agriculturalists, were represented at both levels: directly in the provincial committees, and indirectly by their own experts.

The commissioner received a salary and was in charge of the “establishment, preservation and updating of the agrarian *cadastre*. He [was to] collect information concerning the forecasts and outcomes of harvests, by compiling statistics for every municipality which he [was to] communicate to the Ministry as soon as possible; he [was to] collect information concerning the livestock, the products of agrarian industries, and domestic trade of agrarian products and livestock, alongside the corresponding prices”²⁷. The provincial committees, for their part, had to direct and supervise the collection of data by the commissioners. Actually, such committees certified the trustworthiness of the figures. They were also in charge of all the work of elaborating the data.

As Carlo Stabilini proposed at the meeting in February 1907, whenever possible, the actual survey of cultivation masses was assigned to travelling chairs²⁸. Travelling chairs in fact could take the closest view of the “special, natural and economic conditions of places”, both because the staff of travelling chairs was clearly familiar with the territory they served, and because they were in direct contact with farmers²⁹. For Valenti, the problem was that, although MAIC had imposed some common standards to them³⁰, Travelling chairs were not evenly distributed, however,

²⁷ [Valenti(1907)], p. 29.

²⁸ Verbale dell’adunanza tenutasi il 3 febbraio 1907 presso la Società Agraria di Lombardia per istituire un esperimento di Statistica Agraria nel la provincia di Milano, Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907.

²⁹ On this issue see: Chapter 3 above.

³⁰ The measure that generalized the procedure for personnel recruitment was the R. D. 29 Novembre 1906 (Norme per le commissioni di vigilanza e i concorsi presso le cattedre ambulanti di agricoltura), in particular art. 1 and 6; the L. 14 Luglio 1907 n. 513: “Le cattedre ambulanti contemplate dalla presente legge sono

across regions and provinces. While they were very active in some areas of Northern and Central Italy, they were extremely rare in the South (with the exception of those of Basilicata and Calabria that the government had recently established). Valenti was thus forced to rely on a different set of institutions in different provinces, but it was agreed that the prefects would preside over the provincial committees only if no-one else would. To Valenti's double network, we have to add a third key element. The CA, as noted in the previous chapter, was not a mere survey of surfaces and crops. It required a great many details on farm life. In particular the assessment of standard yields per hectare for the different categories of land was a delicate issue. Only local farmers could give the appropriate information. It was therefore the task of each provincial committee to build its own network of informants. The Società Agraria di Lombardia, for instance, addressed potential correspondents with a letter that stated clearly the official character of the inquiry but promised discretion, as follows:

In agreement with the Ministry of Agriculture, our Society, with the assistance of the Travelling Chair of Agriculture, has discussed the conducting of an experiment in agricultural statistics in our Province. The inquiry is in no sense a fiscal one. The incomes of land are not an issue; it wants only to learn how much is produced in the whole municipality in cereals, fodder, etc. The purpose is to make up the serious deficiency of statistics in Italy, which, although a predominantly agricultural country, does not know the amount of its plant and animal production³¹.

The letter went on to explain that the Società addressed its informants because they knew local conditions very well, and to propose a meeting on a fixed date with some delegate of the Society.

It was not possible to find a complete list of correspondents for all the provinces involved in the experiment. We know that there were from one to four correspondents for each agrarian zone in the provinces of Padua, Udine and Trapani³². We have only the lists of the correspondents involved in the cases of Padua and Udine.

In the case of Udine (its list being the more informative), the agents and administrators of large landowners are the professionals who are most represented, but there were also foresters, rural

sottoposte all'alta vigilanza del Ministero d'agricoltura" accounted for the supervision of MAIC over the itinerant teachings. On the *Cattedre ambulanti*, see the not very informative [Zucchini (1970)].

³¹ Letter model from the president of SAL, Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907.

³² [MAIC (1908)], fasc. II, p. 65.

teachers, aristocrats, pharmacists, surveyors, geometers, etc³³. The Associazione Agraria Friulana and the travelling chair of Udine had been able to mobilize not only large landowners (who were also the leading members of the Associazione), but also the “reflective” part of the rural population: the backbone of “civil society”. All those who lived in the countryside were affected by commercial treatises, investment policies, agricultural policies, etc. And statistics would necessarily enter the political debate.

7.3 Valenti’s uncalculating centre of calculation

Devolution was only one aspect of Valenti’s strategy for the experiments. Strict standardization was another. When Cocco-Ortu accepted Valenti’s proposal to conduct 13 other experiments in addition to the ones that he and the Associazione Agraria Friulana had been carrying out in Padua and Udine respectively since 1906, the agricultural economist was aware that the chamber of commerce in Mantua was trying a method that differed from his own. He decided not to involve them in his experiments because he wanted to standardize the results as much as possible. Local committees had great autonomy in collecting the data, but Valenti allowed no variations of form.

The standardization of forms had shortcomings that Valenti was fully aware of, however. Observers on the ground were sometimes inclined to devise forms that better suited the peculiar conditions of their own areas. They might want to ask additional questions or specify entries in a way that answered their particular interests more closely. Yet standardization had its advantages. The main one was comparability of data.

In his instructions Valenti repeatedly stressed this point: “We recommend the Commissioners to scrupulously follow the present instructions and restrain from modifying in any way the forms sent to them by the central office”³⁴. By the emphasis on this recommendation, it seems that the use of standard forms across the nation was in fact a controversial issue³⁵.

³³ [MAIC (1908)], fasc. II, p. 93ff.

³⁴ [MAIC (1908)], fasc. I, pp. 15ff.

³⁵ P. Brassley has shown that the standardization of methods of enquiry was extremely controversial among British agricultural economists.

STATISTICS II: STAKEHOLDER STATISTICS

The homogeneity of the data and standardization of the forms were ensured by Valenti and his Bureau of Agricultural Statistics in Rome. Only the authority that came from his position inside the administration of the state guaranteed that Valenti could enforce standard procedures and standard forms, and could obtain comparable results in all the provinces involved. Without the Bureau's intervention, the experts mobilized by the associations would most likely have deviated from the standards.

According to the proposal the central bureau had to be small and flexible. It was not itself to make the statistical work, but only to "direct and invigilate" as regards the data flowing in from the local offices. A small and flexible structure would allow Valenti to bypass the bureaucracy of MAIC, "more sleepy than ever and eager to escape any new work"³⁶, and also to keep some control over the recruitment of its collaborator. The Ministry, in fact, usually hired generic functionaries who could then be moved to different offices at will. The new head of the Bureau of Agricultural Statistics would rather have had specialized collaborators.

In Valenti's view, "the central office should be staffed with only a few, vigorous units, able to guide and control, by means of inspections, what is done in the individual provinces"³⁷. Within MAIC, Valenti could not count on a large staff of surveyors. In contrast to the 2000 employees of the Inland Revenue who collected similar data in Great Britain³⁸, only a few functionaries could be detached to work on agricultural statistics at MAIC. Basically, the central office was composed of Valenti himself, Giuseppe Zattini, Oreste Narduzzi, Pietro Gervaso, and Umberto

³⁶ G. Valenti, [Valenti(1919a)], p. 72; Valenti belonged to the tradition of classical liberalism. Criticisms of bureaucracy and bureaucrats (as stifling and lazy) are frequent in his work; In *L'agricoltura e lo Stato*, Valenti identified in the nature of State bureaucracy the major source of inefficiency of MAIC: "we can briefly summarize [them, scilicet the flaws of Italian administration] by saying that the organization of services does not follow those economic criteria that are the precondition of success for private enterprises; that the functionaries are on one side badly paid and on the other they bear no responsibility for the outcomes of the public administration and consequently have no interest in making these outcomes positive; and finally that the greater number of functionaries lacks specific competence for their posts. In Italy functionaries are bon à tout faire. Everything is done bureaucratically even when the technical elements are indispensable for the accomplishment of the aims that the function should fulfil". But the peculiar inefficiency of MAIC was commonplace: see the parliamentary debate over MAIC's budget in 1909 and the harsh attacks of Nitti on Giolitti (Camera dei Deputati, *Atti parlamentari*, tornata del 11 Maggio 1909, pp.590-623), and [Melis (1992)], vol.III, p.30.

³⁷ Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907, report of a meeting held in Rome on the 19th of September 1907, at MAIC. The meeting was attended by Oreste Bordiga, Francesco Cavani (who presided over the committee in Bologna), Niccoli, Valenti and Zattini.

³⁸ [Craigie (1903)], p. 323.

Ricci (Luigi Basso, although a close collaborator of Valenti, was not officially at MAIC)³⁹. The structure of the CA and the support of local institutions were expected to compensate for the small size of the central office.

At the beginning of the experiments, the surveyors of the different organizations that took part in them were asked to visit Padua and Udine, where the new methods had first been tried out, in order to be sure that they understood the way the AC was conceived. In a letter to Vittorio Alpe, for instance, the head of the Bureau for Agricultural Statistics asked the vice President of the Società agraria di Lombardia to send at least one of the young surveyors that the SAL hired to Padua, Udine and Rome, to become familiar with Valenti's guidelines, since "not everything can be communicated in writing and publicly". As an alternative, Luigi Basso could go to Milan and train the agricultural engineers who had been hired for the survey⁴⁰. Alpe answered immediately, rather perplexed that he did not see any need for Basso to come to Milan, nor did he think that there was any pressing reason to dispatch two young agricultural engineers to Rome, Udine or Padua. If anybody, it would have been the director of the travelling chair, Soresi, who would go to Rome and meet Valenti⁴¹. The Società agraria di Lombardia and its experts tried somehow to retain some autonomy.

But Valenti insisted: Basso's visit to SAL would beyond question be advisable. In other provinces, forms had been interpreted erroneously, and comparability required such differences to be eliminated. Unexpected problems could arise in Milan. Basso had the experience of the work done until then, while the operators in Milan had the specific knowledge of local conditions. A meeting to coordinate local peculiarities in a nationwide format could be very helpful⁴². Clearly "*discentramento*" was made possible by Valenti's dedication to keeping potential sources of divergence under control. But Valenti was not left alone at the head of the office. Before Cocco-Ortu approved his plan of 1906, the minister asked the budget promoter Casciani and Luigi

³⁹ [MAIC (1908)], fasc. I, p. 6.

⁴⁰ Valenti to Alpe, 4th August 1907, Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907.

⁴¹ Alpe to Valenti, 5th of August 1907, Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907

⁴² Valenti to Alpe, 9th of August 1907, Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907, this time typed (rather than handwritten) on the official paper of the General Directorate of Agriculture.

Bodio for advice, as Valenti recalled shortly after⁴³. Next, the minister thought of a different advisory board, an *ad hoc* Consultative Commission. Consultative Commissions were standard practice in Italian ministries and the High Council of Statistics had been a consultative commission. Important academics usually took part in such commissions alongside top officials from the ministries involved and ministers themselves⁴⁴. The Consultative Commission for agrarian statistics was composed of the minister Cocco-Ortu, Senator Luigi Bodio, On. Paolo Casciani MP, On. Antonio De Viti De Marco MP, Prof. Maffeo Pantaleoni, Prof. Montemartini, Commander Bartolomeo Morelli, inspector of MAIC, while Umberto Ricci served as secretary⁴⁵.

The Consultative Commission offered a larger institutional framework to the Bureau of Agricultural Statistics. It gave the experiment the greatest scientific legitimacy, since Bodio, De Viti-De Marco and Pantaleoni were celebrated academics, and Giovanni Montemartini was a statistician with a good reputation. It also shielded the initiative from attacks that could be made by the bureaucrats of MAIC itself because its members were top officials or MPs. To face objections from the Consultative Commission, the head of the Bureau of Agricultural Statistics could rely, in addition to his closer collaborators (Basso and Zattini, in particular), on a smaller group of provincial commissioners: notably, Niccoli, Bordiga, Francesco Cavani and Pecile; he consulted them whenever specific difficulties emerged.

On 11th October 1907, Valenti began confidentially communicating the results of the experiments to the provincial commissioners, as they would be published in the *Bollettino Ufficiale* of MAIC. They had done most of the work, so out of respect he kept them informed. The experiments seemed to be a great success. The great number of committees, commissions and commissioners who took part in the undertaking and the Minister himself seemed to have

⁴³ Valenti to Alpe, no date but January 1907, Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907, Numero d'ordine 62a, posizione 11.

⁴⁴ On the Consultative Commission for Statistics, which eventually became the Superior Council for Statistics, see [Marucco (1996)]; in those very years, the Council included members such as Rodolfo Benini, Napoleone Colajanni, Francesco Coletti, Luigi Einaudi, Maffeo Pantaleoni, whom M. L. D'Autilia qualifies as "i personaggi più rilevanti del mondo accademico e della nuova burocrazia tecnica", [D'Autilia (1992)], p. 12.

⁴⁵ Bodio was the most illustrious Italian statistician, who had been secretary general of the International Statistical Institute and led the MAIC's general directorate for statistics until 1898; De Viti De Marco and Pantaleoni were economists; Montemartini was a statistician stemming from the Società Umanitaria di Milano, becoming director of general statistics in 1911; Ricci, a statistician as well, was to move very soon to the IIA as director of the statistical service there.

been satisfied: the statistics were deemed reliable, quickly done, and complete⁴⁶. There was still the matter of costs to be resolved. The central commissioner therefore required all the provincial committees to estimate the cost incurred in the process. From the data collected, Valenti and Zattini expected that the whole AC would cost 555,000 lire, out of which 55,000 already spent on the experiments. This was a huge sum, but the two assumed that once this initial work had been done, the Ministry would then save on the yearly statistics⁴⁷. When Cocco-Ortu, jointly with Minister Carcano, required funding from parliament for the statistics, in July 1908, he forecast that the first implementation of the AC would cost 500,000 lire, while the annual statistics would cost around 120,000 lire yearly⁴⁸.

On 1st April 1909, King Vittorio Emanuele III signed a Royal decree by means of which the Bureau of Agrarian Statistics (Section III of Division VII of the General Directorate of Agriculture) was put in charge of extending to the whole kingdom the survey already completed in the 15 provinces where experiments had been carried out. In the statistical year 1910, the first statistics of agricultural production based on the AC were published. The whole AC had cost slightly more than expected. But in the end the enterprise was hailed by the main group of agricultural experts as a remarkable improvement. Immediately after the conclusion of the survey Valenti was able to add the results of his statistics to the stream of publications that marked the 50th anniversary of the Unification of Italy⁴⁹. Retrospectively, agricultural experts celebrated the achievement in a collective volume published by the Federazione Italiana dei Consorzi Agrari in 1919: *L'Italia agricola e il suo avvenire*, that signaled the postwar consolidation of the group gathered around the old scholar⁵⁰.

⁴⁶ Exactitude (*esattezza*), quickness (*rapidità*) and completeness (*completezza*) were the three basic characteristics that statistics should possess according to [Valenti (1907)].

⁴⁷ Società Agraria di Lombardia, Archivio Storico, Direzione centrale, Statistica agraria, 1907: report of a meeting held in Rome on 19th September 1907 between Valenti, Zattini, Bordiga, Niccoli, and Cavani.

⁴⁸ Prospective costs were presented so by Valenti at the meeting of the Consultative commission for agrarian statistics that was held with the participation of Minister Cocco-Ortu, Senator Bodio, Prof. Pantaleoni and others on the 5th of November 1907, [MAIC (1908)], fasc. I, p. 344. Actual costs ended up being higher for the establishment of the AC.

⁴⁹ [Valenti (1911)].

⁵⁰ [Valenti (1919b)].

7.4 Valenti's departure: centralizing statistics after the Fascist takeover

Notwithstanding the positive beginning, the publication of the projected volumes of the CA shows that the effectiveness of the Bureau of Agricultural Statistics was not complete. Publishing began with the volume concerning the Marche, Lazio and Umbria in 1912, but stopped after two more volumes and was never resumed, most likely because the data for many provinces were incomplete and also because the publication itself was very expensive⁵¹. Meanwhile, and after only two years of this work, Valenti had been forced to resign. The new minister of agriculture in the fourth of Giolitti's cabinets, Francesco Saverio Nitti (1858-1953), had decided, against Valenti's advice, that the Bureau for Agrarian Statistics should leave the General Directorate for Agriculture, and merge with General Statistics in the revitalized Labor Office⁵². Valenti strenuously opposed this change; for him, agrarian statistics required more competence in agrarian economics than in statistics. By placing the Bureau of Agrarian Statistics under the aegis of General Statistics, Nitti would have emptied it of its necessary competencies and best collaborators. When Nitti ignored the protests, Valenti resigned⁵³.

There were personal reasons for Nitti's hostility towards Valenti, as the two had violently clashed in 1896 over the chair of Political Economy and Science of Finances at the University of Naples, but the contrast between them may have been more substantial. Nitti, a radical, was a vociferous advocate of industrial development and technical *dirigisme*, and among the statisticians protected Alberto Beneduce who was later one of the founders of the industrial state holding IRI⁵⁴. The activity of the Bureau of Agrarian Statistics, instead, depended on the collaboration of landowners and landowners' associations and carried the traditional agricultural elites. Moreover, by putting agricultural and general statistics under the Labour Office, Nitti refocused statistics on areas of social conflict. In the strained social climate that followed the strikes of 1909, this meant that the new cabinet, although still under the leadership of Giovanni Giolitti, was steering to the left precisely at the moment when the associations of agriculturalists were radicalizing their opposition to the demands of the workers.

⁵¹ [Istituto centrale di statistica (1929-1939)], *Introduzione*, p. 4.

⁵² On the Labor office, [Johnson (1985)].

⁵³ This is at least how Valenti himself recalled the story: [Valenti(1919a)], pp. 77ff.n.1, where Valenti published a letter from him to Nitti, complaining about dispersal of the statistical personnel to other offices.

⁵⁴ On Nitti's clash with Valenti, see [Barbagallo (1984)], pp. 75ff; on Nitti's attacks on the Bureau of Agrarian Statistics in 1907, p. 144; on his favoring Beneduce, p. 167.

The political shift that was brought about by this fourth cabinet of Giolitti determined not only the end of the climate of cooperation of the government with the agricultural elites but also serious fractures within the representation of agriculturalists themselves. Local associations (as in Bologna and Ravenna) became fierce opponents of Giolitti's policies, while the Society of Italian Agriculturalists (SAI) still tried to mediate⁵⁵. In these conditions, Valenti's position was undermined by the fact that Nitti looked for statistics that focused on workers rather than production, but also by the weakening of the group of agriculturalists who had supported his project, i.e. the moderate leadership of SAI and the founding figures of the Agricultural Parliamentary Committee such as Pantano, Ottavi (president of SAI since 1911), Faina, and Luzzatti.

Valenti was succeeded by his closest collaborator at MAIC, Inspector Giuseppe Zattini (1861-1926)⁵⁶. But Zattini was unable to maintain the office's working capacity and lacked both the political support and the ramified network that had guaranteed the success of Valenti's experiment. Personnel was dispersed and transferred to other offices, funds shrank, the reliability of the statistics fell. Nevertheless, in one form or another, Zattini and his remaining collaborators continued to provide figures and update the agricultural *cadastre* wherever possible. The travelling chairs for instance, as witnessed by the case of Milan, tried to update the data on surfaces again in 1916⁵⁷. Somehow the network of agricultural experts created by Valenti in academia and in the institutions of technical assistance survived the war (for instance in the Ufficio tecnico per l'agricoltura of the National committee on trade tariffs and in the Ufficio tecnico of Federazione Italiana dei Consorzi Agrari), but its ability to control the creation of statistics was undermined⁵⁸.

After Valenti's death, in 1920, the *reseau* came to be dominated by Arrigo Serpieri, most of all when in 1923 he entered the cabinet and tried to create the Istituto di Economia e Statistica Agraria. Serpieri has often been connected with Nitti by historiographers. D'Autilia and Melis for instance call him "un tecnico nittiano" due to the commitment to modernization that Nitti and

⁵⁵ For the position of local associations see [Cardoza (1982), Malatesta (1989), Roveri (1974)]; for the gap between SAI and local associations see [Rogari (1994b)] and [Musella (1984)].

⁵⁶ Giuseppe Zattini was an engineer. After his graduation in Bologna (1885) he worked for many years at the administration of the *cadastre*. Valenti called him to the newly formed Bureau of Agricultural Statistics.

⁵⁷ *Annuario della Cattedra per la Provincia di Milano*, 1916.

⁵⁸ [Adorno (1995)].

Serpieri shared and to the similar view they held on state intervention⁵⁹. Yet, Serpieri, through Valenti, was introduced to other, if anything more influential, circles, such as the Federazione Italiana dei Consorzi Agrari, SAI, etc. There was a strong, individual sense of community among the agricultural technicians that belonged to or collaborated with these institutions, thanks in particular to the common effort made for Valenti's agricultural *cadastre*. The Istituto di Economia e Statistica Agraria capitalized on this network and was an attempt at giving it an institutional form.

At the death of Zattini, nevertheless, Serpieri's idea of keeping together agricultural economics and agricultural statistics, clashed with the hegemonic designs of Corrado Gini. Since 1926, Gini had been at the head of the newly founded Istituto Centrale di Statistica. In the politics of the Fascist regime, the Istituto Centrale di Statistica (now ISTAT) corresponded to the pivotal role of Mussolini, the leader and ultimate decider. ICS directly responded to the chief of government and was in principle destined to be the only producer of statistics for all the ministries of the cabinet⁶⁰. In the struggle between Gini and Serpieri, the statistician had the upper hand: the Istituto di Economia e Statistica Agraria ceased to exist, and all its statistical tasks were transferred to the ICS⁶¹.

In 1928, under the direction of Carlo Dragoni first and then Nallo Mazzocchi Alamanni, the ICS began the collection of data on surfaces and yields for the new agricultural *cadastre* of 1929 (whose ponderous volumes were published throughout the 1930s). If the general concept remained the same as had inspired the agricultural *cadastre* of 1910, the Fascist regime transformed the collection of data. Rather than exploiting the cooperation of state and local elites on an equal footing, the ICS put up a centralized system. The travelling chairs were transformed into local agents of the Ministry of Agriculture and Forests, losing their autonomy completely⁶². They would be responsible only for the collection of raw data about the agricultural

⁵⁹ The link between the two would be confirmed by the fact that it was Nitti who called Serpieri to Florence to lead the Istituto Agrario Forestale of Vallombrosa, a prestigious position, [D'Autilia(1992)], [D'Antone (1979)].

⁶⁰ See [Marucco (1996)].

⁶¹ [Istituto centrale di statistica (1930)] expresses the point of view of Gini; see [D'Autilia (1992)]

⁶² [Zucchini (1970), Desideri (1981)], Chap. II above.

cadastre, thus excluding the larger network that had cooperated to the AC 1910. The elaboration of such raw data then was to be the exclusive domain of the statisticians in Rome⁶³.

7.5 Conclusions: building the observatory

The renovation of Italian agrarian statistics that took place between 1906 and 1910 shows some interesting aspects, both in terms of the organizational forces involved and for the techniques, methods and concepts that it required. I now list some of them as they emerged in this and in the previous chapter. The organizational plan shows at least two interesting elements. The first is the interaction between experts (technicians inside the administration and academics) on one side, and the government (the ministers but also the MPs who took part in the Consultative Commission). In this case the two central elements are the Consultative Commission and Valenti's own network. The Consultative commission, like most of the other comparable councils that crowded the Italian administration, was explicitly conceived as the locale for connecting scientific expertise (Valenti, Pantaleoni or De Viti-De Marco) with the administrative experience of those who actually directed the administration at MAIC (Inspector Moreschi, for instance). Luigi Bodio in this case was the amphibious figure of a scientist who had served in the administration. The minister was the arbiter.

Valenti himself was at the centre of a scientific network of connections. We have seen that he managed to mobilize all the leading experts of his field: Alpe, Bordiga, Miraglia, Niccoli, Peglion, and Serpieri, who all had different roles and different specializations (although most of them were expert in appraisal and rural economy). In a sense this undertaking contributed to unify the field of agrarian economy by grouping its practitioners together⁶⁴. Next to the economic and agronomic expertise of the academicians, the CA required the collaboration of more "technical"

⁶³ Comparing the CA 1929 and the CA 1910, Mazzocchi Alamanni wrote: "Il fatto che la rilevazione sia stata totalitariamente affidata ad una unica categoria di tecnici specializzati, quelli delle Cattedre ambulanti di agricoltura (oggi, Ispettorati agrari) – categoria particolarmente organizzata e rafforzata ai fini della specifica e vasta opera di rinnovamento rurale della Nazione – ha indubbiamente costituito ulteriore ed importante elemento di tranquillità circa la "sufficienza" dell'approssimazione potuta raggiungere dall'attuale catastazione a confronto con la prima, la cui esecuzione fu, di necessità, affidata a rilevatori i più disparati: società di agricoltori, privati studiosi, qualche cattedratico", [Istituto centrale di statistica (1929-1939)], vol. I, p. 10.

⁶⁴ After the war, most of these men (Serpieri, Peglion, Alpe) contributed to [Valenti (1919c)]. The problem of defining "agrarian economists" (as opposed to "agronomists") drives [Lechi (1990)], pp.3639, and [Di Sandro (1995)], Against the exclusion of Valenti from the group of "agrarian economists", [Giacconi (2003)].

experts whose formation and training had developed inside the office of CT and the IGM. At their best, such technicians were represented by Ing. Zattini, but less qualified geometers and land surveyors are also included in this category.

The third element of interest is that the making of statistics involved some of the “stakeholders” of statistics: the agrarian associations, the landowners, all the possible “experts” regarding local conditions who could be induced to participate as representative of their area alongside the public administration. Through their associations and representatives in parliament, groups of agriculturalists had been campaigning for new statistics long before 1907. For them, statistics were part of the overall modernization of the country, would enable the government to better adapt its policies to the actual needs of agriculturalists, and would give agriculturalists themselves a better understanding of their economic conditions. The participation of associations of agriculturalists in the making of CA was therefore motivated by an interest in preparing the statistics, as well as by the desire to control the statistical survey.

Such participation was supposed to compensate for the weakness of the public administration itself, which was unable to run the machine on its own by means of its local branches (prefects and municipalities). Local associations and the experts whom they could involve in the project replaced the peripheral offices that lacked the knowledge needed. The result was a network of observatories made up of informants, commissioners, and associations, kept together by Valenti. The core of the empirical work was done by travelling chairs, thus beginning the evolution that ended in 1935 with their transformation into the territorial offices of the Ministry of Agriculture. But in the 1900s, travelling chairs still had a double nature, as state organs and private organisations. Agricultural experts themselves, led by Valenti, moved rather frequently from business organisations, to academia, to business friendly administrative offices.

Although Valenti’s was a “participative” statistics, it was not a democratic one. His project excluded direct investigations based on a general census. Not everybody had their say in the final figures, as they would have done by democratically filling up forms. Only some respondents were considered reliable enough to provide sound numbers, even fewer took part in the sort of state – civil society fora that were the Provincial committees. As a result, informants had to be contacted on a semi-personal basis by provincial commissioners and the final statistics rested on the work of very different people in the different provinces. Here again, Valenti’s network was

probably an essential starting point. As former secretary general of the Società degli agricoltori italiani he was in contact with most of the associations, and a member of several⁶⁵.

The CA mirrors the forms of political representation that characterized “liberal” Italy before the extension of the suffrage enacted in 1911⁶⁶. The Bureau of Agricultural Statistics was a “privileged contact point” of agricultural interests and the state⁶⁷. The harmonious composition of interests within MAIC became more difficult when Nitti became minister. Fascism formally imposed a clear division between state officials and representatives of economic interests, thus severing the links between statistics and stakeholders. Not by chance, then, when the Fascist regime ordered a new CA in 1928, the Central Statistical Institute replaced all such forms of participative statistics with a centralised structure. The travelling chairs of agriculture (which had themselves meanwhile undergone a process of bureaucratization) became the only bodies responsible for the collection of raw data while the ICS took over the whole task of elaborating them.

The CA was not a practice that could be exported to a virgin and unknown land. The importance attached to the participation of local élites in the undertaking was precisely motivated by the need to grasp the reality of something local, something singular, but also something essentially beyond contingencies, which was revealed only by long acquaintance and familiarity. The skilled surveyors, with their theoretical basis in appraisal and agronomy, were entitled to select and describe the typical farms, and their constitutive elements. The provincial committees, as a sort of statistical parliament, set the limits on what was acceptable in the resulting image. The “normal” features, identified by skilled surveyors and checked by way of discussion within provincial committees, offered the least bad starting point. The correction of mistakes was entrusted to the law of large numbers.

⁶⁵ He was a member of the Accademia dei Georgofili, for instance.

⁶⁶ On the mistrust of Italian élites for the people: [Baffigi (2007)], and the first essay in [Vivarelli (1981)].

⁶⁷ [Melis (1985)].

8 Monographs I: types of farm

The foundation of the National Institute for Agricultural Economics (INEA) and the attribution of the tasks of the Bureau of Agricultural Statistics to the ICS, in 1926, mark a turning point in the evolution of methods of agricultural economists and of their role. The personal struggle between the founder of the Institute for Agricultural Economics and Statistics (IESA), Arrigo Serpieri, and the president of the ICS, Corrado Gini, was only the surface of the contrast. The contrast lay deeper: in the significance attributed to the different forms of observation. Agricultural economists on the one hand defended the unity of prevalingly qualitative forms of observations, such as monographs and enquiries with quantitative statistics of surfaces and yields, in the name of the unity of the subject matter of observation, namely agriculture. Statisticians, instead, aimed at imposing statistical methods as the only legitimate way of investigating economic subjects, and wanted to impose this monolithic view of data.

In the end, both groups were partially disappointed. Apparently, the ICS at first expected to take over the whole IESA. Inside the ICS, what had been Valenti's and then Zattini's Bureau of Agricultural Statistics would carry on updating the agricultural *cadastre* and provide, on this basis, the statistics of yearly output, while the research in agricultural economics would be attributed to the Ufficio Studi of the ICS. Serpieri could not accept this radical loss of autonomy for agricultural economists. Instead, the tasks of the IESA were split between the ICS and the INEA. The way the tasks were divided between the two institutions is revealing of the way in which statistics and competing forms of investigation came to be conceived in the 1920s.

As we know, the ICS fundamentally took over the functions of Zattini's Bureau: the update of the agricultural *cadastre* and the making of the yearly statistics of harvest, based on surveys of yields and surfaces. This corresponded to the narrow interpretation of statistics that had slipped into the language of the time. Already Valenti and his parliamentary supporters had reserved the name of "agricultural statistics" (*statistica agraria*) to the figures that concerned the yearly production of agriculture, the surfaces under crop, and the yield per hectare. Such has been the notion of agricultural statistics that I have used throughout the previous chapters, its key defining elements being the comprehensive study of the whole population and its quantitative character. To this we must add the census of agricultural businesses that was carried out at the end for the first World Census of Agriculture of 1930.

The INEA inherited everything that fell beyond this definition of statistics, which was considered a matter pertaining to agricultural economics. The INEA claimed for its structures the investigation of farms, in particular, both by means of monographs and through the observation of account books (*osservazione contabile*). Such observations were to be carried out by the central structure of the Institute with the help of a network of local “observatories” (*osservatori*): “The principal task of the INEA is to carry out and promote studies, prevalingly monographs, on the economy of agricultural promotion, and to collect, coordinate and elaborate the accounting data of agricultural businesses”¹.

In the eyes of the statisticians of ICS, such subjects as those the INEA was prepared to investigate (on prices and costs of production, on the distribution of income, on the effect of the reclamation policy over farms and families) required statistical methods, were statistical in nature, and therefore should be kept under the control of the ICS itself. In their view, agricultural economics and agricultural statistics were inseparable: “The economic investigation has a concrete and practical value if it is supported by statistical data, which are its precondition. Agricultural statistics have an effective value, if their data make the economic investigation possible”². They also believed that agricultural economists were unaware of the right statistical methodology, and used superseded methods. They contested the representativeness of monographs and accounting studies.

Agricultural economists, instead, were willing to narrow the tasks of the ICS down to the production of statistics about yields and the agricultural *cadastre*. In their view, statisticians should provide a general quantitative framework. Studies in agricultural economics would complement such general figures. Such research required a more specific training in agricultural economics than statisticians had. The practices of investigation of agricultural economists, in general, relied upon a fundamental notion of “type of farm” (*azienda agraria tipica*), whose validity was heavily questioned by statisticians because of the difficulty of its mathematical treatment and its dependence on the judgment of experts. In Chapters 5 and 6, above, I briefly introduced the concept of the typical farm. In this chapter I want to make this concept more explicit.

¹ [Serpieri (1929)], p. vii.

² [Istituto centrale di statistica (1930)], p. 240.

This chapter and the next deal with farm monographs and their evolution into accounting-based statistical texts. They explain how the division of tasks between INEA and ICS was justified by the practices of agricultural economists. While Chapter 9 is dedicated to the institutional framework of monographs and accounting studies, mostly after the foundation of INEA, here I investigate the roots of these forms of observation, and the different traditions of thought that determined their development between the 19th and early 20th centuries, and show how they differed from what was conventionally called “statistics”.

8.1 Monographs and types.

As we have seen, in his report to Cocco-Ortu, Ghino Valenti lists three methods for observing agriculture from an economic point of view. He mentions the general statistics of production that his office was to publish (these he called agrarian statistics proper), enquiries (*inchieste*), and farm monographs³. Farm monographs derived in part from family monographs, which had been popularized – if not invented – by the French engineer Frederic Le Play in the second half of the 19th century⁴. Le Play and his collaborators interviewed working class families and compiled monographs that revolved around the family’s budget. By means of family budgets, family monographs described the living conditions of a family, their sources of income, their expenses, and the workforce available to it. Everything was computed in the assets or liabilities of the family’s balance sheet.

A similar method of compiling monographs was also applied to farms. Farms were often run by individual families and it was easy to move from the study of a family’s expenses to the study of the productive unit that the family earned its income from. Farm budgets were the central elements of such farm monographs: they showed how gross production was divided in order to remunerate all the factors of production and compensate for the amortization of capital. The study of gross production and its inputs revealed the technical features of agricultural production, such as crop rotation and crop specialization, and also the technical efficiency of farms. Two disciplines with which agricultural economists were familiar, land valuation and

³ [Valenti(1907)]; It should be noted that, for Valenti, farm monographs were only significant when the farms were selected on the basis of previously existing statistics. In fact, appropriate statistics were often unavailable and monographs worked as substitutes rather than as complements to statistics.

⁴ An interesting (but very teleological) history of the evolutions of budget enquiries from family to farm budgets is given by [Čajanov and Tonču (2006a)].

accounting, became the lenses through which the distribution of income and poverty could be observed. Together, family monographs and farm monographs respectively represented the two elements of a country's agrarian economy: demand and supply, the workers and the farms. For this reason they were often included in socioeconomic enquiries. Problems of production (inputs, outputs, and technologies) and of distribution (the distribution of social product and net product) could be reduced to a familiar accounting framework and investigated in a limited number of individual specimina. The analysis of the farm included determining the productivity of inputs and hence fixed the general frame (and in some cases the boundary curve) for discussing issues of distribution and production.

There was a variety of reasons to focus on businesses. The micro level allowed investigation to take place of the various forms of contract that ruled agricultural businesses as economic living organisms. It also responded to a long tradition of economic thought that had started with the Physiocrats, if not before, and took individual farms and eventually firms as the site where the product was distributed among factors of production⁵. Around the turn of the 19th century Marshall's theory of representative firms, demand and supply, simply provided an updated theoretical justification for observation methods focused on individual businesses. Finally, farm analysis was consistent with the technical tools that agricultural economists learned in universities. Since they were basically trained to be farm managers, accounting and management offered basic economic categories and frameworks⁶.

Agricultural economists, in adapting Le Play's *monographie de famille* to farms, translated Le Play's fundamental concepts into their own terms. The typical family that Leplayan monographs studied became a typical farm, the representative instance of a way of combining the factors of agricultural production. What I would call the agronomic concept of type of farm was characterized by two dimensions: a first dimension was productive orientation (dairy farm or crop farm, etc.), a second dimension was that of local peculiarities, which involved both adjustments to climate and geography and social factors, such as tenancy contracts. Farm types

⁵ For the Physiocrats and their farm accounts see, [Théré and Charles (2008)] and some of their recent unpublished work; on Ricardo's analysis of farms, see [Morgan (2008)].

⁶ Serpieri's reconstruction of the history of farm studies is significant, as he sketched a line that goes from Cuppari, to Oreste Bordiga, to Niccoli, to himself and ends with Perini, see [Serpieri(1948)]. [Di Sandro (1995)] convincingly argues that the analysis of individual farms lay at the basis of agricultural economics as a discipline.

were hence usually labelled with names that reflected both dimensions, such as ‘Lombard dairy farm’, etc.

Farm types (and, as a consequence, typical farms) consisted of a synthesis derived from the agricultural businesses that prevailed in some areas, of some configurations of social, technological and geological elements that an observer could expect to find under certain conditions: a general scheme of farm structure. A farm type was first of all a system of farming. This view of farm types was relatively old, dating back at least to the German agronomists of the early 19th century. Both the Norfolk and Three Fields rotation schemes that were discussed and compared in the 19th century agronomic debate were farm types. Type, in this case, meant a specific combination of technical factors and managerial principles. Types had different levels of productivity, and for this reason it was important to establish which type was better for farmers and estate owners. Was the Norfolk better than the Three Fields type as Albrecht Thaer claimed for Germany?⁷. Answers were not unanimous.

The geographically differentiated approach proposed by Johann Heinrich von Thünen with his famous model of the *Isolierte Staat* gave a theoretical rationale for the variety of regional farm types⁸. As a consequence, the school of von Thünen often engaged in descriptions of farm types across Europe. But before Thünen, Arthur Young (the main influence on Thaer) had already popularized in Europe a geographical approach, centered on the description of the agricultural traditions that he encountered in his travels. Almost in response to Young, Jean Charles Simonde de Sismondi published his celebrated description of Tuscan agriculture that extolled the Tuscan tradition of share-cropping (a farm type) as the best way to promote social peace and economic prosperity⁹.

Farm monographs typically contained the survey of a farm type, the description, i.e., of a typical farm, either a real or an idealized one. Pietro Cuppari from the 1850s¹⁰, and later Vittorio Niccoli set the model for studies of this kind in Italy.

At the core of farm monographs lay the farm budgets, since the budget clarified the relationship between the inputs and the outputs of the farm. Monographs showed the monetary values of the

⁷ [Nou (1967)] on Thaer.

⁸ [Nou (1967)] on Thünen.

⁹ [Sismondi (1801)].

¹⁰ [Cuppari (1860)]; on Cuppari’s method, see also [Gabba (2000)].

farm's assets and liabilities, revenues and expenses, which formed the budget, and they also included such physical quantities as the surface under crop, the number of hours worked, the gross product or the livestock that corresponded to such monetary values.

But the budget was only part of the farm monograph. It was usually completed by an account of the land tenancy contract and of the physical composition of the farm (surface, buildings, etc.), the prevailing crop rotations and the farm's various enterprises¹¹. In an area where small farms prevailed, the farm type had a small surface. In an area where share-cropping contracts prevailed, the typical farm was leased to share croppers. Where fertilizers were used in limited amounts, the typical farm used them sparingly, and so on. The farm type was characterized by both qualitative (tenancy contracts, for instance) and quantitative elements (surface, the relative importance of enterprises on revenues, etc.). The study of farm accounts therefore contributed to the crystallization of farm types.

As noted, investigators could proceed in two ways. They could either dedicate a monograph to a sort of ideal type of a farm or describe an actual farm, thought of as representative of its type. The early investigators in particular, such as Cuppari, preferred the first method. The relatively reduced number of farm surveys available, the wish to illustrate synthetically the general forms of agriculture that prevailed over relatively large areas, induced them to compose different features from actual farms into a single typical one. Just as the famous painter Zeuxis had created an image of Helen by copying the best parts of the most beautiful women of Kroton, so agricultural economists could combine the most characteristic features of different farms into a typical one.

It could be very difficult to find a real farm that reflected the type in all its details, and was representative enough. The importance of observing actual instances, nevertheless, was stressed abundantly by Le Play and his followers and became commonplace among investigators in the second half of the 19th century¹². We see in sec. 8.3, below how Italian social scientists interpreted these directions. The choice of an existing representative farm, however, and the combination of typical features of different farms, both relied on the "good intuition of the investigator"¹³.

¹¹ See, for instance, [Comizio Agrario di Bologna (1881)].

¹² For the positive and concrete character of Le Play's method, see [Protasi (1996)], pp. 816-17.

¹³ [Serpieri (1950)], p. 486.

In contrast with the most important supporters of the monograph method, such as Le Play, Duplectiaux and Ernst Engel, Cuppari did not plan to collect large numbers of monographs. Cuppari and his followers claimed that, by carefully selecting the farms to be investigated, the resulting farm monographs would be able to offer a good description of a country's agriculture through its prevailing farm types¹⁴. The investigator's experience was sufficient for discounting the irrelevant or misleading elements and selecting the right farm to represent the dominant characteristics of a region's farms. For Cuppari: "A clear concept of the rural economy of a country can be offered only by the description of specific farms; among which to select a certain number of types (...). The overall physiognomy – so to say – of the local rural economy will emerge from comparing the various types". Farm and family monographs alike were inspired by the assumption that the family or the farm to be studied could be selected in such a way as to represent the families or farms of its area or a specific class of them. They were the types of their class.

For agricultural economists as well as for politicians interested in agriculture at the beginning of the 20th century, the framework for thinking about Italy's regionally differentiated agriculture was provided by Vittorio Niccoli's *Manuale dell'agronomo e dell'ingegnere agrario* (1897). He studied in detail three types of farm, each roughly significant for a specific region of Italy: the irrigated farm of Lombardy, the *podere* of Val d'Elsa, and the latifundium of Maremma. For each type, Niccoli addressed the issue of gross product, expenses and interest costs on capital, in order to compute the rent, the rate of return on the purchase of land and the value of the farm¹⁵. To the three types sketched by Niccoli, agricultural economists could refer when investigating different areas and farm typologies, by exploiting likeness and variation. Niccoli's *Handbook* provided in this way a sketchy atlas of Italy's agriculture in economic terms: rent, the expected returns on land investments, and some technical coefficient. On this atlas, other researchers could map their own local studies.

Investigators could a posteriori determine the position of a real individual farm on the grid of types, using the data collected¹⁶. This was especially useful for appraisal, where, as we have seen, an individual farm had to be assigned to the appropriate type in order to determine its value. Each of Niccoli's three types was intended to represent different forms of agriculture, and could

¹⁴ [Cuppari (1869)]; see [Serpieri (1948)].

¹⁵ Value was obtained by capitalizing the expected rent; [Niccoli (1897)]; Niccoli applied his type based analysis also in the creation of Italy's CA in 1910, on the basis of harvest statistics until the 1930s, see sec. 6.5.

¹⁶ This was especially the case for E. Laur's celebrated farm account statistics.

serve as a reference point during the valuation of farms of the same type. The irrigated farm of Lombardy gave a general scheme for the understanding of capital intensive forms of agriculture, the *podere* of Val d'Elsa represented labour intensive forms, and the latifundium of Maremma stood for all similarly extensive farms in Central and Northern Italy as well as the South¹⁷.

8.2 Typical farm as ordinary farm

Studies such as Niccoli's rested on the appraisal of different elements of the economic structure of farms and estates that characterized each farming system. The most important was the determination of the value of land as it varied between farming types. High unitary values of land seemed to be an index of the high productivity of an area and its prevailing farming system. There was a general consensus that the value of land was to be computed as the capitalized value of yearly rent (we see in Chapter 10 what this consensus meant). Land appraisal hence depended on the appraisal of rent. But what was rent, and how was it appraised?

In Italy, already in the *Cadastr*es of the 18th century, the rent (*rendita* or *beneficio fondiario*) was considered the part that remained to the landowner once all the expenses for cultivation were subtracted from the land's gross product. But whenever for some reason no full actual rent was paid by tenants to landowners, this was a notional rather than an actual value, and it was difficult to assess it accurately. Once the expenses were detracted from the gross product, the result did not include the rent alone. It was the sum, instead, of the rent (*beneficio fondiario*) and the return for the entrepreneurship of the farmer (*beneficio industriale*)¹⁸. Expenses included the remuneration of managerial work and the interest paid on capital other than land, together with the costs of seeds, of insurances on bad weather, of fertilizers, of labour, etc. There were two problems to be solved, and both involved the identification of typical farms. The first issue was how the farm gross product was to be assessed. A furious debate raged between two schools of appraisal in Italy, the *suscettivisti* and *attualisti* up until the end of the 19th century. The whole point in the discussion between *suscettivisti* and *attualisti* was about what counted as a legitimate basis for the computation of rent. A second problem was how to distinguish *beneficio fondiario* and *beneficio industriale*.

¹⁷ [Serpieri (1950)], p. 481 n. 2.

¹⁸ [Di Sandro (1995)]. It is worth noting that the *beneficio industriale* was distinct from the returns on capital. It represented rather the reward for the entrepreneurial ability of the farmer.

Although appraisal and land valuation were very general practices, Italian agricultural economists of the 19th and 20th century were convinced, almost unanimously, that appraisal was an “Italian science”. The Italian tradition of appraisal was for them the oldest and the most thoughtful in Europe. For Niccoli, after the Romans and their principles of land valuation, the modern bibliography on appraisal began in 1755. “The first stone of the scientific building of valuation” according to him was the *Trattato sulle stime dei beni stabili* by Cosimo Trinci¹⁹. Trinci listed three classes of element that had to be considered when estimating the land value: the surface, the quality of land, the position. But what was he estimating? Was he appraising land on the basis of its current, actual, production, or instead on the basis of its potential production, given the land’s best foreseeable use? Trinci was in favour of considering the dispositions of the soil, its potential, as the basis of land value. Niccoli saw in Trinci’s work the very beginning of a debate between *attualisti* and *suscettivisti*.

Attualisti claimed that, in assessing the value of a specific plot, it made no sense to consider also the income that could be obtained by additional investments. Land had to be appraised for what it was when it was bought, not for what it could have been according to the estimator if all sort of counter-factual conditions were fulfilled in the future. The *suscettivisti* claimed instead that the dispositions and potentialities of land (*suscettibilità*) should not be ignored, because the buyer of the land could have exploited them. There was a great variety of positions within these two battling groups. Adamo Fabbroni, for instance, held a position that was somehow in between the two (but the dispute had not yet reached its climax): while private investors should take into account only the current, actual, rent, states should tax land according to its potential, in order to stimulate improvement.

Melchiorre Gioia, the reference point of the *suscettivisti*, suggested that the crops with the most stable prices, rather than the crops actually growing on the land, should serve as the starting point for land appraisal. But after expressing so strongly the position of the *suscettivisti*, he limited its radicalism by adding:

If an appraiser is asked to evaluate a plot which yields but a minimum rent, due to very bad methods of cultivation, he shall ignore the current rent, and look for the value by assuming that the plot was already worked according to better methods and the standard ability [of the farmer]. For the very same reason he

¹⁹ [Niccoli (1889)], p.19.

shall not attribute to the plot a value that results from an extraordinary enterprise or abundant capital²⁰.

Gioia introduces here a limitation to the position of the pure *suscettivisti* that eventually led to the final solution of the debate. He introduces the idea of the standard ability of the farmer. Since it is the land, and not the ability or negligence of the farmer, that is transferred with the purchase, it would be wrong to assess production on the basis of something exceptional.

This idea was soon to be generalized. Not only the farmer's ability, but also the techniques and even the crops considered for appraisal must be those prevailing in the area where the plot is situated. Hence Nicola Cavalieri San Bortolo in 1821 distinguished transitory from permanent rent. The transitory rent was only the rent computed on the basis of the product of the years preceding the appraisal. The permanent rent, instead, depended

on the internal natural, social and economic conditions of the plot itself, according to the *ordinary system of cultivation* and the structure of the land²¹.

With the works of Giuseppe Borio, who left a lasting mark on the landscape of the science of appraisal in Italy (a small but pugnacious territory), the debate between *suscettivisti* and *attualisti* reached its conclusion along the lines traced by Nicola Cavalieri. A farm should be appraised neither by assuming its potential production, nor considering its actual production. The appraiser, instead, should compute the farm production as if the farm was an ordinary farm, where the standard techniques of the area were applied, and the area's standard system of farming adopted²². Such an ordinary farm was, in fact, a typical farm, which represented the prevailing type, or one of the prevailing types in its area. Beyond considerations of soil, exposure, surface, that could apply to a great many different areas and regions, appraisers should consider the farming types that prevailed in their area, that is, the standard crop rotations, the traditional techniques. They served as the reference points for land valuation.

This implies that appraisers must have been able to identify the typical farms of the areas in which they operated. Unfortunately, manuals of appraisal usually took this ability for granted. While they devoted a great many pages to accounting formulas for capitalization and discussed in detail the different elements that had to be taken into consideration in specific cases, they

²⁰ Gioia (1817) quot. in [Niccoli (1889)], p. 39.

²¹ Nicola Cavalieri San Bortolo (1821), cit. [Niccoli (1889)], p.49 (my emphasis).

²² [Polelli and Sali (1995)].

never discussed how to identify the ordinary farmer, techniques and farming system in practice²³. Prevailing farm types probably seemed evident to locals and were matters of common knowledge among people endowed with tacit and localized expertise. The ordinary farmer (for private purposes or for the *cadastre*) must have been recognizable as such by locals and the criteria of ordinariness emerged from within the local community²⁴.

The second problem mentioned above was not so much a problem in practice (the reason why will emerge below), as it was a tormenting riddle for the theory of appraisal: how to separate *beneficio fondiario* (B_f) from *beneficio industriale* (B_i), the revenue of the entrepreneur and that of the landlord? In 1916-17 Arrigo Serpieri, who became the most influential agricultural economist in Italy for decades, published a long paper proposing to reframe the notion of the ordinary farmer in a marginalist framework, inspired by Vilfredo Pareto, Enrico Barone, Léon Walras and above all by Alfred Marshall and his theory of the representative firm. Serpieri assumed that, for an ordinary farmer who lacked any special managerial ability or extra capital (or who was not particularly incapable nor deprived of capital), P (production) equalled K (expenses, including rent) and B_i (the industrial profit of the farmer, *beneficio industriale*) was absent. For him, this was the consequence of an equilibrium market where competition ate up economic profit, but not rent. In fact, if $P = K$, since all expenses except rent (B_f) are supposed to be known, it is enough to reverse the equation as $B_f = P - K'$ (expenses except rent), in order to obtain the rent itself (*beneficio fondiario*)²⁵.

The theoretical premise for estimating rent was thus the existence

of a widespread ordinariness (*ordinarietà diffusa*) in the use of production factors such as can be considered the analogous Walras' tendency towards the offset of profit²⁶.

The ordinary farm was characterized by the ordinary combination of production factors and corresponded to Alfred Marshall's representative firm. The empirical identification of ordinary methods of cultivation was the task of the appraiser. For the area where the farm was situated, he had to fix:

²³ See as an example the textbooks by [Tommasina (1912)], and [Fettarappa (1887)], the main names, with Borio of "scuola di estimo torinese".

²⁴ On the consensual formation of cadastral estimates see [Tassinari (1922)], on the combination of plots in Austria; for the Italian cadastre, the already mentioned [Pederzani (2008), Carli(1815), Marsili Libelli (1912)].

²⁵ [Serpieri (1916-1917)], p. 35f., §11, §17, §22.

²⁶ [Polelli and Sali (1995)], p. 92.

1. the ordinary farming system, i. e. the combination of crops, the way the products were marketed, the organization of labour, the surface of each enterprise
2. the way the farming system was applied, i.e., the fertilization methods, the methods of executing technical operations (machines, etc.).

Although Serpieri refrained in this contribution from giving practical guidelines for determining an area's ordinary farming system, he noticed that this was hard to determine whenever (and wherever) agriculture underwent systematic transformation, but was relatively evident to the eyes of appraisers when agriculture enjoyed periods of relative immobility and stability²⁷.

The theory of appraisal translated the concept of typical farm into that of ordinary farm and therefore decisively contributed to determine, for agricultural economists, what a typical farm was. By the First World War, the typical, that is, the ordinary farm was, for Serpieri, the agricultural equivalent of the representative firm of Marshall: being incapable of particular innovation and safe from extraordinary losses, it was a price taker without (economic) profit. This idea also implied that farms, at least locally, must have similar cost structures; this tended towards a similar use of production factors, since the market pushed all farmers in the same direction. Statistically, this meant that farms would be distributed normally around a central average size for all the relevant quantitative factors (surface, use of fertilizers, hired labour, etc.). Although they did not have empirical evidence, agricultural economists were fairly confident that this must be so.

8.3 Monographs, enquiries and statistics

Until the 1920s, the relationship between monographs, enquiries and statistics seemed relatively simple to economists and statisticians alike. Monographs provided the detail, and the other two forms of investigation, each of them in its own way, provided the general picture. Like Le Play's pupil, Emile Cheysson, Italian agricultural economists assumed that: "La statistique officielle va donc en avant-garde et dégage les moyennes qui conduisent le monographe à son type. A son tour la monographie lui rend le service de vérifier par une étude détaillée les résultats généraux

²⁷ [Serpieri (1916-1917)], p. 84f.

de l'enquête"²⁸. Statistics, in particular, studied the whole relevant population, while monographs studied a limited number of well-chosen cases. The choice of such cases rested on the general features of the population as a whole, such features being known to the investigators from statistics.

Their relationship with statistics rested, at this time, on the principle that statistics were actually a precondition for monographs. Valenti's criticisms to Edoardo Pantano's plan are revealing. Pantano, as we saw in sec. 6.2, considered that farm monographs representing the agricultural peculiarities of each region could be a cheap substitute for statistics of agricultural production, and would not force the government to ask parliament for significant funding²⁹. Monographs of typical farms represented local variations of the nation's agriculture in more detail than any nationwide statistics. They described crop rotations and production coefficients that the static character of output figures would not fully represent. And monographs were obviously cheaper than statistics, since they did not require a permanent or semi-permanent institutional setting. Moreover, Belgium had already started the publication of collections of farm monographs describing different regional types of agriculture. These monographs were compiled by the Service des Agronomes de l'État and covered the provinces of Belgium³⁰. To Pantano and his staff, this seemed to be the Columbus' Egg of statistics and they ordered farm monographs to represent each of Italy's 69 provinces.

Valenti had been chosen to prepare the monograph for the province of Padua, where he was teaching, but as soon as the cabinet fell and the new minister Cocco-Ortu selected him to reorganize the office for agricultural statistics, he voiced his dissent from the project. Valenti, like Cheysson, was convinced that monographs and statistics were complementary to each other, and one could not substitute for the other. He stressed the difference by claiming that only the availability of good statistics could provide adequate information for formulating the appropriate typology.

²⁸ Emile Cheysson, quoted in [Desrosières(1988)], p. 97; on Cheysson as the reconciliation of Le Play and Quételet, see [Protasi (1996)] and [Favero (2011)].

²⁹ The agricultural enquiry that the Italian parliament undertook in 1876 also included farm monographs. The analysis of individual farms was thought to be the right way to reveal the dominant traits of the types, agricultural businesses in each area (a province or a smaller unit). They were expected to distinguish what Jacini himself called "the many Italies of agriculture". Not enough effort was made to institutionalize the collection of such data; see Chapter 4.

³⁰ [Belgium. Ministère de l'agriculture.(1899-1901)].

Only when the general figures representing the agriculture of a province (“the average ratio of surfaces of different crops and relative productions, the average revenue of the land, the average number of livestock, etc. etc.”) were known, was it possible to judge which farm was close to typical. However, “a farm monograph (...) will give a much more robust idea of the agrarian organism than that formed by considering the results of direct investigation alone, since they cannot offer but the general schematic lines”³¹. His criticism of Pantano’s plan was confirmed by a closer examination of the latter’s Belgian model. The Belgians prepared their monographs on the basis of the general agricultural census of 1895 (*Recensement général agricole*). This meant that “statistics preceded, rather than followed, monographs”³².

The Italian and French statisticians, after Adolphe Quételet, thought that when the data concerned were distributed approximately along the curve of a normal distribution, they revealed the existence of a single underlining cause of the phenomenon observed. They thought that the average datum revealed an essential feature of the population studied, and that divergence from the mean, on one side or the other, meant some sort of error or deviation from such essence. The “typical value” was taken to be the most frequent value:

Who wants to study, for instance, a professional group from the point of view of the number of children of each member of the group, will ask: how many individuals in the group under examination have no child; how many of them have 1; how many have 2 children; how many have 3, etc. and will determine in this way the typical value. The group of Italian miners discussed in 1907 in an enquiry of the Bureau of Labor is distributed under this respect, as follows: 4526 with no child; 4167 with 1 child; 4954 with 2 children; 4188 with 3 children; 3158 with 4 children; 3633 with 5 children or more. We will therefore say that the typical value of the phenomenon observed (family status concerning number of children) is represented, at least in the rough series presented here, by the miner with 2 children³³.

³¹ [Valenti(1907)], p. 26; On this see also the discussion between Bodio and Montemartini at the Consultative commission, where Montemartini argued that monographs were intended to select the most profitable sources on which statistics could rely, and were thus preliminary to statistics, while Bodio answered that monographs (as practiced by Cheysson, Le Play and Cuppari) could provide only the coefficients that need to be multiplied by the large numbers obtained through statistics[MAIC (1908)], vol. I, p. 340. Bodio’s remark seems to consider monographs only good to provide the coefficients of conjectural statistics.

³² [Valenti (1907)], p. 12.

³³ [Niceforo (1923)], pp. 39f. Niceforo’s treaty is relatively recent, but it expresses the received view of Italian statisticians; see also [Baffigi (2007)], p. 42f.

But a population could show more than one type. This was the case, for instance, when instead of normal, the distribution was bimodal, that is, instead of showing a single central value in the proximity of which observations thickened, it showed two of such values. In his studies on the height of Greek statues in the collection of the Louvre, for instance, Quételet had observed a similar distribution: the heights observed clustered around two values. He assumed that there had been two types of Greek statue: a bigger and a smaller one, most likely with different destinations³⁴. The typical emerged from the analysis of the statistical distribution of masses of data as the average or also as the mode (which in a normal distribution coincide): “What’s the aim of Statistics? It aims at discovering what is typical beyond variability, what is definite in the indefinite mass of social facts”³⁵.

In principle, Cheysson was confident that types that emerged from statistics could well serve monographic investigations. In practice, however, the guidance offered by statistics in the choice of the type for the monograph was less straightforward, and Le Play’s followers were always forced to adjust their notion of typical to the real needs of the investigation³⁶. For agricultural economists, Cheysson’s concept of “typical” (a concept shared by many statisticians at the end of the 19th century) also interfered and combined with the older notion of farming type and typical farm. When it came to actual research, agricultural economists thought that their own typologies, developed according to agronomic categories and already applied in land valuation, would coincide with the typical instance of Cheysson’s monographs and hence with the average individual of the type. As we saw in Chapter 6, the lack of previous reliable statistics induced Valenti to combine Cheysson’s systematic view of the typical with Niccoli’s agronomic view of farming types. Coletti’s methodological guidelines for the Faina enquiry, discussed in Chapter 5, above, should help set out the multiple ambiguities in the concept of typical.

In the next chapter I want to show how the growth of data on individual businesses that was made available to agricultural economists with the expansion of farm accounting offices, made a rigorous definition of type necessary, while statisticians increasingly criticized the methods of fieldwork based on types. For the first decades of the 20th century, the confidence in monographs was shared, nevertheless, by statisticians and agricultural economists alike.

³⁴ [Niceforo (1923)], p. 54.

³⁵ “A che mira la Statistica? A scoprire il tipico nel variabile, il definito nell’ indefinito di numerosi fatti sociali”, [Salvioni (1892)], pp. 97-98.

³⁶ Bosco quot. in [Baffigi (2007)], pp. 42f. and [Protasi (1996)].

In the parliamentary enquiry on the conditions of the peasants in the Southern provinces and Sicily (the Faina enquiry), monographs complemented, as we have seen in sec. 5.4, the parliamentary enquiry and served as “a synthesis and an index” – in Coletti’s words – of what was happening to a class, that of peasants or that of landowners, and in specific areas. Francesco Coletti recommended the preparation of family and farm monographs for typical families and farms³⁷. While Coletti’s alleged models, the 1902 Irish and British enquiries on income and wages in agriculture, and the German enquiries on income and labour conditions³⁸, were based on the collection of a large number of budgets, in practice, Coletti’s technical delegates were able to collect only a few detailed budgets.

Coletti summarized and published in 1907 Cheysson’s directions for the compilation of monographs as methodological guidelines for the Faina enquiry. In 1929 Coletti’s *abregé* of Cheysson was extensively quoted by Arrigo Serpieri in his *Guida a ricerche di economia agraria* which remained the basic textbook for empirical research in agricultural economics until after the Second World War. First of all, the monographic method rested upon the presupposition that there existed a pre-ordered division of all elements of a class into “typical categories”. This categorization depended on factors that the researcher must have known already (for instance from an equivalent of the Belgian *Recensement Général*, mentioned above). Coletti gives this example, concerning the choice of typical peasant families:

In a *circondario* (...) there are two distinct agricultural zones: the zone of hills, and that of mountains. In each zone, there are peasants who cultivate the land as share-croppers, others as tenant farmers, others, finally, as free wage labourers. In one of these categories, say for instance among the tenant farmers, there is a visible difference between a group of well-to-do tenants and a group of tenants who can barely subsist. We thus have for each agricultural zone four types of family: share-croppers, fat tenants, meager tenants, wage labourers. In the whole of the *circondario*, eight types³⁹.

³⁷ [Coletti(1906a)].

³⁸ Among the enquiries to which Coletti referred are the following: Great Britain - Board of Trade: *Earnings of agricultural labourers: 2d report by Mr. Wilson Fox on the wages, earnings and conditions of employment of agricultural labourers in the United Kingdom, with statistical tables and charts*, London 1905; the enquiry of the Verein fuer Sozial Politik, *Die Verhältnisse der Landarbeiter in Deutschland, Leipzig 1892*; F. Dettweiler, *Die Handarbeit in der Landwirtschaft*, Jena 1905.

³⁹ [Coletti (1906a)], p. 153.

It will be noticed that some of these family types are rather farm types, and that they all spring from the agricultural conditions of the area (which in fact makes types dependent on the preliminary division of the country in agricultural zones).

Within each type so defined, the researcher will choose a larger or smaller number of typical families according to the resources available. But in general in the original practice of Le Play and his school it was the village notables, the social authorities, who selected representative individuals for Le Play's envoys: types could be identified through their environment⁴⁰. Coletti, who was a reforming socialist, did not expect researchers to rely absolutely on social authorities (he claims that Le Play's political principles had been generally discarded) but he nevertheless based the choice of typical instances on the mobilization of "all the expert and practical individuals who will be found in each *circondario*, i. e., in the small area that will be taken as the scope of the enquiry"⁴¹.

For Coletti, their choice of the typical is what distinguishes monographs from statistics. While statistics surveyed a population, and extracted the typical from the mass or series of data, by computing the average and the mode of the population, the enquiry and the monograph fixed their attention immediately on the cases that were considered typical and representative of a particular class of phenomena. On the basis of the features observed in such cases, they directed their observations and developed their inductive reasoning⁴².

8.4 The *koiné* of monographs

In practice, the choice of typical instances, and the study of such typical instances for the compilation of monographs rested, to a great extent, on the enquirer's ability to establish relationships and mobilize resources during his or her fieldwork. Selecting and studying a typical farm or a typical farmer's family required a sort of empathy (It. *immedesimazione*) between the researcher with the object of his/her research. This argument had already been developed by Luigi Einaudi⁴³. In the case of Italian agricultural economists, this meant attributing great

⁴⁰ [Kalaora and Savoye(1989)].

⁴¹ [Coletti (1906b)], p. 61.

⁴² [Coletti (1906b)], p. 61.

⁴³ [Protasi (1996)], p. 816.

importance to the institutions that formed an intermediate level between science and peasant life, such as the *Cattedre ambulanti di agricoltura*.

The picture of Antonio Bizozzero (Figure 3.1), who held the travelling chair of agriculture in Parma for many years, surrounded by his farmers, makes clear how Professors and Assistants of the *cattedre ambulanti* lived amidst the farmers: they knew what was typical and how to build the area's farming types, because they experienced every day the fine grained differences between types of agriculturalists⁴⁴. The more or less explicit hope was that the results of the monographic method either coincided with the typical obtained by means of statistics, or allowed the researcher to verify the results of the statistical method⁴⁵.

Investigators in general compensated with the high degree of detail for the small number of monographs collected. Each monograph required a very skilled investigator, with a good knowledge of agricultural techniques and a certain familiarity with specific local conditions. In these conditions, therefore, they could not be collected in great numbers. But this was not even necessary, since investigators assumed that they were representative enough, precisely thanks to the careful choice of the farms described. For Coletti, in fact, farm monographs served more as an illustration of the conditions of the area, than as an inductive base. They were, in his words, "an episode in the warp of an historical narration". They were "the synthesis and the index" of the prevailing conditions of the area and he claimed that the budget they contained "will be for us, on one side the confirmation (*riconferma*) of the observations made generally over a mass of cases, and on the other side a specification of those very observations"⁴⁶.

This wealth of detail was not strictly speaking limited to economic factors. Next to the study of land use (the main concern of agricultural statistics), investigators observed peasant morals (*Sitte*), production technology and institutional arrangements (contracts, relations with the state and among private individuals). Agronomic and social aspects closely intertwined in the farming type. Farming depended on contracts, on the relations between peasants and landlords, on the morality of the peasants, on their degree of literacy, openness to new techniques, spirit of enterprise and other sociological and anthropological categories. State enquiries usually dedicated a consistent space to this kind of investigation because they were basically expected to

⁴⁴ For the importance of *cattedre ambulanti* in the making of the Faina enquiry, see Chapter 5.

⁴⁵ [Favero (2011)], p. 276.

⁴⁶ [Coletti (1906b)].

produce at the same time knowledge on social problems and on the economic environment that limited the possibility of their solution⁴⁷.

When the Faina enquiry was launched in 1906 it was an enquiry that programmatically concentrated on the condition of peasants and smallholders. The focus naturally was on typical peasants and typical farms⁴⁸. When instead of the agronomic elements of the farm type, the investigators stressed social and ethnographic facts, such as the peasant mentality, housing, living standards, etc., almost inevitably their research, while keeping them still within agricultural economics, came close to the research of ethnographers and sociologists. In both cases, monographs of farms were considered the best way to capture farm types. Since agriculture was described by means of typical farms, and typical farm presupposed typical farmers, great importance was attributed to the description of living and working conditions of typical farmers. These were described through the selection of documents: contracts, photographs, drawings, witnesses, budgets. Agricultural economists shared these methods with ethnographers or scholars of folklore, who transcribed the legitimate traditions of a population. They did so, because contracts, for instance, were the cornerstone of the economy and determined by their prescriptions the prevalence of certain farming types.

Ernesto Marengi, who was the enquiry's technical delegate in Calabria, documented land lease contracts in the area. They usually followed standard types with similar modes of renewal, payment structure, etc. Sometimes standard contracts were recorded on blank forms that the parties themselves could fill and specify. In other cases, contracts might be regulated by conventions, transmitted orally, to which the parties could add their specific requirements, but which they generally respected. Marengi collected examples of written types and transcribed oral contracts (discussing their possible variations).

⁴⁷ For some aspects of the rising importance attributed to the interconnection between moral elements and economic milieu, and economics as a middle ground for facing the social question in France, see [Rabinow (1989)].

⁴⁸ Chapter 5.



Figure 8.1: A photograph taken by Simone Magliolini, assistant to the Travelling Chair of Agriculture in Borno (Lombardy) during the 1920s (Milano (MI), Regione Lombardia, fondo SimoneMagnolini, serie Vita rurale, SMA 144 LS ND).

Other areas where the enquiries of the economist and of the ethnographer overlapped were the study of agricultural techniques and housing. The volumes of the Faina enquiry contained a great many photographs of houses (typical houses, of course) and peasants engaged in agricultural activities. This was the same kind of material that agricultural economists who worked for local institutions of agricultural extension (*Cattedre ambulanti*) also collected in their daily work. Only pictures could properly reproduce the different typologies of ploughs and the different ways of using them. They thus constituted invaluable documents⁴⁹.

The investigators of the Faina enquiry also took a great many photographs that delineated population types in terms of their traditional clothing and physiognomy. Types could and should be exhibited. This obviously left open the problem of selecting the truly typical costume, tool,

⁴⁹ See also [Šebesta (1980)].

village structure, etc., a problem equally resented by ethnographic collections of the same years⁵⁰. In some cases, agricultural economists organized displays of the life of villages for the benefit of the visitors of national or international fairs⁵¹.

This sociological-ethnographic approach to farm types shows the contamination between strictly agro-economic studies and anthropology and linguistics. The overlapping was mutual and, in parallel with the field work of agricultural economists, anthropologists investigated the possible causes of poverty in Southern Italy. In the study of Southern Italy carried out by Alfredo Niceforo, the investigation of socio-economic factors combined the “physical study, the pathological-physical and the psycho-physical study of the individuals who constituted the population studied”⁵². Ethnic types were identified by a plurality of elements, cultural and physical. For Niceforo, as for his teacher Cesare Lombroso, anatomical types demonstrated socio-economic characteristics. Photographs or even physiognomies described by means of police methods of identification offered material for overall judgment. Niceforo was highly influential on Italian public opinion and in 1920 became a member of the Council for Statistics, which superintended Italy’s statistical works⁵³.

Although not everybody agreed on the racial explanation of Southern Italy’s economic destitution, reasons for this backwardness were inevitably attributed to a plurality of causes that included not merely economic facts but traditions, culture, mentality, etc.⁵⁴ Ethnography, physical anthropology and economic investigation could combine and types should be able to summarize populations that were supposed to be homogeneous⁵⁵ while types often mutated into stereotypes.

⁵⁰ [Puccini (2005)], p.32, recalls the concern for representativeness expressed by Lamberto Loria in organizing the collection of folk objects for the Universal Exhibition of 1911, in Rome.

⁵¹ Laur prepared a fake “typical village” in Switzerland to exhibit local life, [Laur (1943)].

⁵² [Niceforo (1910)], p.16, quot. in [Protasi (1996)], p. 824.

⁵³ On Niceforo and the Italian anthropologists, see [D’Agostino (2002)].

⁵⁴ On different interpretations of Southern backwardness, see [Galasso (1978)], pp.14-30, while on the early stereotypes on Southerners [Petrusewicz (1998)].

⁵⁵ On homogeneity, see [Niceforo(1923)], and also [Baffigi (2007)] for a thorough discussion of the importance of such a concept in Italian statistics.

8.5 Conclusions

In the period discussed in this chapter, different definitions of type competed and overlapped. In fact, a rigorous formalization in the language of statistics proved hard to obtain. This very indeterminacy allowed researchers to bend the typical to answer a variety of needs. Together with the physical elements of crop rotation and surface, farming types could not avoid including other elements: techniques, technologies, contracts, family structure, etc. that were difficult or impossible to quantify, but were part of the expertise of agricultural economists in particular places. The farming type therefore had an agronomic and a social dimension: it existed empirically but it was also a prevailing style or a set of values diffused across the agricultural population⁵⁶.

Probably the most emblematic of the Italian farm types was the Tuscan share cropper, whose veritable myth focused not so much on the physical, agronomic data of the Tuscan *podere* but on the moral values of the share-cropper (*mezzadro*): the steady family, social peace, personal engagement in the enterprise, etc. So vivid was this myth that share-croppers from Central Italy would be dispatched to the most destitute areas of the South to export their techniques and values in so called internal colonization⁵⁷. It was this wide range of components that made the concept of type so valuable.

The social dimension connected immediately research in agricultural economics with ethnography and anthropology. There was a sort of methodological *koiné* (common language) in theory and practice that embraced such disciplines as anthropology and agricultural economics. This *koiné* was not necessarily the product of diffusion from one discipline to another; it could also be the result of a polygenesis (as the importance of farming types in appraisal practices sufficiently documents) that eventually led to phenomena of contamination. The common language centered on types allowed, in the view of the investigators, a grasp of local differentiation along multiple dimensions of analysis (economic, but also social, etc.). Hence the attention paid to representative individuals capable of summarizing and displaying the (blurry) type, rather than statistics. In agricultural economics, types possessed also a geographical character; they served to systematize structural differences induced by the adaptation to climatic,

⁵⁶ On farming styles, see the seminal [van der Ploeg (1994)], and a reassessment of the concept in [Vanclay et al. (2006) Vanclay, Howden, Mesiti, and Glyde].

⁵⁷ [Azimonti (1921)].

hydrographic, orographic and geological conditions. This adaptation extended to purely social facts, to the mores of the population.

The practices of agricultural economists, land valuation in particular, played a great role in the construction of types of farms. In field research, recognizing types was a matter of the eye, of *coup d'oeil* rather than of information, something that could only be learned by practice, and by experience. Statistics, doctrine, the science taught in university were preliminary to but not a replacement for fieldwork.

Notwithstanding this close link with expertise and practice, agricultural economists did not abandon a theoretical framework for their typical farm. Cheysson, in particular, provided the statistical framework: the farms selected for the investigation should display the characteristics that prevailed in the population according to the statistics available. In the first decades of the 20th century, agricultural economists combined rather uncritically Cheysson's criteria of choice with their own disciplinary tradition of farm studies. Since the 1920s, the viability of Cheysson's view of type has been questioned and the confidence in its results shaken, but, as Serpieri's *Guida* witnesses very well, farm types still responded to the methodological needs of agricultural economists.

In practice, the debate in agricultural economics on the respective roles of statistics and monographs, of average and type, ended with the marginalization of type but not with the disappearance of monographs and types. The INEA systematically collected farm monographs all through the 1930s, while monographs of farm types remained an important component of enquiries and had a role in the making and updating of the agricultural *cadastre*. From the 1910s in Italy, agricultural economists also began to focus on the budget of farms and from farm monographs originated the budget studies that I discuss in the next chapter. In fact, it was through research in rural sociology that farm types (or farming styles) adapted to the new environment and survived⁵⁸.

⁵⁸ Farming styles look very much like the last mutation of farm types, see van der Ploeg's early work on farming styles: [van der Ploeg (1994)].

9 Monographs II: budget studies

The relationship between monographs and statistics, then, was in no way straightforward. Monographs could also turn into statistics. As Salvioni noticed, once a sufficient number of monographs was accumulated, it was possible and meaningful to apply the methods of statistics to them¹. There was a quantitative element in monographs that lent itself very well to statistical treatment. The most important quantitative feature of farm and family monograph was the budget. The entries of the budget were monetary values representing the incomes and the expenses of the farm or the family studied. Ernst Engel, for instance, discovered his celebrated law (that the proportion of expenditure destined to food decreased as income grew) by exploiting family budgets collected in Saxony². This way of approaching social issues was very successful for the investigation of socioeconomic phenomena and was applied everywhere in Europe, to investigate in particular, the conditions of the lower classes and their levels of consumption.

In Italy, Giolitti's policy of neutrality – which most landowners in the countryside opposed, as vehemently as factory owners opposed it in the cities – induced part of the landed classes to look for the peaceful solution of disputes in scientific investigations of agricultural economy. Tensions in the countryside revolved around the issue of land lease contracts in those areas where tenancy dominated and around wages in the areas where the work force predominantly comprised waged laborers. Agricultural economists, thus, focused on the micro level of farms – agricultural businesses (It. *aziende agrarie*) – in order to analyse the way that the product was divided among the different inputs of production: labor, land, capital, and entrepreneurship. To find how changes in the distribution of gross product that did not entail reduced production could be brought about, they started analysing farms' budgets. Agrarian economists and progressive members of the liberal ruling class hoped in this way that statistics might serve as a common ground for landowners, tenants, and trade unions.

¹ [Salvioni (1892)].

² On Le Play, see [Porter (2009)]; [Engel (1895)], which also contains Engel's previous work on Saxony, together with long discussions on data collected by Le Play and Duplectiaux.

Agricultural economists thus saw their discipline and observational techniques as the starting point in the quest of solutions to social controversies, and implicitly claimed for themselves the role of impartial observers. The data provided by agricultural economists seemed to account for Giolitti's policy of neutrality before and shortly after the World War. Coletti's approach was nevertheless insufficient to address such questions appropriately. The task required many more possibly standardized budgets to be collected, as Engel had done. Only in this way could agricultural economists make their case convincingly and claim impartiality.

The apparent impartiality of number, however, could exist only as a combination of different elements. The ideal of "mechanical objectivity" dominated the natural sciences and its principles extended to the collection of numbers in different fields. It seemed to offer a good solution to the issue of impartiality. As described by Daston and Galison in the case of the natural sciences, mechanical objectivity is the ideal of observing phenomena without interference from the subjectivity of the observer³.

Such an ideal was to be pursued by means of machines (the camera, the spectrometer, etc.). In social sciences, a close equivalent for mechanical objectivity was the rise of statistical observatories, whose data were collected almost mechanically by low-skilled data gatherers and could be freed from idiosyncrasies and aberrations by statistical manipulation⁴. Standardization, sheer quantity as regards the sample, and the machinery of the institutional framework stood for the machine component of mechanical objectivity⁵.

Mechanical objectivity in itself, however, was not an issue for early 20th century agricultural economists who thought it absolutely natural for investigators to skillfully select their material. The quest for impartial numbers, and for a general consensus on the results of their investigation, nevertheless, induced an increasing concern with subjectivity. For budget enquiries, the primary effect of this concern was an increase in the number of budgets collected. Since growth in scale would have been meaningless without standardization, agricultural economists also tried to make the production of account books more standardized. Finally, to make the data collection easier and more constant, they looked for institutional frameworks that

³ On objectivity in terms of the mechanical reproduction of phenomena, freed from the perturbing influences of the scientist's choices, see [Daston and Galison (2007)].

⁴ [Porter (2007), Porter (1995)].

⁵ The phenomenon of a growing mechanization and "taylorisation" has been observed in recent works by T. Stapelford and by [Didier (2009)], for different aspects of American agricultural statistics.

allowed them to pursue their research. These developments were costly and, to be accomplished, required agricultural economists to form alliances with different social forces.

The institutional model for the collection of farm budgets was Ernst Laur's Accounting Office. We can call this metaphorically an "observatory" for the economic life of the countryside since it was able to collect significant numbers of budgets every year. In the words of Ernesto Marengi, similar institutions "mark the beginning of a new period in the history of agricultural economics, in the same way as the invention of the weighting scale marked the beginning of a new and glorious period in the history of chemistry"⁶.

In Italy, as Giolitti's neutrality experiment came to an end, and the rise of the Fascist regime froze social conflicts, the forces that supported inquiries on distribution weakened, and agricultural economists tried to redirect their methods of investigation along productivist lines, in agreement with the new interests of some of the most advanced groups of the landed elite. How agricultural economists tried to reclaim safe neutral ground out of the muddy marshes of political partisanship (if the reader will allow me this Dutch metaphor), and why they failed in the Italian case is the main point I hope to clarify in this chapter. I will thus examine different ways of dealing with farm budgets, from Serpieri's experience at Società Umanitaria di Milano to the INEA's series on farm budget statistics. Through such cases, I trace the effort to make numbers more objective (and less reliant on individual experts) the way in which this effort responded to dramatic political changes, and how in the end, Italian agricultural economists fell short of their alleged models.

The data provided by the observatories of agricultural economics, nevertheless, were not without effect. In sec. 9.4, I discuss how the definition of 'typical' was questioned when statistics based on the observation of a significant number of farms were made available by the observatories.

9.1 Serpieri and the peasants of Alto Milanese

In 1904, the Società Umanitaria of Milan promoted an inquiry on the land leasing and labor contracts that involved peasants in the area of Milan. The SUM had been established thanks to

⁶ quot. in [Istituto centrale di statistica (1930)], p. 240: "... segnano una nuova epoca nella storia dell'Economia agraria, nella stessa guisa che la introduzione della bilancia e del metodo ponderale ha segnato un nuova e gloriosa epoca nella scienza chimica".

the legacy of Prospero Moisè Loria in 1902 “as a Red Cross, which rescues and assists those who have been injured on the battlefield of industry”. In Loria’s mind the activity of assistance could not be disjoined from a positive understanding of the “factual conditions determining its activity”⁷. The SUM hence dedicated a great deal of its activity to the investigation of the conditions of the working class, in both its Labor and Agrarian Offices.

The two offices launched a joint enquiry on the living conditions of the peasants of the Milanese region (the Labor Office, directed by Giuseppe Lorenzoni, took part in the preparation of questionnaires)⁸. The wave of strikes and acts of sabotage that hit that area in 1901 had been impressive (64 strikes in 48 municipalities⁹) and had been followed by substantial changes in the land leasing and labor contracts of the peasants¹⁰. In order to study such changes and their effect on the conditions of the peasants, the SUM charged Serpieri, who was then a young professor of Appraisal and Agrarian Economics, with the task of investigating the situation, “by surveying the actual conditions of a great number of real cases, i.e., a great number of estates and peasant families”¹¹.

This enquiry marked a turning point in the use of farm monographs. Although surveys of farms could still be woven into a wider inquiry, as in the Faina Enquiry, in Serpieri’s work they formed the empirical basis of the analysis. Farm surveys were here employed in a way closer to that of Dettweiler’s *Die Handarbeit in der Landwirtschaft*¹². Instead of referring to them as “indices” or “episodes” (as Coletti had done), Serpieri wanted to replace, by means of farm monographs, “quantitative, specific, exact terms by qualitative, generic terms whose interpretation wavered with the mood of individuals”¹³. The macroscopic effect of this desire was a growth in the number of farm budgets collected and a focus on a relatively small and homogeneous geographical area. The survey of individual estates (which contained a number of farms leased to peasant families) and the collection of peasant budgets in the Upper Milanese took almost three years. Serpieri and his two assistants visited 114 estates in 95 municipalities out of 169

⁷ Quot. in [Granata (2003)].

⁸ [Lorenzoni (1903)].

⁹ [Serpieri (1910)].

¹⁰ On the evolution of peasant life in the area, see [Corner (1993)].

¹¹ [Serpieri (1910)].

¹² Dettweiler had collected very specific questionnaires from a relatively large number of farms in order to determine how manual labor was used in agriculture: how many working days per year, what were average wages, etc. He had elaborated the data in order to reach some kind of general conclusion by computing means and dividing the population into classes.

¹³ [Benini (1906)], quot. in [Serpieri (1910)], p. XII.

municipalities in the area studied and investigated 206 families in 89 municipalities and 129 estates (94 of them included in the 114 mentioned above).

Estates' owners or administrators were asked to reveal to the investigators as many details as possible concerning the organization of the estate. The questionnaires covered three points. The general description of the estate came first: its extension and the different crops that were cultivated, but also the systems adopted to administer it, the composition of capital (land, trees, and buildings), the productivity of the soil and the way the estate was divided into different farms. Second, there was the investigation of the economic budget of the estate. The third question covered by the questionnaire for the survey of estates concerned the relationships between the owner and the peasant families, and, in particular, the contracts that bound the two. By law, landowners had to keep an updated account of the exchanges occurring between them and their peasants, called the *Libretto Colonico* (a record of all the exchanges of services and money between the sharecropper and the landowner), but in fact landowners kept such accounts very irregularly or unreliably, preferring to be "fair" in their own way or deliberately taking advantage of the ignorance of the peasants. This was nevertheless the element in the estate organization on which most data were available.

The questionnaires for families aimed at describing the peasant family in its composition (number of family members and housing), and the farm they worked on (use of farm land and respective extension of different crops), including the capital they had invested in the farm (*capitale d'esercizio*), the ways in which the land was cultivated, the amount of work they did on the farm, and the final economic results. The farm budget was intended to determine "the net income of the peasant family, i.e., how much they earned in remuneration for the labor they expend on the farm and the capital they invested (in the form of livestock, tools, etc.). It should be noted here that Serpieri's "family surveys" are significantly different from Coletti's (i.e. Cheysson's) "family monographs". In fact, Serpieri had in mind farm monographs, instead, and the budgets he presented were the peasant farms' budgets, where peasant families themselves entered only as the source of inputs (management, labor and part of the capital) and as the recipients of the remuneration of such inputs.

From a statistical point of view the main result of this impressive empirical work are the six tables that conclude the discussion on "the income of tenants". The scientific "neutrality" of Serpieri's position manifested itself in the economic analysis of contracts that he conducted on the basis of the data collected. The way in which the gross product of farms was split between

landlords and tenants, which was discussed in the text by means of idealized and generic examples, is displayed in these tables. Three of them concerned contracts which involved at the same time payments in kind (forms of sharecropping) and in money (*contratti misti*), the other three concerned farms whose rent was paid exclusively in money (*affitto in danaro*). For each of these two macro-types, the first table showed how the farm gross product was divided between the different co-operators of production. Serpieri and his collaborators computed the gross value of production for each farm. They estimated a “standard” annual yield and multiplied it for the prices they judged to be reasonable (slightly lower than current prices, to account for transportation and storage expenditure).

This was a complicated operation that involved plenty of discussions with peasants, inspections and conjectures. From the ensuing value, a quota was subtracted immediately because it was due to the landlord (sharecropping). Other expenses due from peasants according to their contracts (*oneri colonici*) were easier to determine because they were recorded by landlords in a special booklet (*libretto colonico*), whereas it was much more complicated to estimate the production expenses proper. Only the knowledge that investigators possessed of agricultural production processes and their skills in appraisal made estimates credible. Finally, the difference between the value of gross product that was left to the tenant and the sum of *oneri colonici* and production expenses yielded the average yearly income of the tenant family under the hypothesis that all of its labor force and capital were invested in the farm and in the farm alone (which in many cases was not true).

The annual average income so obtained was then divided by units of workforce (men, women, and children’s work was made comparable by means of a special conversion coefficient) to show the returns of labor. This was a very significant datum since a low return per unit of labor was taken as a symptom of some pathology in the farm. In the case of the Upper Milanese, Serpieri interpreted the low values reported in some areas as an effect of ongoing industrialization: as more and more family members entered factories, agriculture was confined to marginal labor (elders), and plots grew smaller (and mulberry trees declined)¹⁴. Income from industrial wages entered, instead, the tables that show the family income divided by numbers of consumers (here, again, made comparable by appropriate coefficients). Similar data are displayed for the farms leased in exchange for a monetary rent (the computation of deductions from the gross product was obviously different in this case).

¹⁴ On the decline of silk production as tenants gained contractual power, [Corner (1993)].

These tables showed the basic facts about the gross product of agriculture and its distribution that any decision on modifying tenancy contracts had to take into consideration. In themselves, these figures were the result of painstaking activity. The budget inquiry (*bilancio economico*) was particularly difficult to complete for estates. Most landowners were not easily persuaded to provide the investigators with confidential information: “asking straightforwardly for the estate’s budget was often perceived by the interviewed as exceedingly indiscreet for us to insist on”, wrote Serpieri.

But lack of confidence in the investigators was only part of the problem. Most landowners and their administrators plainly lacked the information asked for by the investigators: “in how many cases” – complained Serpieri – “the landowners themselves do not know and do not care to know the composition of the peasant families that live on their estate! In how many cases they do not even know exactly the estate’s total surface nor how much of it is dedicated to the different crops!”¹⁵. Part of these data could be “stressfully” retrieved from “messy logbooks and account books” whose accuracy was often questioned by Serpieri’s team. Faced by information that they judged “approximate and incomplete”, nevertheless, Serpieri and his team remained confident that the pieces of information collected would “check each other” and a consistent synthetic picture would result.

Moreover, for individual farms and tenant families, in the absence of account books, the collection of such minute information presented special difficulties. Peasants were “ignorant”, “rude”, “diffident”, and tended to complain about the owners more than they should have, but Serpieri assumed again that such method could “find in itself control and correction when extended (...) to a great number of family farms”. Moreover, the investigator, “an expert investigator, not lacking knowledge of agriculture”, should be able, in his opinion, to “exert on the answers a sufficiently critical spirit, being able to discuss and eventually contradict [the interviewee], etc.”

Difficulties also involved the reliability of the information collected. This depended not only on matters of precision, but also on larger social issues. Most of the families to be interviewed were chosen with the help of the owners themselves and the interviews were held in the presence of the owners or their representative, so that peasants – this was Serpieri’s explanation – would not exaggerate the misery of their conditions. In some cases, the participation of peasants was not

¹⁵ [Serpieri (1910)].

totally spontaneous, but in others, peasants themselves were eager to attract the attention of the investigator. Serpieri, for instance, interviewed a significant number of peasants when a competition was held in Desio for the best farm (*colonia*); on this occasion, the tenants disclosed a great deal of information for the competition “under the incentive of prizes”¹⁶.

All this was openly stated, as the investigators were members of an educated class and their social stance allowed them to relate to peasants in an openly paternalistic manner, in particular in a book – such as the enquiry’s proceedings – that was destined for other members of the educated classes and would never fall into peasant hands. But landowners were equally liable to manipulate information, although Serpieri was less vocal in his criticisms. He expressed skepticism about the information they provided, criticized the way they recorded the debts and credits of the peasants; he assumed that only by cross checking and comparing the data they provided could he paint a satisfactorily lifelike picture

In fact, Serpieri and the economists of the SUM tried to achieve a neutral point of view, somewhere between the claims of the peasants or factory workers and that of the agricultural or industrial owners, but no purely mechanical procedure made the information they collected fully free of lies, omissions, and manipulation on the part of their informants. “Scientific neutrality” had to navigate between the Scylla of landowners who were willing to resolve social contrasts without great interference from economics (and more interference from the army), and the Charybdis of peasants who trusted their own resistance leagues and trade unions much more than they trusted agricultural economists.

9.2 Farm accounting offices and accounting statistics: Laur

Serpieri’s use of farm monographs in *Il contratto agrario e le condizioni dei contadini nell’Alto Milanese* shows most of the difficulties that Italian agricultural economists, among others, faced when they wanted to collect a significant mass of detailed data on the fine grained structure of farms. The precision, comparability, and reliability of the data each constituted a problem. Moreover, long and painstaking enquiries such as Serpieri’s focused on small areas and restricted periods of time. In order to be able to extend them across space and time, in order to build what we would now call historical series, radically new institutions were required. In 1901, shortly

¹⁶ [Serpieri (1910)], p. 205.

before Serpieri began compiling his surveys in Milan, Ernst Laur, *privatdozent* at the ETH in Zurich, established an Office of Farm Accounting (*Abteilung fuer Rentabilitaetserhebungen*) in Brugg. The Office was a branch of the Secretariat of the League of Swiss Peasants (SBV) and was funded by the Swiss Federal government. Its aims were at least twofold: on the one side, its task was to disseminate accounting techniques among peasants so that they could manage their farm more rationally; on the other, the resulting accounting books were to serve as the basis for detailed statistics of agriculture¹⁷.

Year after year, the office instructed dozens of peasant-farmers so that they could keep the accounts of their farms (on average each year 55 farmers for the German cantons, 40 for the French, and 20 for the Italian). For years after the course, the peasants so instructed collaborated with the Farm Accounting Office, by compiling their accounting books and sending them to the Office in Brugg. In a few years, Laur had collected hundreds of farm accounts from all over Switzerland, all compiled according to the standard criteria of the Office (which Laur himself had devised for his aims and whose application was verified by employees of the Office who visited the farms in the survey to check for errors¹⁸). Land, inventories, stocks were assessed, by the Appraisal Office of the Sekretariat, according to shared principles, thus offering a reliable and comparable starting point for the following budgets. By 1922, Laur had 6063 farm accounts from 2280 farmers¹⁹.

On the basis of these data, Laur and his collaborators elaborated a vast mass of statistics “able to measure – in time and across economic groups of farms – the economic structure of enterprises and their economic results, and consequently, also the fluctuations determined by natural or economic factors: statistics suitable, thus, to serve as the basis of certain comparisons, and to provide a systematic economic illustration of Swiss agriculture”²⁰.

Monitored farms were attributed to different classes according to their dimension, the prevailing regime of soil use (the s.u.r. or *Bodennutzungssystem*, of which there were 26 typical ones in Laur’s system²¹), and the relationships with the milk transformation industry (*Betriebsrichtung*). The classes corresponded to categories (geographical and productive) that were considered

¹⁷ On Laur see [Baumann (1993)] and Laur’s own autobiography, [Laur (1943)].

¹⁸ Laur’s accounting system is in [Laur (1920)](8 Auflage, 1927); to Italian agricultural economists it was summarized by [Marengi (1922)].

¹⁹ [Howald and Schweizerischer Bauernverband (1922)].

²⁰ [Brizi and De Polzer (1938)], p. 15.

²¹ [Laur (1920)].

agronomically and socially significant. They were thus conceptually analogous to farm types, as discussed above for Coletti. Many statisticians, nevertheless, thought that the vast mass of farm accounts collected could not be representative of Swiss agriculture: the self-selected sample seemed likely to include the best farms in Switzerland²².

For all classes, alongside other figures, the office provided three sets of fundamental indicators of economic activity: the gross return, the sum of expenses, and the income or net return. The gross return was “a very carefully recorded and as carefully appraised account of the increases in values due to the operations of the farm plant for the time period involved”²³. It included not only operations in cash, but also contributions in kind and appraisals of the variations in the inventory. The same held for the expenses, which included not only cash outlays and outlays in kind, but also “the appraised value of the labor time of the farmer and his family” and “a nominal charge for the farm operator’s management”²⁴. The resulting income of the family was “that share of the gross return which, within a given time period, has become the property of the operator and may be consumed by the operator and his family without reducing the family’s farm assets during the same period”²⁵. There were four measures for it, the first three more appropriate to smallholdings, the fourth to larger farms:

1. Family Farm Earnings, reported as (a) a total money figure and (b) per day of man labor.
2. Family Labor Earnings, per day of man labor.
3. Family Capital Earnings, reported as (a) a total money figure and (b) as a percent of family capital invested.
4. The Net Return (on total farm assets), reported as (a) a total money figure and (b) in per cent of total invested capital.

By means of his accounting definitions, Laur and his collaborators determined for each class of farms and for different years the distribution of total product in remuneration of the different factors of production. In particular, they showed how the gross product was divided between the abstract economic characters of capitalists, entrepreneurs, landowners, workers, on the one hand, and, on the other, the average incomes perceived by concrete combinations of such

²² Such criticisms to the method of Laur’s accounting statistics are hinted at in [Istituto centrale di statistica (1930)], p. 241.

²³ [Roth (1931)], p. 562.

²⁴ [Roth (1931)], p. 563. The rejection of this aspect of Laur’s method was the starting point of A.V. Čajanov’s theory of the family farm; for him, it makes no sense to assign a monetary value to a working time which lies outside the category of wage labor; A. V. Čajanov, *The organization of peasant economy*, (1925) in [Čajanov et al. (1986) Čajanov, Thorner, Kerblay, and Smith].

²⁵ Laur quoted in [Roth (1931)].

abstract characters as they concretely manifested themselves in Switzerland: entrepreneur-capitalist-worker (a farmer who was working on a farm that belongs to somebody else but who has invested his own capital), entrepreneur-worker (a farmer who borrowed his capital and leased the land), entrepreneur-capitalist (a farmer who leased the land and hired labor), etc. By so doing, Laur provided a conceptual (and statistical) framework in economic terms for the understanding of economic contrasts in agriculture.

From a scientific point of view, the figures made it possible to identify relationships between phenomena, for instance between classes of surface and income, by means of a method intuitively similar to correlation²⁶. A key result concerned, for instance, the so called social income per hectare. This was defined as gross product minus all the expenses but those for labor and taxes, i.e., all that was left for distribution among the human co-operators in production (the owner, the entrepreneur and the workers). The Office's statistics showed that social income per hectare was larger for the classes of smaller farms, and that, moreover, small farmers achieved larger production per hectare and sold more of their production per hectare on the market with respect to larger properties, thus contributing more to the welfare of cities. The results I have just mentioned motivated Laur's support for farmers rather than large estates: smallholdings (if not too small!) were socially more efficient than large properties. Laur thus offered sound statistical arguments for the idea that relatively small farms formed the backbone of a healthy agriculture and that family farmers were an asset that European states should protect against the temptations of cities and fluctuations of world markets²⁷.

It must be stressed, nevertheless, that Laur and the Secretariat of the League of Swiss Peasants were more concerned with conflicts between agriculturalists and industrialists, between producers and purchasers of agricultural products, than with distributive struggles within agriculture (daily laborers and small tenants against landowners, for instance)²⁸.

²⁶ A discussion of the limits of this view in [Brizi and De Polzer (1938)], p. 97: "When – to take only one example – we elaborate the resulting incomes by classes of surface, we are actually considering as a unique cause, what is in fact – however important and influential – only the result of a complex of causes (the surface under crop). Nothing guarantees – in each individual farm – that these causes really affected the result or that they always affected the result positively".

²⁷ [Laur (1930)].

²⁸ In his autobiography Laur connected the birth of the SBV with the protectionist wave of the 1890s, and the activity of the Secretariat bore this mark; [Baumann (1993)] shows how the SBV lobbied in favour of agriculturalists and against industrial lobbies.

Alongside the scientific ones, these numbers also served practical purposes in defense of SBV associates. On the one side, they influenced the political debate, motivating requests for subsidies and protectionist tariffs. On the other, they were intended to guide the specific decisions of farmers. On the basis of these data, the Office for Land Valuation, for instance, (another branch of the SBV's Secretariat) computed for prospective purchasers of land the appraised value of plots (*Ertragswert*) and their *Existenzwert*. What was called the *Existenzwert* was the maximum theoretical value that a peasant family could pay for land without reducing its wealth and possessed a clearly prescriptive value, forming the basis of Laur's "economic education" of peasants²⁹.

Very early, Italian groups of agriculturalists developed an interest in Laur's experience. The International Institute of Agriculture (IIA), which at that time was led by Marquis Raffaele Cappelli and was heavily under the influence of Italian concerns, despatched Ernesto Marengi to Brugg. Marengi, who taught accounting, appraisal and agricultural economics in Milan until his early death in 1926, prepared a detailed report for the IIA in which he described Laur's activity (as well as other institutions promoting accounting among farmers) and its advantages for understanding the problems of agriculture. The report focused on the two sides of Laur's work: the dissemination of accounting techniques among farmers and the usefulness of aggregate statistics that by means of accounting data could display indicators for the structure of agricultural business. Although it was published complete only after the war, Marengi's report was ready by 1914 and had already begun circulating in Italian during WWI, immediately making Laur's office a standard reference point for statistics of agricultural businesses³⁰.

9.3 Observatories of agricultural economy

Since Serpieri and his school – after the older Cuppari and Niccoli – put the study of farms (*azienda agraria*) at the core of the interests of Italian agrarian economists for generations³¹, they were among the first to seize the potential of Laur's statistics. They thus began a series of

²⁹ On Laur's methods for appraising properties, see [Laur (1912)].

³⁰ [Marengi (1914)]; [Institut International d'Agriculture (1920-1924)].

³¹ A. Serpieri's books were reference textbooks for agricultural economists until the 1960s, and I can say from direct experience that Serpieri's books are still often on loan at the library of the faculty of agricultural sciences in Florence! See [Di Sandro (2006)].

attempts to extend the investigation of farm budgets to the whole of Italy and to an ever-increasing number of farms and farm types.

Data from farm budgets responded to two different research interests: a productivist and a social one. Serpieri pursued these two lines together. For him, who stressed the role of entrepreneurs (*imprenditori agricoli*) in almost Schumpeterian accents³², only the analysis of accounting data made it possible to describe the different combinations of inputs of production and resulting outputs. But, as we have seen, he also resorted to farm budgets in order to observe the conditions of peasants and determine the range of possible variations that could be introduced into tenancy contracts. When Serpieri moved from the Scuola d'Agricoltura of Milan to Florence, his pupils in Northern Italy concentrated on farm accounts in order to evaluate the economic results of different regimes of land use. It was in particular Giuseppe Tassinari who pushed forward this line of research at the University of Bologna (while the myth of sharecropping induced Serpieri's school in Tuscany to pay more attention to social and even sociological aspects of agriculture³³).

Tassinari began collecting farm accounts from various parts of Italy in 1912, just after the social struggles reached their pre-war peak in the area of Bologna³⁴. His work, suspended during the war, was resumed in the early 1920s when strikes and social protests reached culmination point and violent repression began. The research was finally published in 1926 with the support of the Federazione Italiana dei Consorzi Agrari, the spearhead of agricultural modernization in Italy, as a synthetic view on the effects of the World War on Italy's agricultural businesses.

Tassinari's *Saggio intorno alla distribuzione del reddito nell'agricoltura italiana* resembled, in principle, the work carried out by Luigi Einaudi's group a few years earlier. In Turin, Einaudi's pupils collected accounts of joint stock companies in order to "ascertain how economic results varied across time, sectors and firm size"³⁵. Tassinari, instead, examined variations of economic results according to farm size and crop specialization. His analysis, however, was complicated by issues of sample size and completeness. While the results of joint stock companies were relatively

³² See: [Serpieri(1901)] and [Serpieri (1916-1917)].

³³ The myth of Tuscan *mezzadria* runs as a red thread from Sismondi's "Tableau de l'agriculture toscane" (in 1801 and Sidney Sonnino to R. Putnam's analysis of Tuscan civism and social capital in the 1990s, [Putnam and Leonardi (2002)]); farm monographs in Tuscany produced, in the 1930s, the image of happy and blessed families that appear in the INEA monographs (recently republished in [Tolaini (2005)]).

³⁴ On the increasing difficulties encountered by intermediate positions in social struggles around 1910, see [Rogari(1994b)]; for a typical reaction of landed interests to strikes and legislators' reformism, see the report that the Agraria di Ravenna addressed to the government, [Associazione Agraria Ravennate (1910)].

³⁵ [Forte (2009)], p. 156.

easy to get, gathering a statistically significant sample of farm accounts would have been unfeasible.

Tassinari, thus, centered his analysis on farm types and after a short general introduction, he presented a number of monographs of farms, each representative of different regions of Italy and different productive specializations: there were 3 farm types for the irrigated areas of Piedmont and Lombardy, 2 types for the dry farms of Emilia, 2 types for Monferrato's vines, etc., for a total of 20 types covering most of Italy's regions. For each type, the book offered a monograph of a single actual farm, which was described in its inputs and outputs, often for both periods 1912-14 and 1921-22. Although Tassinari acknowledges that his types did not represent the whole existing variety of farms (the South was in particular underrepresented), he built in this way a "geography" of farm types that followed the lines traced by Niccoli's *Manuale* of 1897³⁶.

After the presentation of the individual types, Tassinari discusses the most relevant economic issues. The key numbers for him were the net product of the farm, and the rent; the first being the portion of gross product that is available to the agricultural classes (workers, entrepreneurs and landlords) after subtracting production expenses, and the latter being the return on land. Tassinari compared the result of the investigation for 1912-1914 and for 1921-1922, in order to discuss the changes brought about by the war with special attention to the distribution between landlords (the rent) and tenants (profits and wages). It is to be noticed that the figures he presented were not averages. They refer, instead, to the individual farms presented in the monographs, whose "typical", representative character had to be assumed beforehand.

That Tassinari limited his research to a few typical farms, instead of collecting a large mass of data, did not result from deliberate methodological reasoning. As Serpieri states in the introduction to Tassinari's book, the investigation originally began with the aim of providing "research on the economic structure of agricultural living organisms" for the "solution of disputes" between wage laborers and landowners. This meant that the whole research was initially dominated by urgency: "every time necessity was impending and new positive information urged, researchers would be called upon for help, in order to investigate and prepare the elements for judgment (such was the case with the agricultural unrest of Bologna, Tuscany and Soresina; with the update of cadastre's valuations; with the crisis of wheat in 1923 and the

³⁶ [Tassinari and Federazione Italiana dei Consorzi Agrari (1926)].

more recent crisis of beetroot)³⁷. Tassinari himself acknowledges in the introduction that he could study only those very few farms whose owners decided to cooperate.

Statistics of accounting allowed him to focus on both distributive and productive issues, and were stimulated by contingent situations of disorder, either social or economic. If Tassinari's collection of farm monographs was, initially, driven by the will to find a solution to the social turmoil that was compatible with the necessity of production, it eventually attracted the attention of powerful Federconsorzi because it offered a starting point for an analysis of the effect of price crises on agricultural business³⁷. The demand for budget statistics did not disappear, in fact, when the Fascist regime put an end to strikes. On the contrary, the relative social peace induced the Federconsorzi, and other organizations to plan the establishment of permanent institutions for the collection of accounting data with a stronger focus on agricultural systems (*sistemi agrari*) and their respective economic results.

When Serpieri entered Mussolini's government as vice-minister for agriculture, and established IESA as the new nationwide research centre for agricultural economics³⁸, he included among the tasks of the new Institute the creation of local offices for farm accounting: the Observatories for agricultural economics. The aspiration was to replicate in Italy Laur's Office for Farm Accounting. The first of such observatories to be created was that of Bologna. The creation of the Observatory was promoted by the Società Agraria della Provincia di Bologna, an old institution of the landed patricians who had sided with the Fascists since their appearance in Bologna³⁹.

Like its model in Brugg, the Bologna office also combined in principle scientific tasks ("it will update the monographs of agricultural businesses that already exist and will undertake the missing ones (...); "elaborate data resulting from accounting for research in agricultural economics"; "cooperate (...) with the service of agricultural statistics") with practical ones ("elaborate a method of accounting suitable for the peculiar local conditions"; "keep the accounting books of all the smallholders and tenants who required its assistance")⁴⁰. To lead the Observatory, the Società agraria called Tassinari himself. Under the latter's guidance, Dario

³⁷ On the Federconsorzi, see [Fontana (1995)], and in particular the section by [Adorno (1995)], for the relationship between Serpieri, Tassinari and the Federconsorzi.

³⁸ On the early history of INEA and agricultural statistics, see [Magnarelli (1981)] and D'Autilia (1992)].

³⁹ On the Società Agraria Bolognese, its role in bringing about the regime change in Italy, and the type of technologically advanced agriculture it promoted, see [Cardoza (1982)].

⁴⁰ Funding was provided by the Cassa di risparmio di Bologna and by the government: *Annali della Soc. Agr. Di Bologna*, 56, 1925, p.49.

Perini carried on Tassinari's work on farm accounts within the institutional framework of INEA's Observatories for agricultural economics.

In 1932, INEA began publishing the statistical series *Risultati economici di aziende agrarie*. In these reports Perini published a vast collection of data taken from the accounting books of hundreds of farms from all over Italy⁴¹. As the omnipresent Serpieri puts it in his preface to the first volume of the series, Perini's work was the first comprehensive collection of statistics based on accounting data available for Italy's agriculture. Since by that time many other countries had been publishing their data regularly in a series coordinated by the IIA and inspired by Dr. Laur⁴², Serpieri emphatically declared that Perini was finally filling a gap.

The Observatory, however, was never able to instruct peasants or landowners in accounting techniques, because it lacked adequate financial resources and maybe also because of a certain lack of interest on the part of agriculturalists⁴³. As a consequence, although Perini was able to collect a much larger number of account books than Tassinari, such books were still kept according to different methods and definitions, and the lack of standardization made them ineligible for statistical elaboration: Perini renounced any elaboration of the kind provided by Laur's team, and simply presented the data for each individual farm, adding only a synthetic comment on the trends of Italian agriculture.

Only Giuseppe Medici with the assistance of the Federconsorzi, attempted to statistically elaborate the monetary and real data of farms that had been collected. Medici, who after the war launched a land reform that increased the number of smallholders, used these data to question the very existence of typical farms⁴⁴.

⁴¹ In Perini's first volume ([Perini (1932)]) there are budgets for 110 farms compared to 65 of [Tassinari (1931)] which cover the years 1925-1928 (and it is actually a second updated edition of [Tassinari and Federazione Italiana dei Consorzi Agrari (1926)]).

⁴² Laur's importance is witnessed by his report to the IIA, [Laur (1-3 Octobre 1929)], by his address to the Agricultural Congress in Bucharest, and also the repeated mentions of him and his results in [Brizi (1-3 Octobre 1929)].

⁴³ See [Perini (1932)], since I was unable to document the activities of the Observatory otherwise (the Bologna branch of the INEA was somewhat uncooperative). Moreover, the *Annali dell'Osservatorio di economia agraria per l'Emilia* do not contain many details on the extra-scientific work done.

⁴⁴ [Medici (1933), Medici (1945)].

9.4 Medici and the typical farming business

The young Giuseppe Medici (later Minister of Agriculture in the De Gasperi cabinets after the Second World War) took part in the collection of data for Lower Lombardy. He accumulated a significant number of figures concerning the use of land, farm revenues, etc. In 1933, he published a paper in the proceedings of the Observatory of Bologna, *Ricerche intorno alla azienda agraria tipica*. The long contribution discussed whether “there exists a typical farming business, from a purely statistical viewpoint or [whether] the concept of typical should be limited to only certain specific factors or ratios”⁴⁵. This discussion was intended to move the concept of typical farm from qualitative to quantitative: was typical to be used in the proper statistical sense or in the “qualitative sense proper of some sciences or arts which consider the typical as a model or a paragon”? He therefore fundamentally questioned the relationship between statistics and monographs as it had been theorized by Cheysson and Coletti.

Typical, in statistics, meant “the most frequent value”. Statistical textbooks of the age used typical value to indicate the value of the mode⁴⁶. The whole point of the quest for the typical in the social sciences, however, was to find a value “which could replace or summarize the whole *seriazione* under consideration”, and for this task the mode was not always appropriate. In particular it was not appropriate whenever the distribution was not normal. The representativeness of the typical value (in the statistical sense, i.e., the mode) was hence “a function of the regularity of the phenomenon”: the closer the most frequent value was to the average value, the more representative the statistically typical value would be of the whole population⁴⁷.

There was an additional problem. Adolphe Quételet had assumed that it was possible to construct a statistically typical man by taking the average measure of each body part: the arm, the head, the trunk, etc. But, while the composing elements of a man seemed to be intuitively clear, what did a farm consist of? Not to say that this was an operation that transfigured a mass of data empirically gathered into a totally ideal image: was it legitimate? Could a similar ideal man, or an ideal farm obtained by adding up average parts really exist? It could well be that an average surface is incompatible with an average revenue, etc. Even if the quest for the typical farm was

⁴⁵ [Medici (1933)], p. 7.

⁴⁶ [Benini(1906)], [Niceforo (1923)].

⁴⁷ [Medici (1933)], p. 8.

reduced to a small homogeneous agricultural zone (by analogy to the search for average men limited to individual races) the relationships between the different components of the farms were in no way easy to understand.

In order to solve these problems, Medici as a preliminary divided the features for which he had data into two groups: the physical and economic features of farms. The first group consisted of 13 items ranging from surface, to yield per hectare, to number of working hours spent on the farm, number of machine, etc. The economic feature (9 items) consisted of the gross saleable production, the net product, the value of stock, etc. Medici argued that for agricultural businesses (*aziende agrarie*), the physical quantities often seemed to be more significant than the economic quantities. The fact was that the latter were functions of the former⁴⁸.

Excluding economic quantities from consideration meant reducing the importance given to the personality of the agricultural entrepreneur, since this was reflected mostly in the commercial action, and constituted the most relevant determinant of irregularity in the data. Moreover, the lack of uniformity in accounting principles would not have hindered the analysis of physical data. But reducing the analysis to physical data alone was also relatively harmless for Medici's argument since, if he found great irregularity (i.e. a non-normal distribution) in physical factors, how could he expect to find more regularity in the economic features that derived from them but incorporated also the variations of the market?

Medici proceeded to the analysis of the physical data available. He had data for five relatively similar agricultural zones (Ferrara and Alagna, Alto Pavese, Basso Pavese in Destra Ticino, Basso Pavese in Sinistra Ticino, Basso Pavese Vitato), that he considered separately. The classification of the farms according to their productive surface turned out to be incredibly far from the bell curve of normal distribution (Medici's Figure 9.1 shows the results for two of the five agricultural zones).

⁴⁸ To understand this, it is enough to consider, for example, that the net value of product per hectare was obviously a function of the farm surface and of the total product in physical units.

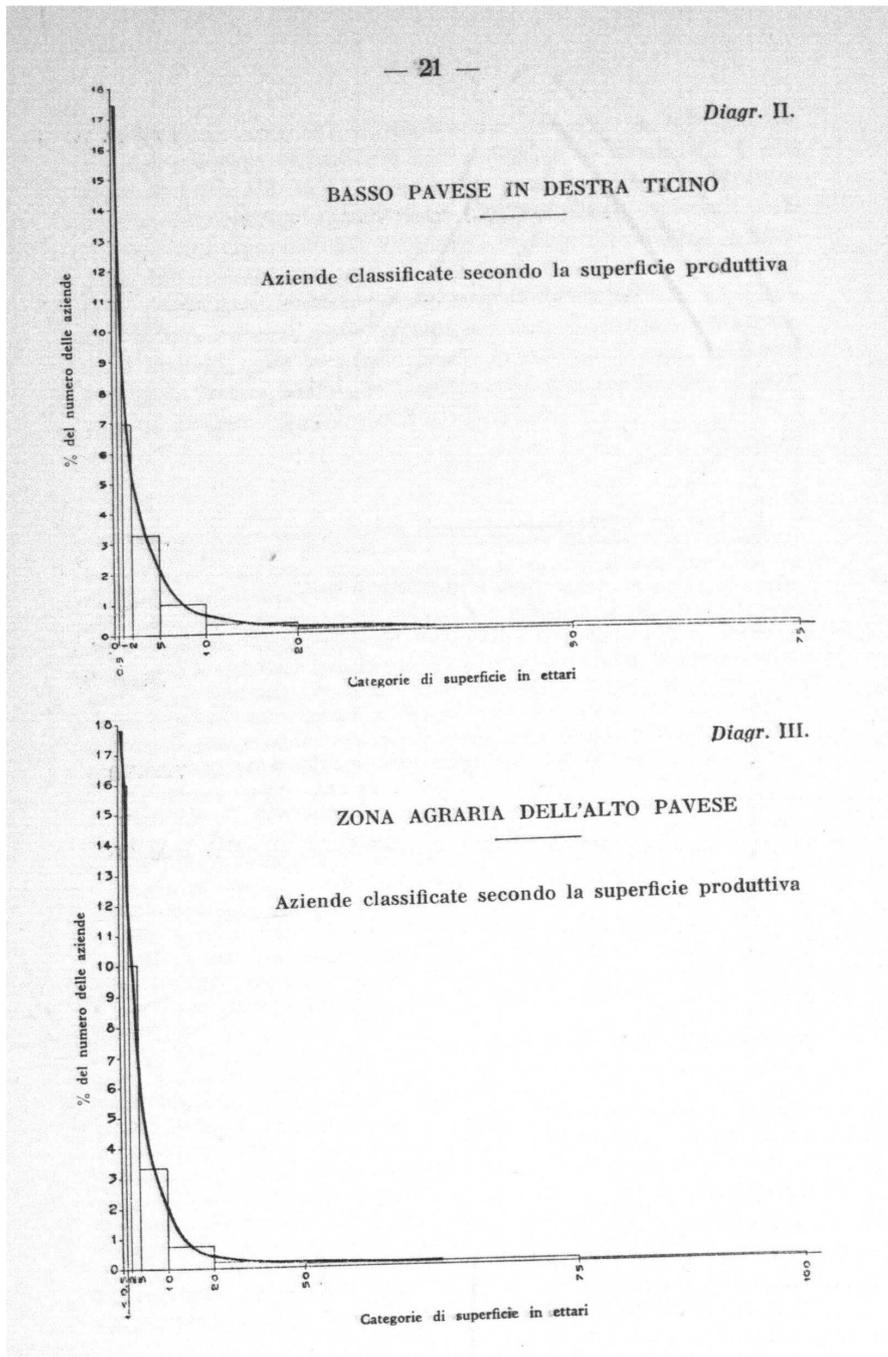


Figure 9.1: *Distribution of farms by surface in hectares*

The same held for the surface dedicated to each crop. The distribution was consistently irregular. The typical farm seemed not to exist even when the smallest and largest farms were excluded (in particular the former, a huge group of farms). In contrast to this result, however, the graphs displayed a regular curve when Medici examined the percentage of surface dedicated to each crop, instead of the absolute figures. Here finally the distribution appeared close to normal. This

meant, for Medici, that it was statistically meaningful to speak of typical farms (Figure 9.2 *Figure 9.2*).

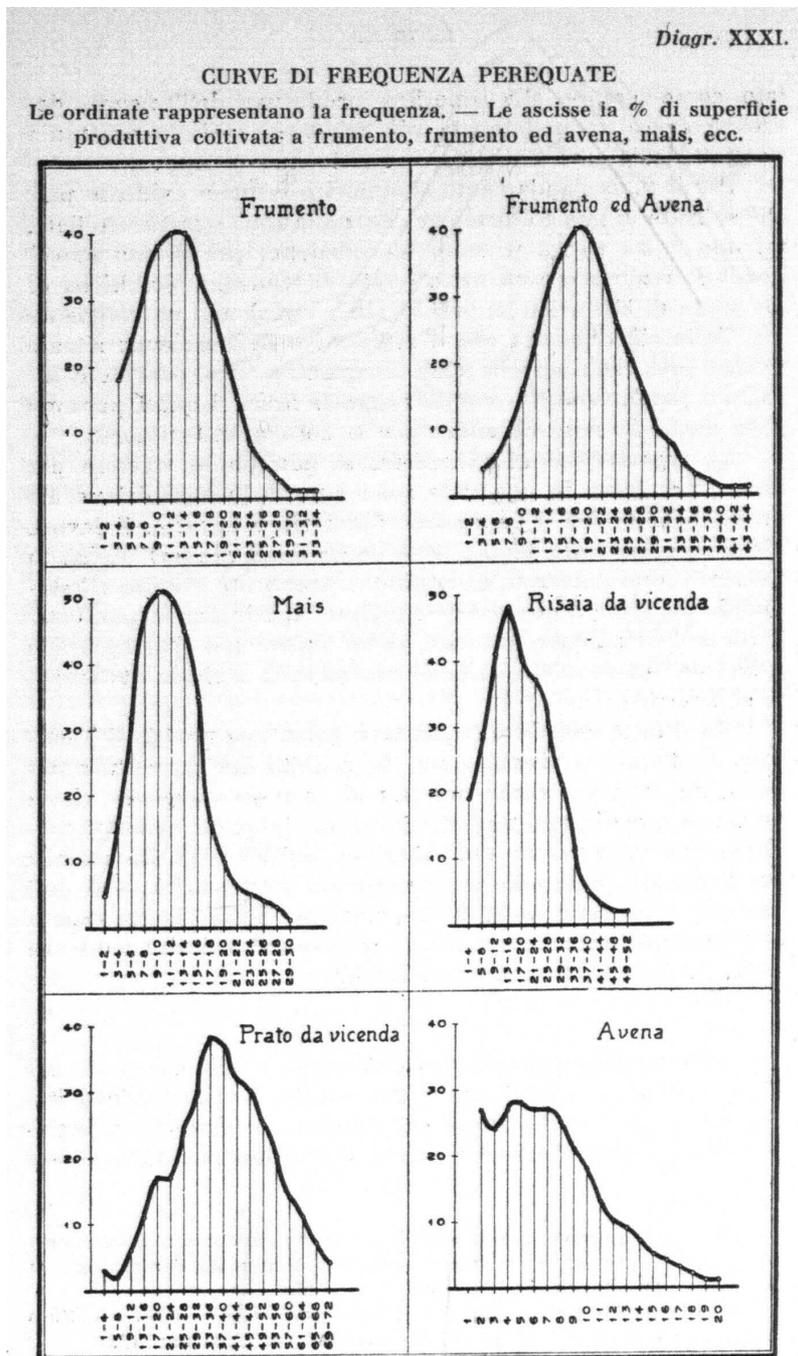


Figure 9.2: Distribution of the percentage of surface dedicated to each crop in different farms.

In this case the conclusions of statistics were far from unexpected for the agricultural economists. Even though the use of fertilizers and the increasing dependence of farms on the market made crop rotations less regular, inevitably each agricultural zone was characterized by a

succession of crops gravitating around one or two types. In the area of Alto Pavese, for instance, the prevailing types of crop rotation were two: the most common included rice fields, the less common excluded them. Independently of statistical data, this was easily observable for agricultural economists, almost at a glance.

Moreover, the persistence of conventional types of contract determined the prevalence of a symmetric (roughly normal) function for the distribution of the percentage of net product received by each factor of production (labor, land, agricultural capital, directive work) in each year in each farm (for these data, Medici relied on works by Giuseppe Tassinari and Stefano Perdisa⁴⁹). Contracts prescribed precisely the way that the product was divided between the farmer, the landowner, and the hired workers. The model contract acted persistently and determined a central pattern of income distribution with minor variations in one or the other direction.

In these two cases, although the normal distribution only approximated to the empirical curves, it nevertheless came reasonably close. For such features, the representative value of a typical farm, selected statistically, was relatively high.

Once reassured about the existence of typical farms, Medici confronted his results with economic theory to show their importance. Serpieri had assumed, in agreement with theoretical economists such as Walras and Marshall (sec. 8.2), that market forces drove entrepreneurs towards the typical farm. Their varying degrees of ability determined the distribution of farms along a normal curve of efficiency. As for the use of the single most important production factor, land, statistics should have shown a central (typical) value representing the size of a typical farm. They however did not and, according to Medici, could not, since it was impossible to assume equal cost curves for each farm. In fact, Marshall, according to Medici, had already been forced to define his representative firm in contradictory terms. Just like the theoreticians of appraisal, Marshall (according to Medici) had in mind a theoretical construct, but he also wanted to give it flesh and find an empirical counterpart:

Our typical firm must have lasted for a reasonable time, experienced a discrete prosperity, it must be managed with normal ability, it must be able to obtain, in

⁴⁹ [Tassinari (1931)] and [Perdisa (1933)].

a normal measure, such internal and external economies as are appropriate for the total volume of production...⁵⁰.

Although Medici's data confirmed the possibility of singling out some typical features, they also showed that an overall typical farm, obtained by assembling average values for each feature into an artificial construct, was a monstrum and ran into contradictions:

In the end, the agricultural economy of a territory, the result of the activity of individual businesses, cannot be replaced by an average datum, however clever and refined the statistical methods employed. And this because the "agricultural business", as a fact, is neither individually typical nor collectively typical, but atypical par excellence; it is an individual fact that bears the deletable traces of an unmistakable personal work, the product of the contrast between well defined natural elements and the man who manages the farm⁵¹.

But if the type could not be constructed statistically, how was the agricultural economist to proceed? He will use, following Medici's suggestion, real cases that he will then "ideally link with all the other farms wherewith the farm is connected in the reality of agricultural life". If a statistical definition of 'typical' was not viable, the cases that presented themselves to the attention of the researcher (for contingent reasons) had to be surveyed and critically analysed on the basis of the researcher's "intimate knowledge of the environment that he describes and which he only can thoroughly grasp so that difference and likeness will emerge".

Calling Marshall's definition of a typical or ordinary firm into question meant, in the end, casting a shadow not only on the monographic method, but also on those methods of appraisal that assumed the existence of an ordinary farm (i.e. an attack on Serpieri). Medici and Serpieri themselves seem not to have fully appreciated the consequences for appraisal and research, with the dominance of Serpieri's paradigm remaining unshaken for decades⁵², but the introduction of statistical methods in the study of farms paved the way for important changes. Although it was still necessary to induce individual farmers to open their account books, the treatment of masses of data, instead of individual monographs, made the results and the very science of agricultural economics more impersonal, more "mechanically objective", and widened the gap between farmers and economists, between the observed and those observing them.

⁵⁰ Marshall, quot. in [Medici (1933)], p. 106

⁵¹ [Medici (1933)], p. 113.

⁵² [Medici (1953)], [Serpieri (1946)], [Serpieri (1948)] and [Serpieri (1950)], in particular Chapter XV.

9.5 Conclusions

I have been trying to sketch the evolution of Italian research studies based on farm budgets and accounts. There are at least three lines of development that I would extract from this dash through thirty years of statistics. First of all, a tension existed between different ways of considering statistics. In the myth of Laur's Office can be discerned a general tendency towards data that emerge almost mechanically from the processes of the economy. What the Swiss had achieved was the standardization of accounts, the institutionalization and regularity of their collection, the collection of a great number of such accounts. This ideal did not respond to an abstract desire for objectivity alone. Smooth, standardized data spontaneously flowing from business to statisticians allowed much better manipulations and displayed the attractive properties of large numbers that the few monographs collected by field-experts could never show⁵³.

A second tendency, that partially contradicts the first one, was at work in the investigations directed by Coletti and Tassinari. Whenever significant quantities of farm budgets could not be collected, or could not be collected in time (as it was the case with parliamentary enquiries or with any other investigation dominated by the urgency of action), then a well-chosen example, a typical specimen, was considered to do as well and more cheaply. Actually, the most influential guide to fieldwork for agricultural economists consecrated monographs of typical farms is the working paradigm of the category⁵⁴. The analysis of typical farms, thus, was not simply a cheaper substitute for statistics of farm accounts. Its main concerns, as it emerged from being employed in parliamentary enquiries, was with regional differentiation, with mapping local types and with doing these quickly.

The long term tendency towards Laur's model that nevertheless dominated the field of budget and account research implied high financial costs. Offices for farm accounting required a heavy structure, a consistent number of employees and a permanent organization. But they also required social forces determined to engage in the process. The tenants and smallholders who went to attend a three day crash course in accounting and who submitted their accounts to the

⁵³ But on the subjectivity of appraisal in business statistics, and in particular of inventory, see [Desrosières (2001)].

⁵⁴ [Serpieri (1929)]; the extreme defense of a well-chosen sample brought forward by Corrado Gini against Anders N. Kiaer's random sampling seems to have something in common with the stress that agricultural economists put on the study of typical individual farms, see [Desrosières (1993)].

Office in Brugg every year willingly sacrificed their time and energy to the cause of statistics. This was made possible by the specific social configuration and pervasiveness of the SBV. Seemingly impartial numbers were actually the result of engagement.

Italian agricultural economists carried out their investigations in a changing political environment where there was nothing comparable to the SBV⁵⁵. They initially exploited the opportunities that the social reformism of Giolitti's era offered them and focused their use of farm budgets on issues of distribution of income. In part, their attempts fell victim to the failure of such reformism. After the war, alliances shifted, as Serpieri and Tassinari at different times prepared to enter Mussolini's cabinets⁵⁶. For statistics based on farm accounts, the stress moved to issues of production, in particular when a series of price crises hit agriculture in the 1920s and 1930s. This time funds were provided by the landed elites of the Po Valley. Although the new alliance with the regime allowed Serpieri to create a stable institutional framework for research into agricultural economics (the INEA and its local Observatories), it did not encourage the degree of orderly participation that the experience of SBV required. In the end, the agreement between Serpieri, Federconsorzi, and the government proved unstable⁵⁷.

The controversies over what was called the *Bonifica Integrale*, the project of total reclamation of land from marshes, the showcase of Fascist policies for agriculture, showed the isolation of Serpieri and agricultural technicians. Land reclamation was promoted by Serpieri as the solution to the lack of land for peasants. It was intended – on the basis of an analysis similar to that of Laur on the social income of farms – to create medium sized farms that could absorb daily workers and increase production (at least in part)⁵⁸. The development of agriculture implied farms that were both capital and labor intensive⁵⁹. But, although the *Bonifica* progressed, Serpieri was ousted from the government⁶⁰.

⁵⁵ On the Italian Società degli agricoltori italiani from a European perspective: [Malatesta (1997)].

⁵⁶ On Serpieri's politics see [Prampolini(1976)];[D'Antone (1979)] and [Stampacchia (2000)]; when he died in 1944, Tassinari was the Minister of Agriculture of the Fascist Salò Republic.

⁵⁷ See again [Adorno (1995)], p. 99 ff. on the divergences between Serpieri's group and other groups of agriculturalists within the regime.

⁵⁸ Farms that were too small to remunerate work adequately should have been recombined following a model common in Germany: [Tassinari (1922)].

⁵⁹ Serpieri was not an isolated – nor the most extreme – supporter of a labor and capital intensive model: Čajanov's *Putešestvie moego brata Alekseja v stranu krest'yanskoj utopii* (1920) presents a future dominated by highly technological but labor intensive small farms (an English translation in [Kremnev (1976)]).

⁶⁰ On the *Bonifica* see again [Stampacchia (2000)].

The vows expressed at first by the General Assembly of the International Institute for Agriculture in 1922⁶¹, and then repeated at the Agricultural Congress of 1929 (and on both occasions welcomed by Italy's principal agrarian economists⁶²), that all member countries might adopt standardized methods of accounting statistics on the Swiss model, remained almost without effect in Italy until the end of the Second World War. Still, the agricultural economists had successfully established themselves as the bearers of the analytical skills that any agricultural policy required.

⁶¹ "Rien ne serait plus susceptible de susciter de part et d'autre un jugement plus objectif qu'une comptabilité bien comprise qui, d'une part, renseignerait sur ce qui gagnent l'agriculteur et les autres producteurs ainsi que sur le cout de leur activité, et qui, d'autre part permettrait de se faire une idée exacte de ce que consomment et épargnent les ouvriers et les fonctionnaires. Il n'est donc pas exagéré de dire qu'en contribuant à la généralisation de la comptabilité agricole, nous collaborons en même temps à l'atténuation des antagonismes sociaux", the Spanish delegate to the IIA claimed on that occasion referring to the conflicts of opposing agriculturalists and urban dwellers, [Institut International d'Agriculture (1920-1924)], p. VII-VIII.

⁶² See Laur's letter to "MM. les chefs des offices de comptabilité agricole" (August 15, 1929), Archivio dell'Accademia dei Georgofili, fondo Tassinari, 6.6.1.

10 From data to policy: statistics, enquiries, and monographs in the 1930s

The cases and methods examined in the previous chapters have all contributed to setting the so called agricultural question (*questione agraria*) in a specific form. With the 1900s, the basic focus of agricultural economics started to shift from the modernization of large properties to a broader understanding of the economy of peasant life. The *questione agraria* had both a productive and a social dimension: it concerned ways to expand agricultural production, and ways to raise the living standards of agriculturalists. Enquiries, statistics, and monographs (including budget studies) explored both dimensions, providing information on the living conditions of peasants, on the organization of farms, on the productivity of factors. These investigations prepared a scientifically determined “space of response”, an array of possible answers to the problems of agriculture. The paradigm of response that emerged in the first decades of the 20th century centered on small farming and the defense of peasant families: defense from external market forces and from the inner disruptive forces of the families themselves.

In this chapter I show how the mass of information collected by means of the different methods had a lasting effect on the debate over agricultural policies, well beyond the period that I have analyzed in the previous chapters, and far into the 1930s and '40s. In particular, I discuss here the debate over smallholdings (*piccola proprietà coltivatrice*) that dominated the Italian agricultural discourse after the First World War and up to the European Common Agricultural Policy. Small properties formed one of the main concerns of agricultural economists and politicians for quite some time after the war, when small properties rapidly multiplied. All the information available was mobilized to answer the fundamental questions: could smallholdings improve production systems and increase the overall output? Should the Italian state favor the creation of smallholdings? How could smallholdings be protected from their inner tendency to fragment?

The erosion of large estates began with the fall in wheat prices in the late 19th century, but the First World War marked an acceleration in the formation of smallholdings in Italy. The policies of the post-war governments favored this massive movement towards ownership of land. The foundation of the Opera Nazionale Combattenti already in 1917 (a difficult year for the armed

forces of the anti-German coalition, due to widespread mutinies of troops on the French and Italian front) was intended by Nitti as an instrument for directing the post-war reconversion of soldiers into farmers. In many cases, the illegal occupation of land plots was tolerated and eventually legalized in the tense political climate of 1918-1919. The war inflation also decisively contributed to drive landowners to parcel out their estates and sell small plots to willing farmers, often their tenants¹ with a consequent fall of the capitalization rate².

Agricultural economists reflected on this change with the instruments at their disposal. The enquiry launched by the INEA in 1928 on the formation of smallholdings after the Great War of 1915-1918, the first agricultural census of 1929-30 (promoted internationally by the IIA)³, the collections of monographs promoted by the INEA in the 1930s, Serpieri's *magnum opus* published for the Carnegie Endowment for World Peace, all reflect the attention of agricultural economists to these huge movements in peasant life. The war rhetoric of the "army of peasants" that fought in the Alps, the mutinies of 1917, the social unrest of 1919-1921, all contributed to make the peasantry the focal point of the agricultural sciences⁴.

In 1917, the Minister of Agriculture, Giovanni Raineri, summoned a special committee of parliamentarians and officials in order to investigate the impact of the war on smallholdings⁵. As the proceedings of the first meetings of the committee suggest, the assumption was that the war must have affected smallholdings very negatively. To begin with, members expressed their

¹ [Lorenzoni(1929)]; the 15 volumes of the enquiries were published by INEA between 1931 and 1938; for a sample of INEA's monographs, see the already mentioned [Tolaini (2005)]; [Serpieri (1930)] exposed to an international public the consequences of the *Grande Guerra* for Italian peasants.

² [Serpieri (1930)], p. 476ff.

³ [International Institute of Agriculture (1939)].

⁴ [Serpieri (1930)], p. 82: "Per mantenere ferma la resistenza, per mantenere alto lo spirito dei combattenti e della popolazione nell'interno del paese, la classe dirigente, a mano a mano che gli anni passavano, ritenne opportuno di ricorrere sempre più largamente a promesse di larghi compensi agli attuali sacrifici; di prospettare alla pubblica opinione i termini di un bilancio, il cui passivo era rappresentato dalla guerra e dai suoi sacrifici, ma l'attivo lo avrebbe largamente superato". Socialists, Democratic Socialists (led by Leonida Bissolati), and the Democratic Constitutional Party talked about the "social function of land" (funzionalità sociale della terra) and the expropriation of uncultivated land, see p. 84. Even the conservative Marquis Tanari of Bologna "mostrava di aderire all'idea che si dovesse agevolare largamente il passaggio della terra ai contadini, benché naturalmente in forme individuali", pp. 84f.

⁵ The committee met for the first time on the 15th October 1917. Among its members were Luigi Rava, vice-president of the Chamber of Deputies, Senator Count Eugenio Faina, the Right Hon. Giovanni Pallastrelli as representative of the SAI, and the Right Hon. Francesco Beltrami and Massimo Samoggia as representatives of the Association of Smallholders. With them there was also the Right Hon. Giuseppe Micheli, who would later be Minister of Agriculture. After the cabinet fell, the committee gathered again under the new minister, Giovanni Battista Miliani.

concern that the war might lead to the disappearance of smallholdings altogether⁶. Politicians hoped that peasant farmers would be the backbone of an inclusive state, which could mediate between socialist landless workers and reactionary landowners, as had happened in France. The committee decided to investigate the conditions of small farmers during the war by means of an enquiry.

The ministry prepared a questionnaire that was sent to the directors of the *cattedre ambulanti* in February 1918. The questionnaire included three key questions: had the number of smallholdings increased or shrunk during the war? What was happening with the land prices? What did the respondents expect would happen to the prices after the war? The *cattedre* directors continued to answer throughout 1918 and 1919, many of them when the war was already over. Their answers were not unanimous, but generally documented the rapid formation of new smallholdings. The functionary who edited the responses (Piero Vigorelli) summarized the evidence collected by the *cattedre* as follows: “Properties are far from being concentrated in a few hands. Instead, they have been broken up into smaller parts, and in most provinces smallholdings have therefore increased, beginning with those where agriculture is most developed”⁷.

The *cattedre* collected their information from a variety of sources, “directors of schools of agriculture, agricultural associations, mayors, parsons, secretaries of municipalities, notaries, land registrars, tax inspectors, surveyors, etc.”. Most reported soaring prices. The *cattedra* in Turin, in reply to the question about the average prices of land before and after the war, claimed an increase of 35%-40% in the prices of plots in the plain, “due to the strong demand for land by smallholders, traders and industrialists”. In Alessandria, the director reported an average rise to 3500 lire per hectare from 2200 lire before the war; in Novara, price rose from 4000-5000 to 6000-8000 lire per hectare in the irrigated areas; Cremona declared a growth in prices of about 20%. Data were similar for the rest of the provinces that answered the questionnaire⁸. Still, the directors of the *cattedre* were not unanimous in their expectations about future land prices. Turin expected that prices would suddenly drop after the war, as soon as the war inflation came to an

⁶ Micheli, *verbale della terza seduta del 16 marzo 1918*, [Ministero dell’Agricoltura Direzione generale dell’agricoltura (1921-1922)], vol. 1, p. 54.

⁷ “Lungi dal concentrarsi in poche mani, va invece spezzandosi, accentuando la piccola proprietà, nella maggior parte delle provincie, a cominciare da quelle in cui l’economia agricola è più progredita”, [Ministero dell’Agricoltura Direzione generale dell’agricoltura (1921-1922)], vol. 1, p. 71.

⁸ See the table on [Ministero dell’Agricoltura Direzione generale dell’agricoltura (1921-1922)], vol. 1, pp. 77ff.

end (a surprisingly accurate prediction of what actually happened with the deflationary policies of the late 1920s), but most of the other directors forecast that the demand for land would remain steady and prices would skyrocket (which is what actually happened in the first years after the war).

Vigorelli thus summarized the data coming from the *cattedre*:

In general, the prices of land have grown significantly, due to the wider availability of money (following an increased circulation of money), to the increased value of agricultural products, to the lively demands on the part of farming peasants, etc. This increase, in the period when the data were collected, had in certain areas reached double the pre-war prices, and it seems that it will keep on going.

The land in the mountains (excluding the forests) and in certain areas of Southern Italy was the exception. Here, the lack of available workers, as a consequence of the war, put an end to transactions, brought to a halt the healthy trend towards smaller properties and caused stasis and even a transitory decline in the price of strips of land⁹.

The directors of the *cattedre* attributed these purchases of land and the growth in the number of smallholdings to a deeply held aspiration of the peasantry. The war inflation provided peasants with a unique chance to buy long-coveted properties. “Given the only propensity to saving of our rural population” – the director of Mantua’s *cattedra* argued – “and given their persisting aspiration to a better economic and social status, since there is no other industry that allows them to put their ambition into practice, our rural population cannot but desire land, strive to own it, in order to cultivate it and make it fertile. The tendency of our rural population is to be owners of small properties, with the prospect of becoming medium-sized and large owners”¹⁰.

⁹ In generale i prezzi delle terre sono assai cresciuti in relazione con le maggiori disponibilità di danaro per la aumentata circolazione, l’aumentato valore dei prodotti agricoli, la domanda accentuata dei coltivatori diretti, ecc. Tale aumento al tempo della inchiesta, era arrivato in talune zone anche al 100% dei prezzi praticati anteguerra e l’aumento accennava sempre a continuare. Va fatta però eccezione per i terreni di montagna (non a bosco) e per alcune zone specie del Mezzogiorno, in cui la mancanza di mano d’opera, per effetto della guerra, ha provocato la cessazione delle contrattazioni, con la conseguente sospensione del salutare movimento verso la piccola proprietà e la stasi ed anzi la diminuzione transitoria del prezzo dei terreni”, [Ministero dell’Agricoltura Direzione generale dell’agricoltura (1921-1922)], vol. 1, p.73

¹⁰ “Data la tendenza al risparmio della nostra popolazione rurale, data la continua aspirazione al conseguimento di una migliore situazione economica e sociale, dato che non v’è da noi nessun’altra industria colla quale esercitare la propria attitudine, le nostre popolazioni rurali non possono che volere della terra aspirare ad esserne padroni, per coltivarla e farla fruttare. La tendenza delle nostre popolazioni rurali è quella di diventare

This tendency, these aspirations seemed healthy to the directors of the *cattedre* because they relaxed social tensions and did not impact negatively on production (to a certain extent, at least, they could even increase it). The director of Leghorn's *cattedra* claimed that "small properties contribute to social order and ensure a high agricultural intensity"¹¹. But the most interesting document for this view of smallholdings came in the answer by Novara's chair-holder. This report is worth examining because it introduces the essential arguments that we examine in this chapter.

To the fifth question of the questionnaire, on the opportunity of promoting peasant farms, the chair-holder of Novara answered that this was "a duty of the government towards those who, by shedding their blood for their Fatherland, acquired the right to see their living conditions improve". But the promotion of smallholdings was not only justified by its social impact: "it combined wonderfully the fulfillment of a sacred duty, with the highest interests of the country". Small properties, in fact, "ensur[ed] *the highest yield per hectare*"¹². The owner of a small plot "has not at his disposal the effective means that big agriculturalists can command, to cultivate the land economically, fertilize it conveniently, and sell the products; it cannot be denied, however, that not an inch of land gets lost, not a scrap of harvest is neglected, all the works are completed on time and in the best possible way, so that, notwithstanding the above-mentioned flaws, the net return per hectare appears significantly higher in small properties than in large ones"¹³. To the arguments in favor of smallholdings, this agricultural economist added also a political one: "the peasant who becomes the owner of something (land, livestock, a house, etc.)

piccoli proprietari in attesa, se è possibile, di diventarlo medi e grandi" [Ministero dell'Agricoltura Direzione generale dell'agricoltura (1921-1922)], vol. 1, p. 111

¹¹ "La piccola proprietà è elemento di ordine sociale ed assicurazione di intensività agricola. Conviene favorirla a preferenza della media, ma ponendola in grado di disciplinare e modernizzare le sue attività suscitando o irrobustendo il sentimento della cooperazione; concedendo con avve dutezza il credito sotto il controllo...etc. In una parola, con tutte le provvidenza statali e locali, capaci di trasformare il piccolo-coltivatore diretto, dal rozzo egoista del passato, nel savio ed operoso produttore che sa ottenere dalla terra il massimo rendimento, senza mai indebolirne l'efficienza". [Ministero dell'Agricoltura Direzione generale dell'agricoltura (1921-1922)], vol. 1, p. 118.

¹² "Infatti, la piccola proprietà assicura *la maggior produzione unitaria* della terra", [Ministero dell'Agricoltura Direzione generale dell'agricoltura (1921-1922)], vol. 1, p. 100 (emphasis in the text).

¹³ "E' vero che il piccolo coltivatore non dispone dei mezzi efficaci, che sono in mano ai grandi agri coltori, per lavorare economicamente il terreno, per fertilizzarlo come si conviene, per smerciare convenientemente i prodotti, ecc., ecc., ma è pure innegabile che nella piccola proprietà non un palmo di terreno va perduto, non una briciola di raccolto vien trascurato, i lavori vengono eseguiti a tempo e nel modo migliore possibile, di guisa che, malgrado le rilevate deficienze, il rendimento lordo unitario risulta sensibilmente maggiore nel la piccola proprietà comparativa mente alla grande", [Ministero dell'Agricoltura Direzione generale dell'agricoltura (1921-1922)], vol. 1, p. 100.

has feelings of order and industriousness induced in him and wants to increase its savings in order to accrue his wealth¹⁴”.

When the committee was summoned again by the new minister Giuseppe Micheli in 1920, the discussion moved to the means of preserving and expanding the number of small properties¹⁵. A law was under discussion in the parliament that aimed at favoring the purchase of smallholdings and the breaking down of large properties into smaller plots. The minister stated that “it [was] necessary to ease this ’hunger for land’ wherever the technical conditions of the soil and of the crops allowed small farms to thrive easily, because an intimate link between the peasant and his land contributes to peace and order in society and at the same time promotes a broader development of agricultural production, in particular if individual efforts are supported by cooperation”¹⁶. A view of peasant farms as socially and economically beneficial for the country was shared by the Catholic Micheli, the Giolittian Raineri, and by a number of those who had linked the Italian intervention in the Great War with an expansion of democratic rights, such as Gaetano Salvemini¹⁷. But the rhetoric of peasant farms, of the Opera Nazionale Combattenti was adopted also by the rising Fascist regime, as the next section documents.

Mass parties put the issues of smallholdings, and therefore the question of the behaviour of peasants on the land market, at the core of the state’s concern. Agricultural economists were asked to assess the opportunities offered by different proposals and options and the feasibility of policies that favored smallholdings. The long and detailed reports presented to the committee by Oreste Bordiga and Arrigo Serpieri aimed precisely at understanding the technical limitations that the natural and economic conditions imposed on the expansion of smallholdings. They

¹⁴ “E a questi beneficj d’indole tecnico-agraria altri se ne aggiungono, pure di ragguardevole importanza e degni non meno di considerazione, di carattere sociale, poiché il contadino che diventa possessore di qualche cosa (terreni, bestiame, casa, ecc.) è portato a sentimenti di ordine e di operosità ed al risparmio per aumentare i propri ben, nonché alla previdenza per provvedere alla sua vecchiaia ed ai suoi discendenti” [Ministero dell’Agricoltura Direzione generale dell’agricoltura (1921-1922)], vol. 1, pp. 100f.

¹⁵ The new committee included Faina, Raineri, Pallastrelli (who was Micheli’s vice-minister), Maggiorino Ferraris, Beltrami, Prof. Gaetano Mosca, Eugenio Azimonti, Antonino Bartoli of SAI, Bordiga, Enrico Fileni, the president of the Association of Travelling Chairs of Agriculture, Ernesto Marengi, and Arrigo Serpieri, who was teaching at the time in the Istituto Superiore Forestale in Florence.

¹⁶ [Ministero dell’Agricoltura Direzione generale dell’agricoltura (1921-1922)], vol. 2, p. 10: “Bisogna favorire questa “fame di terra” là dove le condizioni tecniche del terreno e delle colture consentono utilmente la piccola conduzione, perché il più intimo vincolo del contadino con la terra giova alla pace e all’ordine sociale e insieme giova a promuovere un maggiore sviluppo della produzione agraria, tanto più se lo sforzo individuale sarà sorretto dal valido aiuto della cooperazione”.

¹⁷ [Galasso (1978)], p.28.

tried to establish the mediating role of their science in between the opposing claims of politicians.

Serpieri, in particular, tried to draw the “area of economic convenience” of smallholdings and understand how far the government could go in promoting them. His comments on the law under discussion suggest his great prudence and attention to the specificities of different areas. Moreover, the committee’s president, Count Faina stressed the risks that small farms entailed. Peasants seemed to be paying too much for their land, they seemed to work more and earn less, on their own land, than in comparable occupations, thus defying the assumptions of opportunity costs, they overburdened themselves with debts that they could only repay by depressing the already low levels of consumption. This behavior contrasted with many economic assumptions, and could actually have had dangerous consequences, if the parceling out of properties went too far. It should be controlled and understood. But to a wide number of landowners, peasant farms had a universally accepted social value.

10.1 The social value of peasant farms

The formation of peasant property after the war led to a vast range of studies on the sociology and psychology of peasants and the nature of peasant farms. In fact, since the first decades of the century peasant psychology had already become an object of serious study for economists and sociologists and was investigated in the enquiries on Italian peasantry (Inchiesta Faina 1906-10)¹⁸. But it gained relevance after the First World War, when accounting data and enquiries showed an economically significant and potentially quantifiable symptom of such psychology, namely the divergence between real prices and appraised ones. The common judgment that peasants paid too much for their land was taken as a sign of the distance between the homo oeconomicus of theory and real peasants. Research on the extra-economic motives affecting peasant investment in land became a distinguishing trait of Serpieri’s National Institute for Agrarian Economics (INEA) in the 1920s and 1930s (and beyond).

After the SUM enquiry of the 1900s, Serpieri was asked by the Federconsorzi to enquire into the reasons of social unrest in 1911 during the controversy over threshing machines in Romagna. In 1912 Tassinari began for the same Federconsorzi the analysis of the distribution of gross product

¹⁸ [Coletti (1925)].

in Italian farms, and in 1919 Serpieri was commissioned by MAIC to conduct an enquiry into the reasons for the violent agricultural strikes of that year. Such enquiries made it possible to represent some traditional arguments in scientific terms, in particular the stress on the different attitudes of the agricultural toiling classes. In contrast to the warring rhetoric of socialism (centred on the divide between owners and labourers), the agricultural classes appeared divided between peasant farms (sharecroppers, small tenants, smallholders) and capitalist farms with hired labor¹⁹.

The fascist rhetoric built extensively on the figure of the peasant, of the *rurali*. The declared aim of the government was the “ruralization of Italy”, the fight against unproductive latifundia²⁰ and the elimination of day laborers, who should be converted into peasant farmers. Arrigo Serpieri, who was probably the front man of Fascist agricultural policy, had put peasant farms at the core of his public discourse since the 1920s (his political speeches probably put more emphasis on it in than he his scientific work does).

For Serpieri, capitalist farms brought with them modern machines, but also class tensions, and an entrepreneurial ethic that could not be satisfied with the low returns promised by agricultural improvements. He claimed that large farms such as those of the reclaimed land in the lower Po valley had externalities (as contemporary economists would call them), costs for society that they did not pay for themselves. And the same held for the aristocratic estates of Lazio. They created structural unemployment, and therefore social unrest, and they would never be able to afford the long term investments that were required to transform the soil on a large scale, due to the instability of markets; this therefore postponed necessary improvements in malaria-stricken regions. The day laborers who formed the backbone of the Italian trade union movement until the 1920s were residual; the policy of the Fascist state should be to focus on the peasantry.

Peasants, instead, possessed the opposite qualities. They were attached to the land they had traditionally inhabited. If they could, they refused jobs outside the agricultural sector, although it paid better than their work as agriculturalists on their own land (this was particularly clear because the cost opportunity of their agricultural work was computed on the basis of the average salaries of road-builders). Consequently – according to the interpretation current among Italian

¹⁹ [Serpieri(1940 (1993))].

²⁰ It should be stressed that these must be unproductive: Serpieri, however, was always convinced that the typical Southern latifundium was a form of agricultural business well adapted to a difficult climate, see Serpieri’s report in [Ministero dell’Agricoltura Direzione generale dell’agricoltura (1921-1922)], vol.2.

agrarian economists – migration to the city was either forced by very poor living conditions or induced by a sort of corrupting influence of modern life. Finally, they prized the security of working their own land over all other forms of investment: they wanted to be self-standing entrepreneurs as far as possible, even when land was relatively expensive, as the enquiries of the late 1910s and late 1920s showed. This interpretation can already be found in Serpieri's report on the peasants of the Upper Milanese, from his disapproval of the combination of factory and rural employment. Nevertheless, it is in relation to the rural masses of day laborers and the policies of agricultural transformation that the virtues of the peasantry became so important.

The asymmetric pressure on the price of land was the sign of the attachment of peasants to the land. Bourgeois and day laborers were mobile and could abandon the land. They would actually do so given the right conditions. "Smallholders, small tenants, sharecroppers and other intermediate and likely categories" instead stuck to the land and agricultural life "with all their interests, and all their hearts"²¹. The high ratio between the return on land and its price that appeared for large farms was taken as the sign that capitalist investors were considering agriculture an unattractive business. They were impatient.

Serpieri invoked Pareto's sociology to explain the differentials in returns. "Agriculture is not simply an economic activity next to industry and commerce: it is a way of life", he claimed in 1924. In the "world of business, of capitalism, of industrialism" the men who had the qualities for speculation prevailed, "the instincts of combinations, as Pareto called them". Agriculture was different; it was not "the world of fast and rewarding gains, of quick innovations and combinations". The qualities stimulated by the countryside were therefore different: agriculturalists were "less sharp, less ingenious, less cunning, but stronger in temperament and more honest". They displayed the tendency that Pareto called the "persistence of aggregates": they felt "in the highest degree the feeling that bound them to things and people, such as the bond to the family, to property, to their own land, to their native country, to their own language, and religion [...]. Such feelings have often the same or even more strength than interests"²².

²¹ *I rurali nel la vita politica italiana* (1924): "La massima parte di quella media e piccola borghesi che possiede la terra è poco legata alla vera vita rurale. Lo stesso può dirsi, fra i lavoratori, dei braccianti. Chi totalmente aderisce alla terra e alla vita agricola, con tutti i propri interessi, con tutti i propri sentimenti, sono appunto quelle categorie di contadini, piccoli proprietari, piccoli affittuari, coloni, e altre intermedie ed affini...", in [Serpieri (1937-XV)], pp. 56f.

²² *I rurali nel la vita politica italiana* (1924): "L'agricoltura non costituisce semplicemente un'attività economica, a fianco delle industrie e dei commerci: è un modo di vita, che s'imprime nello spirito di chi lo vive con

Serpieri, obviously, could not deny the modernizing influence of large capitalist tenants, but, in the name of the love of the peasantry for its land, he justified even the resistance of peasants to “modern agriculture” (the agriculture propagandized by the travelling chairs!). It is by virtue of this love, Serpieri argues, that peasants stick to their land, even with low or very low returns on their investment. Their stability represented also an element of progress, and a model for the country. Italian agrarian economists prized the characteristics listed above: frugality, attachment to the land, the importance of the family, etc.²³. The peasant farmer (*contadino proprietario*) working on his own land was supposed capable of miracles²⁴. Such characteristics, attributed to small owners or small self-standing agricultural entrepreneur, were integrated into the larger vision of the economy of the countryside. It is sufficient to read some of the INEA monographs of Tuscan peasant families to perceive how, in the 1930s above all, the rhetoric of smallholdings and peasant families informed the scientific literature²⁵.

By means of their assiduous work, peasants were carrying on the transformation of the Italian soil. Instead of being scared by low returns they invested their capital and their own labor in their land, by constantly improving it. Peasants increased agricultural production by expanding agriculture even to marginal land, a result that “industrial farming” could never achieve:

In order to understand the effects that could follow from the prevalence of the industrial spirit in agriculture, the reader may simply reflect that if it is true – and it is true – that most of the work of expanding fertile land is due, not to economic calculations, but to love for the land and property, the greater part of

caratteri specifici, affatto diversi da quelli del mondo industriale urbano. [...] In questo – cioè nel mondo degli affari, del capitalismo, dell’industrialismo – prevalgono gli uomini ricchi di quegli istinti che il Pareto ha chiamato delle combinazioni: uomini abili, ingegnosi, speculatori, amanti del nuovo ecc., i quali trovano appunto, negli affari il migliore ambiente per prevalere, e, dove prevalgono spingono tutta la collettività degli affari. [...] L’agricoltura non offre terreno altrettanto propizio: essa, come a tutti è noto, non è l’arte dei rapidi e larghi guadagni, delle pronte innovazioni e combinazioni. Altri uomini prevalgono quindi nelle campagne, meno abili, meno ingegnosi, meno astuti, ma di più forte carattere e più onesti: uomini nei quali si manifesta piuttosto la tendenza, per usare l’espressione del Pareto, alla persistenza degli aggregati: sono, cioè, fortissimi i sentimenti che li legano alle cose e agli altri uomini, come l’attaccamento alla famiglia, alla proprietà, alla propria terra, al luogo nativo, alla propria lingua, alla propria religione; sentimenti che hanno a lor volta comuni radici, nell’animo umano, con quelli di gerarchia, di culto della consuetudine e della uniformità, di avversione al nuovo ecc. Questi sentimenti hanno spesso altrettanta e maggior forza degli interessi”, in [Serpieri (1937-XV)], pp. 67f.

²³ [Serpieri (1940 (1993))], p.147.

²⁴ [Lorenzoni (1929)], p. 72.

²⁵ [Tolaini(2005)]; see also *Introduzione* to [Lorenzoni(1929)].

the Italian countryside would be at a much lower level of productivity than it is at present²⁶.

For Serpieri, the peasantry ought to inspire the agricultural policy of Fascism: “Just as the man of the fields invests his savings in his own land, driven more by love for the land, than by expectations of gain, so the Italian collective must act. Savings tied up in soil give a high social return, even when the economic return is low”²⁷. The policy of total reclamation that Serpieri devised in the early 1920s and 1930s was driven by this conception of a “high social return”, which consisted not only in patriotic, prolific, and toiling peasants but also in the greater availability of agricultural production for society. Laur had shown, with his statistics on Swiss farms, that small farms generally produced and distributed on the market more per hectare than large ones.

Agricultural experts proposed themselves not only as people who could direct state policies for the promotion of the peasantry by means of land reclamation, but also as those who would keep the peasantry healthy by preserving the balance in the size of properties. The fact is that the very qualities attributed to the peasantry: its resistance to innovation, its hard work, its bond with the land, its lack of “industrial spirit” could also be dangerous. Peasants bought plots of land for very high prices but were then unable to repay their debts, or were overburdened with work. As a consequence of the laws on inheritance, properties were continuously subdivided and this contributed to make farms less economically viable. Moreover, even if peasants could subsist by their own work, they rarely possessed enough capital for machines, storage and transformation facilities, and large scale land improvements. The social value of small properties risked being offset by the pathologies of peasant farms.

²⁶ “Per comprendere gli effetti che potrebbero seguire dal prevalere nell’agricoltura dello spirito industriale, basta pensare che, per esso, la maggior parte delle campagne italiane sarebbe certo in uno stato di produttività enormemente inferiore all’attuale, se è vero – com’è vero – che le maggiori opere di riduzione a coltura si debbono, assai più che a calcoli di tornaconto, a sentimento di amore alla terra e alla proprietà”: I rurali nella vita politica italiana (autunno 1924) in [Serpieri (1937-XV)], p. 69.

²⁷ “Così come l’uomo dei campi impiega i propri risparmi nella sua terra, guidato assai più dall’amore di essa che dal calcolo di guadagno, così deve operare la collettività italiana. I risparmi immobilizzati nel suolo danno alto frutto sociale, quand’anche tenue sia il frutto economico”: *La politica agraria del dopoguerra* (marzo 1924) in [Serpieri (1937-XV)], p. 15.

10.2 The case of the land market

First of all, what did it mean that peasants paid too much for land? Economists had at their disposal a clear term of comparison for benchmarking the decisions of farmers, the purchase of land, in particular. Such a benchmark was provided by the standard theory of appraisal and accounting.

We saw how Serpieri's first contributions to the theory of appraisal, at the beginning of the 20th century, interpreted the ordinary farmer, in the conceptual framework of theoretical economics: ordinary farmers corresponded to the representative firm of Marshall, in that – by definition – they made no (economic) profit and sold their products at cost²⁸. The economic activity of the farm was represented by means of the following equation: $P = Rv + I + W + T + S$, where P represented the farm's production averaged over 12 years and corrected in order to refer to a typical farmer, Rv was the rental value, W the wage paid to manual laborers, T represented the taxes and S the installments due to the bank for the advancement of capital and I the profit of the entrepreneur. By assuming $I = 0$ (i.e., if a typical farmer was assumed), the rent was expressed by the following equivalence:

$$Rv = P - (W + T + S).$$

Analyses of land valuation were based on the capitalization of the Rv obtained by means of this analysis at the appropriate capitalization rate r . Analytical methods were also called rational since they were based on the common sense assumption that the price at which a property can be expected to sell depends on the rent it provides to its owner²⁹. The determination of the capitalization rate was extremely important, since small variations could affect the final results enormously. In general, the higher the capitalization rate, the lower the land value for a constant Rv . The nature of this rate depended on the purpose of the appraisal procedure. By assuming r equal to the rate of interest prevailing among other competing investments, for instance state bonds, or deeds of country saving banks, etc. the valuation showed whether the purchase of land was or was not preferable to other forms of investment. The result was an objective value of land as a capitalist investment.

²⁸ [Serpieri (1901), [Serpieri (1916-1917)], Medici (1953)]; Chapter 8 is dedicated to definitions of the typical farmer.

²⁹ [Tommasina(1912)].

This way of looking at land valuation goes back at least to the 18th century treatises on the subject³⁰. The system of the *cadastre* that was popularized in Europe by Napoleon but was first applied on a large scale by the enlightened leadership of Austrian Milan was based on this concept³¹. In contrast to many previous *cadastres* of the Po Valley, the Milanese Catasto Teresiano and the Italian CT of 1886 adopted the rent, rather than the capital value, as the base of the land tax³². The common objection was that land was usually more expensive than the prices resulting from “theory” and some agrarian economists discarded rational methods altogether.

The alternative to analytic (or rational) methods was synthetic (or empirical) methods. In general, appraisers by such methods obtained the likely market price of land by comparing the land parcel whose price was to be determined with similar plots whose prices (or some coefficients in a stable relationship with market prices) were known. Once the comparison was made, and taking into account the specificities of each plot, the land evaluator could state the likely price of the parcel. Synthetic methods were commonly in use wherever possible and had been recorded since the very first documents of appraisal. These methods were more likely to give a more reliable result the higher the number of parcels entering the comparison for which prices were known.

These methods were called empirical because they did not rely on such complex theoretical premises as the rational ones. They relied instead on the experience (with a large number of similar cases) of the appraiser. They were also called synthetic (as opposed to analytic) because they involved some sort of synthetic judgment made on prices rather than on an analysis of the farm’s operating structure (gross product, production costs, stocks etc.). In principle, if supply and demand were free to adjust according to Marshall’s or Walras’ assumptions, analytic and synthetic methods should have arrived at the same price.

In his book published in 1912, Friederich Aereboe, one of the German authorities on agrarian economics, claimed that only synthetic methods could account for the actual fluctuations of

³⁰ [Niccoli(1889)].

³¹ 1718-1760, see sec. 6.3, [Einaudi (1974), Catizzone and Di Filippo (2009)].

³² In the Republic of Venice, as in Milan before 1718, the tax base was the capital value of land, which was estimated on the basis of current market prices of similar plots (synthetic appraisal): many details on Venetian cadastres are in [Cavazzana Romanelli and Orlando (2006)] (in particular, pp. 85ff.) and also in [Locatelli (2003)], pp. 17ff.

demand and supply. Arrigo Serpieri took a different view³³. According to the Italian, practitioners of analytic appraisal should know that the market in land was peculiar, because many subjective benefits had to be considered. By choosing a lower capitalization rate, the appraiser would take into account such subjective factors and come closer to market prices if this was his purpose. Let us examine this point in more detail³⁴.

Most Italians and especially Serpieri reacted very negatively to Aereboe's proposals. Empirical and analytical methods, it was felt, should coexist (and in fact coexisted), with analytical methods maintaining a primacy over the others. Many reasons were invoked for this, some resting on different theoretical options, some instead on different purposes or external conditions.

The differences between Aereboe and Serpieri were deep. Aereboe and his school of thought stressed the analogy between the farm and a living organism. Richard Krzymowski, went so far as to claim that farms could not be controlled, the "whirlpool" of factors affecting them preventing effective control³⁵. Serpieri was not against biological metaphors, but he always underlined that farms were businesses and farmers entrepreneurs. Moreover, Aereboe, in his revival of von Thünen's theory of localization, gave primacy to rigid "localization sequences", development patterns that should be followed in each area. While Italian appraisers pinpointed the typical as a characteristic of farmers, German agricultural economists incorporated it into the geographical localization. As a consequence, while Italians appraised plots individually (although in terms of typical farms), Aereboe was inclined to see large masses of homogeneous plots.

This was one of the most heavily criticized points of Aereboe's claim. Ernst Laur in Switzerland and Serpieri in Italy opposed Aereboe on the grounds that his method could function only in the German flatland. Small properties in areas where soil, altitude, exposure to the sun changed abruptly in a small area did not lend themselves to classification and comparison, as Aereboe's

³³ Serpieri was not alone: Borio's school also defended analytical methods, e. g., Fettarappa and [Tommasina (1912)]. Marengi, the most important scholar of appraisal by the end of the 1910s, held a conciliatory stance and was regarded as the "Italian Aereboe", see: [Marengi (1994)]; [Salomone (1938)] (in English) explains the contrast between Italians and Germans and summarizes the different methods.

³⁴ The fact is worth mentioning that Aereboe's dismissal of rational methods acquired a stronger meaning after the First World War when he opposed the *Reichsiedlungsgesetz* dell'11.8.1919. The law, voted in by the Social Democrats, but inspired by Max Sering, authorized the state to buy land at the rental value from large landowners and divide it into smaller autonomous farms for peasant settlers. Aereboe insisted that the land was to be bought at its market price and the law was eventually modified, [Aereboe (1928)], p. 577.

³⁵ [Nou (1967)], p. 331.

market-price method required. Italy differed from Germany: properties were much less comparable to one another in the Italian context – so Serpieri claimed – than in the German flatland.

There was an issue of theoretical and statistical legitimacy, as well. Market statistics were rarely available for most areas: in large areas, relatively remote from markets, land was not sold very often and the statistics of land prices lost most of their significance. A relatively small number of transactions would have determined the value attributed to properties, although it was clear that such transactions were carried out at untypical prices. The price resulting from the act of appraisal would have been exceedingly unstable. Significantly, Aereboe's school never succeeded in imposing its view of appraisal, not even in Germany, where, in 1925, an appraisal law made analytical methods compulsory.

Synthetic methods – in the conclusion of Aereboe's opponents – did not allow the economic viability of land investment to be assessed. They merely reflected the prices that could be determined by local factors, speculation, and non-economic behavior (sec. 9.2).

This point was particularly clear to the Swiss Laur, who led the Secretariat of the League of Swiss Peasants (SBV). Next to the accounting office discussed in sec. 9.2, above, the Secretariat also had an appraisal office. The two offices worked together, since the accounting office needed valuations of land and stocks as the starting point of the accounting calculations. But the appraisal office, also had other, independent tasks. It provided SBV associates with an almost free appraisal service. The aim was to assess whether (and at what price) a prospective investment in land could be considered economically advisable for the associate. Small farmers could ask the appraisal office to tell them whether a plot was overpriced, and whether the investment was worth undertaking. In this case, the capitalization of prospective income was the only significant method of appraisal³⁶. As we saw, the Osservatorio di economia agraria that was established in Bologna was assigned very similar tasks.

Laur, however, did not use rent as the relevant measure of perspective income. As noted above, he computed two different values: the *Ertragswert* and the *Existenzwert*. The first one represented a sort of economic value of land. It was computed by capitalizing the *Reinertrag* (Fr. *rendement net*; It. *Reddito capitalistico*), i.e. the return on land and stocks, and the profits of the

³⁶ [Laur (1912)]

agricultural entrepreneur. The *Reinertrag* of a year was capitalized at the interest rates of safe financial investments in that year. In 1919, for instance, the capitalization rate was 4%, while in 1920 and 1921 it was 5%. The resulting *Ertragswert des Landgutes* “equaled the amount of money that should be paid for the plot in order for the buyer – by means of a standard managing of the property – to receive, beside the recovery of expenses (farming expenses, salaries, amortizations, etc.), also a fair compensation for his own and his family’s work and an interest at the current rate of the so called safe assets”³⁷. It is almost needless at this point to stress that in both cases the cooperation of the two offices of the Secretariat greatly helped in establishing what should count as “standard managing of the property” and “fair compensation”. The *Existenzwert* represented in addition a sort of subsistence value for the family: it was enough in this case that they could repay their debts and make a living from the land.

Beyond the differences in the measures of income that were considered, analytic methods were highly prescriptive. But synthetic methods could not distinguish the economic value from the speculative value of land (the trend from the bubble, so to say). Once the capitalization rate was assumed equal to the interest rate on state bonds or similar forms of investment, analytical methods represented the *muss sein* of economic theory: for a lower interest, capitalist investors would not have invested. Peasants, however, behaved differently, and accepted lower returns on their investment, but they should not have paid more than they could afford.

As Lorenzoni explains in his introduction to a new enquiry on small property, started in 1929, different degrees of willingness to pay for land on the part of peasant families could still have some economic justification, because small properties enjoyed some advantages over large ones: “peasant farms (*piccola proprietà coltivatrice*) have a huge advantage on the side of labor, which costs less and is much more productive since it is carried out by the owner himself”³⁸. Yet, prices that were too far from the rental value of land drove smallholdings out of the “area of economic convenience” (a concept I illustrate in more detail in the next paragraph).

³⁷ [Brizi and De Polzer (1938)], p. 23.

³⁸ [Lorenzoni (1929)], p. 73: “La piccola proprietà coltivatrice ha dalla sua parte il grande vantaggio del lavoro esecutivo, che ad essa costa meno ed è molto più produttivo perché compiuto direttamente dal proprietario. Chi lavora da sé fa per tre. Il contadino salariato misura le ore e desidera che siano corte; il contadino proprietario desidera che siano lunghe; egli lavora dall’alba al tramonto coll’acقانimento e la passione che gli dà l’amore alla sua terra; utilizza ogni ritaglio di tempo ed ogni ritaglio di materiale[...]. Il contadino salariato dev’essere sorvegliato; come devon essere sorvegliati i custodi che lo sorvegliano, gl’impiegati che lo dirigono, e l’amministratore stesso che a tutti i dipendenti presiede, ma ciò costa molto danaro e il rendimento alla fine è scarso”.

The *Existenzwert* was, in some sense, the upper boundary of economic convenience. Prices that exceeded these valuations, such as those that were reported in the immediate aftermath of the war, must have been “economically unsustainable”, and could create risky pathologies, leading to the bankruptcy of the farm. Their justification, therefore, must lie elsewhere, in the psychology of the peasantry. Agricultural economists were sometimes confident that, if properly instructed about the “economic” value of land, peasants would practice economically sound behavior. Analytical appraisal was therefore considered part of the economic education of the agricultural classes³⁹.

In the next paragraph I want to show how agricultural economists tried to assess and explain the formation and pathologies of smallholdings, and the remedies that they proposed. These discussions were carried out with the help of data from statistics, enquiries, and monographs (including accounting data) and focused on the understanding of “peasants”, a category defined by the fact that they worked for their own (family) agricultural business, either as sharecroppers or tenants or smallholders, rather than by their ownership of land. As bearers of a specific knowledge of the economy and population of the countryside, agricultural economists emerged as useful guides to reform, trying to balance populist proposals against mere conservatism.

10.3 Peasant farms and their pathologies

With the proclamation of corporativism as the official economic doctrine, the Fascist regime claimed to foster an intermediate position between free market capitalism and communism. Smallholdings had to be evaluated in the new framework of an agricultural policy that fostered national self-sufficiency (*battaglia del grano*), land reclamation (*bonifica integrale*), and the demographic growth of the rural population (*ruralismo*), under the constraints imposed by large landowners, whose support was crucial for the regime. It was also important to compare what had happened in Italy with the results of the more or less radical land reforms carried out in other European countries, from Great Britain to the Soviet Union, and in Rumania and Czechoslovakia in particular.

Serpieri’s INEA decided therefore to launch a wide-ranging enquiry on small properties in 1929. The direction of the enquiry was entrusted to Lorenzoni, while the enquiry itself was to be

³⁹ [Serpieri (1916-1917)].

carried out by the Observatories of agricultural economics in each statistical compartment. For methodological guidelines, Lorenzoni referred to Arrigo Serpieri's *Guida a ricerche di economia agraria*. The relationship between statistics, enquiries, and monographs that the *Guida* displayed was surprisingly similar to what Coletti and Valenti had already proposed in the 1900s, in a striking example of methodological continuity. The *Guida* moves from the general to the particular. It begins with the 720 *zone agrarie* of Valenti's CA and moves to the study of typical farms and typical peasant families. This required, as we have seen, the use of monographs.

After a preliminary description of the main "agricultural zones" of the statistical compartment assigned to them, INEA's agricultural economists were to focus on assessing the number of new properties that appeared after the war. Statistics did not allow for a thorough assessment of the purchase of land by peasant farmers after the First World War. "Unfortunately", stated Lorenzoni in 1929, "it is impossible, with our current statistics, to have a clear or even approximate idea of this phenomenon. We lack statistics of properties"⁴⁰. Agricultural economists could rely only on census data that showed an increase in the number of farming owners (*agricoltori proprietari*) between 1911 and 1921⁴¹, and on the data collected by the small enquiry of 1917-1920. In order to do their work, INEA's collaborators could only complement the scarce statistical information with the information provided by local authorities, and with the many individual cases of estates that had been dismembered.

The most compelling question that INEA's agricultural economists had to answer, however, was the economic and financial health of small farms that had been set up in the period immediately following the war. But by 1929, the economic and social climate that had favored the creation of smallholdings in the early 1920s had completely changed. The agricultural crisis of the late 1920s, and the tight monetary policy that began in 1926 had significantly affected smallholdings. Moreover, the Fascist regime had wiped away those proposals for laws that in the early 1920s aimed at the "socialization of the land" or the expropriation of absentee landowners⁴², and had

⁴⁰ [Lorenzoni (1929)], p. 5: "Purtroppo non è possibile, allo stato attuale della nostra statistica, avere un'idea esatta e nemmeno approssimativamente tale della portata del fenomeno. Manca infatti una statistica delle proprietà".

⁴¹ [Lorenzoni (1929)], p. 5: "fra i due censimenti del 1911 e del 1921 la popolazione rurale accusa un considerevole aumento nel numero degli agricoltori proprietari ed una diminuzione nel numero dei giornalieri agricoli, e delle altre categorie (fittavoli, coloni, obbligati)".

⁴² [Serpieri (1930)] recalls the socialist proposal presented on 17th December 1921, by the Right Hon. Canevari and Piemonte: "in order to begin the process of socializing the land", while the catholic partito popolare supported the participation of farm workers to the profits (*cointeressenza*), pp. 181-182.

stopped the “communist riots” that had forced “weak” landowners to sell⁴³. Under the new conditions, the focus of the INEA enquiry of 1929-1931 had moved towards the pathologies and the defense of small farms.

In order to answer these questions, Lorenzoni recommended choosing farms that could represent the different types of newly created smallholding. The continuity with the methodology devised at the end of the 19th century is demonstrated by the long quotations from Coletti’s instructions to the technical delegates of the Faina enquiry included in the *Guida*⁴⁴. Serpieri remarks that: “the study of typical farms (*aziende terriere tipiche*) acquires a special significance when it is complementary to the general study of the agricultural economy of an area”. The role of monographs of typical farms was to “deepen the analysis of certain aspects of agricultural production”⁴⁵.

As usual, particular attention was dedicated to the budget. The movement from the general to the particular ended with the deconstruction of the farm into its components. A good third of the *Guida* explained to young agricultural economists how to deal with farm accounting and how to interpret its results. The first step was the assessment of the farm’s product, followed by the appraisal of inputs. These were appraised according to the aims of the budget, as market costs, reproduction costs, or cost opportunities (as any student of accounting knows, a firm has no single budget and costs have to be appraised differently according to the practical aims of the particular budget under scrutiny).

Different budgets revealed different things. An important indicator that could be calculated from the budget was the net product (*prodotto netto*), that is, the return obtained from the farm by all the sorts of labor and capital inputs combined. This was computed as the difference between the value of the saleable production (*produzione vendibile*) and the reproduction cost of all the inputs that were not produced within the farm itself. According to Serpieri: “this notion [was] especially helpful for reasons of public economy. The larger the net product per hectare, the larger the income that can be granted to the people – capitalists and workers – that live by it”.

⁴³ [Lorenzoni (1929)], p. 3 claims “that peasants took advantage of panicking landowners under the threat or actual pressure of communist upheaval”; [Serpieri (1930)] states that those who sold their land under the threat of socialism were “weak”, and the whole process had been a sort of natural selection of the strongest landowners.

⁴⁴ [Serpieri (1929)], in particular pp. 100ff.

⁴⁵ [Serpieri (1929)], p. 72.

Serpieri's net product signaled "the maximum social, political etc. convenience of society", rather than society's best economic interests⁴⁶.

Since in peasant family farms there was no distinction between the entrepreneur and the workers (and in some cases the entrepreneur and workers coincided with the landlord), peasants would maximize the sum of rent (if they worked on their own land), wages (as they were their own employees), and profit (as they were also self-standing entrepreneurs); in peasant farms, the family revenues and the firm's accounts were inextricably linked and Serpieri and Lorenzoni assumed that this could in principle explain some of the observed "deviations"⁴⁷.

On the basis of the data collected for typical farms, but also with the help of informants and rapid inspections, INEA's investigators analysed the effect of the formation of smallholding on the life of the countryside, and generally confirmed the hypotheses. The study of the living standards of the new peasant owners showed that these standards had often, improved, albeit slightly. In Tuscany for instance, Mario Bandini (who claimed he was unable to prepare fully-fledged farm monographs, "due to the enormous difficulties we would have encountered in obtaining the data from peasant farmers") was still able to report that "their conditions seem not to be very bad" when their properties were big enough to allow them to subsist on what they produced⁴⁸. Their farms were in fact kept more carefully and net product per hectare was higher than those on larger estates.

But whatever is gained in terms of peasant consumption, it was remarked, is lost in the way the land is cultivated:

the small farmer tends to produce for his own consumption. The market does not attract him, and he prefers to grow corn rather than tobacco and as much wheat as he can; he is also strongly averse to purchases from outside the farm, and reduces his use of fertilizers, machines, tools, pesticides, etc. Only manual labor is spent in abundance on the land⁴⁹.

⁴⁶ [Serpieri (1929)], p. 137, n. 1., compared with Laur's social income, above sec. 9.2.

⁴⁷ [Serpieri (1929)], p. 142.

⁴⁸ [Bandini (1931)], p. 6.

⁴⁹ [Bandini (1931)], p. 13: "il piccolo proprietario coltivatore tende a produrre per il proprio consumo, il mercato non lo attrae, egli preferisce coltivare granturco invece che tabacco, grano più che può; ha anche viva riluttanza a comprare qualsiasi cosa dal di fuori, e diminuisce l'impiego di concimi, macchine, attrezzi, anticrittogamici, ecc. Solo il lavoro manuale è profuso nel suolo e senza risparmio".

The wicked effects of the fragmentation of large estates, which were not visible in the increased consumption of the Tuscan peasants, were clear instead “from the point of view of agriculture as a whole”: “[peasants] do not fertilize, do not follow rational rotation, neglect industrial crops, lack clear concepts in the nourishment and selection of livestock”⁵⁰. The same effects were visible in the farms that Baron Leopoldo Franchetti bequeathed to his tenants near Città di Castello, in Umbria. Under Franchetti, these farms had been part of a single estate, and to have had only a limited autonomy. In the first few years after the baron’s death, the new owners generally increased their consumption, but renounced the most modern technique and deforested the former estate⁵¹.

Observations stressed the pulverization that followed from the division of the property among the heirs, the lack of fertilizers and machines, the conservative techniques, deforestation, the burden of the debts that the peasants had incurred in order to buy the land, and could then repay only at the price of overloading themselves with work.

In Campania, Alessandro Brizi, who held the chair of agricultural economics in Portici and led the local Observatory of agricultural economy, observed similar facts. He made a great point of the difference between “parcel farmers” (*proprietari particellari*) and “autonomous farmers” (*proprietari autonomi*). Autonomous farmers had properties large and productive enough to allow them to live exclusively on the farm’s production. Parcel farmers instead had to integrate their income as farmers with other sources, working either in urban factories or, most commonly, in the fields of others. The conditions of “parcel farmers” were significantly worse than those of autonomous ones, but both categories had made a slight increase in net product (and therefore in consumption) at the expense of the remuneration of their labor⁵². As the *cattedre* was already reporting in 1918, the net product per hectare had actually increased.

⁵⁰ [Bandini (1931)], p. 100: “non si concima più, non si seguono rotazioni razionali, si ostacolano le piante industriali, non si hanno chiari concetti intorno all’alimentazione e alla selezione del bestiame”.

⁵¹ [Vignati (1931)]. For an analysis of this famous case, that seemed to constitute a worrying precedent for many landowners, see: [Ministero dell’Agricoltura Direzione generale dell’agricoltura (1921-1922)], vol. 2, Faina’s report, and [Tassinari (1921)].

⁵² [Brizi (1933)]. In Portici, Brizi had as his pupils Emilio Sereni and Manlio Rossi Doria. Part of the field work for the enquiry, in particular the dull work at the *catasto*, was carried out by them, [Rossi-Doria (1991)]; Sereni eventually drew up the agricultural policy of the Italian Communist Party, and theorized a land reform that would give land to the peasants; Rossi Doria succeeded Serpieri at the head of the INEA, and dedicated his life to the cause of the Southern Italian peasants. On their years in Portici, see [Musella (1989)].

Brizi explained this problem by means of analysing farm budgets. In discussing the distribution of the net product (*prodotto netto o reddito totale da lavoro e da capitali*) among the returns of different production factors for peasant farms, he claimed that it was better to start from an appraised value of rent (*valore dell'affitto*). This fictional figure could be calculated on the basis of the rent ordinarily paid by peasant tenants (*affittanza contadina*). The labor income (*reddito da lavoro*) of peasant farmers could then be obtained by subtracting the appraised rent and the interest on capital from the net product. In this way, Brizi computed very low returns for the labor that peasant families dedicated to their land⁵³. The meaning of these calculations was that the prices of land were kept high by a relative depreciation and intensification of the labor input (since high prices of land translated into high values for the ordinary rent and hence for the appraised rent of peasant farms)⁵⁴.

With his data, Brizi confirmed what was already a commonplace among agricultural economists, namely, that the purchase of small properties “tends only to a small extent to have the nature of a capitalist investment. It is instead essentially a means of labor (*strumento di lavoro*)”⁵⁵. He added that even if the valuations carried out by farm accounting offices were available to farmers and had normative values, they would still buy the land for a higher price, “since peasants purchase due to strong extra-economic motives”⁵⁶.

This was a familiar conclusion for many agricultural economists, as Serpieri already assumed that deviations from economic optimum in land prices revealed that “the hypothesis that entrepreneurs are guided in their use of the available inputs by reasons of pure economic expediency does not correspond more than rarely to reality”. In fact, to Serpieri, investment in land and agriculture “often has a peculiar appeal that induces entrepreneurs (...) to be content with lower returns on their investments than they could get out of other assets”⁵⁷. He introduced in this way the “extra-economic motives” that affected the value of land. The most significant of such motives were attributed to a deeply rooted psychological feature of the agricultural classes, and of peasants in particular, that was dominated by positive values.

⁵³ [Brizi (1933)], p. 61.

⁵⁴ Čajanov called this phenomenon self-exploitation.

⁵⁵ [Brizi (1933)], p. 49.

⁵⁶ [Brizi (1933)], p. 53: “Se, da noi, vi fossero Uffici di Estimo annessi ad Uffici di contabilità agraria, la stima potrebbe essere chiaramente normativa. Ma le parti non ne prenderebbero norma, essendo l’acquisto contadino mosso anche dai forti moventi extraeconomici”.

⁵⁷ [Serpieri (1929)], p. 145.

The small autonomous farm, therefore, “notwithstanding some well known flaws on the technical and economic side, [had] steady and great advantages on the social side – wherefore its spread and preservation must be protected, especially in Italy, a country where the area of economic convenience of smallholdings is peculiarly broad”⁵⁸. Brizi, Serpieri, Lorenzoni, and Bordiga thought that a good service that included accounting and appraisal to assist and educate peasants, could be helpful, but not decisive. The corporatist state should directly “ease but not push” (*agevolare ma non forzare*) the process of creating peasant farms, preserving the natural process of selection of the best peasants, but preventing excessive prices from undermining the emancipation of the peasantry as a whole.

The inheritance law remained unchanged in Italy, but what Ernst Laur had obtained in Switzerland (called the *Anerbenrecht*, which favored one of the heirs alone) was widely discussed. The lack of capital should be fought by organizing cooperatives for the purchase of inputs and the transformation of outputs (cooperatives that agricultural economists were the best qualified to direct). In the 1930s, the state itself intervened with the compulsory conservation (*ammasso obbligatorio*) of rice and wheat stocks, by means of the *Federconsorzi* and the *Ente Risi*. Finally, among the tasks of the provincial Observatories of the INEA, there was an appraisal service that should guide peasants in their choice of investment. As these measures were only partially effective, agricultural economists discussed the possibility of combining different small plots into larger ones that were more agronomically viable⁵⁹. Through these measures, the virtue of peasant farmers would have positively contributed to the transformation of the Italian soil, overcoming the market failures that had slowed down the reclamation of land.

Clearly, agricultural experts had travelled a long way from the beginning of the century. Legitimated by science and the state, facing a population of small peasant farmers rather than a few owners of large estates, they felt entitled to control and intervene. This was the authoritarianism of “rational agriculture” that the liberal Luigi Einaudi eventually criticized; it was the beginning, in Italy, of the type of productivist and interventionist agricultural economist described by Scott and van der Ploeg.

⁵⁸ Brizi 1931, p. 49: “Ma – da un punto di vista obbiettivo – se, come noi crediamo fermamente, la piccola proprietà coltivatrice, a malgrado dei suoi noti difetti dal lato tecnico ed economico, ha i sicuri e grandi vantaggi dal lato sociale – onde si deve tutelarne la diffusione e la conservazione in Italia, paese ove l’area di convenienza economica della proprietà coltivatrice è larga [...]”, etc.

⁵⁹ [Tassinari (1922), Tassinari (1924)].

10.4 Agricultural economists and the peasantry

The main legacy of the study of individual businesses by means of accounting and appraisal was the economic characterization of peasant behavior. Peasantry had specific economic, sociological, and even psychological characteristics, and policies should rely upon and target these in order to promote and protect the peasantry from external disruption or from its own internal dynamics. Policies were devised accordingly to favor the development of agriculture according to a model which was presented as labor intensive and capital intensive at the same time in order to promote small-but-not-too-small holdings and contain the migration of the rural population to cities⁶⁰.

Hence, in particular after WWII, special rationalization policies were designed to defend peasant farms and land reforms were designed to transfer ownership to peasants. Although Giuseppe Medici (who promoted the land reform of 1950) was already in 1946 vehemently arguing against studies in rural psychology⁶¹, the influence of Serpieri and his school remained strong⁶² and Medici himself, in 1949, could not help once more invoking the peasant psychology as an explanatory variable

This coincided with a sociological mutation in the professional situation of the agricultural economists themselves. After the Great War, as we saw in Chapters 2 and 3, agricultural economists gained a relative autonomy from the traditional landed classes, while their position and legitimacy came to depend increasingly on the state. The creation of the INEA and its Observatories of agricultural economy was a key aspect of this autonomy. Having weakened their connection with the territory, agricultural economists inclined toward a growing identification with the state, and toward the “objectification” of peasants as targets of policy.

As objects of research and policy, peasants were assigned permanent and essential behavioral characteristics. On the one hand, a peculiar “psychology of the peasant” emerged, in particular in opposition to the economic behavior prescribed by marginalist (but also Marxist) economic theory. On the other hand, agricultural economists drew from an already existing and

⁶⁰ For instance: Serpieri’s total reclamation policy, see [Stampacchia (2000), D’Antone (1979), Prampolini (1976)] and Serpieri’s own discussion in [Serpieri (1940 (1993))], p. 200.

⁶¹ [Medici (1946)].

⁶² [Serpieri (1948)], [Brizi (1949)] for some significant claims.

widespread contrast between the “values” of the countryside and those of the city. While the progressive liberal thinking of the Italian intellectual elites had often stressed the positive significance of the city, of civilization, of civil liberty, the threat that came from the spread of industrialization for certain agrarian interests and the growth of a revolutionary socialist movement impelled conservative thinkers to extoll the virtues of the patient peasant, who contentedly lived his life of toil.

Agricultural economists observed systematic deviations from the prescriptions of economic theory in the behavior of petty peasants on the land market. Such deviations were made visible by the high prices and low returns of investments in land. Data from family budgets, farm surveys, and accounting inquiries were mobilized to explain and interpret such behavior, in economic, sociological, and even psychological terms. The attempt to build a profile of “peasant behaviors and motives” dominated the field of agricultural economics in Italy until the late 1940s. As bearers of a diagnosis for the pathologies of farming life, agricultural economists purported to lead the balanced modernization of Italian agriculture, but they also forced real peasants into rigid categories, and created a sort of “virtual”, predictable peasant who resisted economic incentives and was anchored to his land⁶³.

In this chapter, I investigated the conditions that made such systematic deviations first observable and eventually commonplace, and revealed how these conditions contributed to structuring the field of agricultural economics. Land valuation and accounting were the general framework of observation. Taught in universities and polytechnic schools by teachers of agricultural economics, land valuation constituted the main channel through which notions of “pure” economics entered the education of graduates of agronomy and agricultural economics. Valuing land also constituted one of their main professional tasks. Land valuation and its methods (analytical and synthetic), thus, generally structured the professional view of agricultural economists and experts in things agricultural.

The discussions that took place among agricultural economists, concerning the methods of land valuation and their meaning, shed light on the emergence of a supposed contrast between appraisal methods legitimized by “pure” economic theory and the situations that agricultural economists observed in enquiries and accounting studies. This contrast, once it was identified,

⁶³ [van der Ploeg (1999)] discusses the creation of “virtual farmers” in the Netherlands since the 1930s, and shows how their agency was taken over by agricultural advisers.

was exploited in order to support by means of “scientific evidence” a specific interpretation of the behavior of peasants and was invoked when policies were implemented that promoted family farms over large capitalist farms with hired labor, therefore stimulating the shift from observation and theory to ideology and policy.

This was not an exclusively Italian problem. While Italians, as we saw, kept the traditional accounting framework and attributed conservative moral values to peasants, in Russia, Čajanov’s organization and production school questioned the appropriateness of capitalist categories. Like the Italians, the Russians also observed, by means of budget studies similar to those of Laur, that peasants behaved in apparent contrast with the prescriptions of economic theory and the decisions of larger capitalist farms. They did not maximize or actually distinguish the profit of the entrepreneur from the rent of land or their wage as workers. They overburdened themselves with loans at high interest and concentrated their labor effort on extremely small plots of land.

Čajanov proposed to abandon categories of accounting that had no real meaning in the life of peasant families who were at the same time wage workers, entrepreneurs, and landowners. He thought that Laur’s system of attributing fictional values (opportunity costs) to infra-family non-monetary transactions (as Italians were doing) was the origin of many mistakes, and that family farms were part of a non-capitalist mode of production without wage-labor, that obeyed different logics of maximization⁶⁴.

What Čajanov actually rejected was a vision of farmers as ignoring their own best interest. Čajanov, for instance, used his scheme to explain the rationale behind the resistance of peasants to certain innovations propagandized by agricultural economists. In his organisation of the peasant economy, he quoted the case of the agronomist D. I. Kirsanov, who, after a failed attempt in Perm’ to popularize a new threshing machine, identified the double role of peasants as the reason; they were at the same time entrepreneurs and workers:

... the main cause of this failure, he saw in the fact that in this type of works, the purchaser of the machines, under the conditions of winter time in the Perm’ governorship, could not have found any job for himself. For this reason, the undoubted reduction of production costs contrasted here with the fact that the addition of profits caused by the machine not only did not increase the total amount of the peasant’s income, but reduced it by the high yearly amortization of the machine. If we accept (...) by analogy with the standard private

⁶⁴ [Čajanov and Tonču (2006a)], p. 299, cfr. [Čajanov et al. (1986) Čajanov, Thorner, Kerblay, and Smith].

enterprise, that the peasant firm is an enterprise in which the entrepreneur and the worker are reunited in one and the same person, then in this case, the gains of the peasant as entrepreneur are entirely offset by the losses that he has as employee, when he is forced to prolong his seasonal unemployment⁶⁵.

Family farms seemed to offer an intermediate system between the radical collectivism of Communism and capitalism proper, which was somehow worth protecting and had, in any case, its own reasons to be as it was. These ideas migrated through the rediscovery of Čajanov's work into the development studies of the 1970s⁶⁶. Interestingly, although they developed divergent ideas of peasant motives, and although they had rather different political views, Laur, Serpieri and Čajanov shared the fundamental observers' framework, the assessment of the importance of autonomous peasant farms, and the expectation of great advantages from farmers' cooperatives.

⁶⁵ [Čajanov and Tonču (2006a)], p. 294, my translation.

⁶⁶ See for instance [Scott (1976)] which, in its second chapter, explains the behavior of South East Asian peasants by means of Čajanov's model of a family farm; [Schmitt (1992)] opposes Čajanov's good fortune among anthropologists, who developed his ideas, to his relative neglect by agricultural economists, although the situation has changed over the past 20 years. For the rediscovery of the Russian agronomist in the 1960s: [Stanziani (2004)].

11 Conclusions

In this thesis I have tried – the reader may judge how successfully – to keep together different dimensions, different stories, so to say, that although potentially autonomous (and sometimes falling under different disciplinary labels) seemed to me so intrinsically connected that they would have been impossible to understand separately. My main characters have been the three forms of investigation that Salvioni and Valenti discussed: enquiry, statistics, monographs. The first task was to give some substance to these three names. I had to clarify what agricultural economists had in mind when they were thinking of agricultural statistics, agricultural enquiries, and farm monographs. This was especially important for enquiries, since the core notion of the enquiry, as a way of observing agriculture, was more uncertain and less evident to us. All the three forms of investigation, however, included relatively different practices whose content changed over time.

I decided therefore that the best way to tell the stories of my three main characters was to dedicate separate chapters to each of them. I identified the key elements of enquiries in the combination of questionnaires and inspections, in the qualitative rather than quantitative character of the observations, in the importance that the positions of the observers had in making observation relevant and trustworthy (Chapters 4 and 5); statistics, instead, had an exclusively quantitative character and supplied large masses of data, collected as impersonally as possible (Chapters 6 and 7); monographs and budget investigations (Chapters 8 and 9) began with the study of individual farms, taken as typical instances of a kind. Each of such pairs of chapters followed the evolution of a form of investigation between Liberal and Fascist Italy. Although I confined them in rigidly divided chapters, the three forms of investigation continuously combined and intersected: they were all different ways of observing the same object, agriculture. In practice, agricultural economists, and agricultural policy makers always combined them. In Chapter 10 I examine the interplay of the three forms of investigation and tried to show how a specific peasant psychology emerged from it.

Forms of observation, nevertheless, are not independent of the conditions that determine them and make them possible. Every practice, and observation is a practice as [Daston and Lunbeck (2011)] make clear, entails a huge set of conditions of “practicability”. In choosing one or other of the three forms of investigation and the related practices, observers of agriculture were certainly

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driven by their specific aims that made one or another form of investigation more or less suitable, but they also had to keep in mind practical, material constraints. The action of institutions, political and economic forces was the environment that promoted or inhibited certain investigative programs, beyond the intentions of the observers themselves. This is particularly evident in Chapter 9 where I discuss how the same form of investigation, the statistics of accounting books, changed when Italian agricultural economists tried to import it from Switzerland. It is important here to stress that Italians wanted to establish observatories that were as similar as possible to Laur's Sekretariat (notwithstanding some minor divergences). By their own standards, they did not succeed in imitating Laur until the late 1920s, which forced them to rely on descriptions of typical farms. Even when INEA's provincial observatories were constituted, the agricultural economists recognized that financial constraints and a lack of support had prevented them from reproducing the model exactly.

The study of the conditions of practicability of each form of observation is the study of the juncture points between the activity of observers and institutions. This is why, I hope, this work also sheds some light on the history of Italian administration and society. The construction of institutional sites of observation, of observatories, was an essential aspect of the conditions of practicability of some of these forms of investigation. If we look at sites of observation we obtain a periodization that connects rather precisely the development of observation and institutions, of agricultural economists and of public administration.

Enquiries, as considered here, both direct and indirect, lacked a privileged site of observation, a physically established observatory. Their strength, their popularity as a form of investigation, came from the fact that they did not require a solid administrative structure to start with and rely upon. Direct enquiries, which in fact are very rare in their "pure" form, were characterized by on-the-spot inspections. The observer in his travels followed the objects that he wanted to observe. The site, therefore, coincided with the observer himself. In addition, indirect enquiries did not require specific observatories. The enquiring centre collected "second degree observations": the reports of observations made by the informants, sometimes unsystematically, in the course of their daily experience. Indirect enquiries, therefore, were made possible by the evenly spread presence at local level of individuals who, by virtue of their belonging to a class or an institution, could be considered reliable informants. It was these individuals that the enquiring body would ask to answer the questionnaires and flesh out with information the structure of the enquiry. It is important to stress that, in principle, their supposed reliability rested on their social position, and on their knowledge of the local conditions of the area they

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lived in. Direct enquiries could complete indirect enquiries and verify single items of information, but observers coming from afar, as visitors, could never replace the information provided by insiders: their inspection would always be too limited in time and space.

In Italy, the enquiries launched by the state in the late 19th and early 20th century inevitably relied on two overlapping groups of local informants: local functionaries and local notables. Local notables (landowners and professionals) were the natural mediators between the state and the local civil society. They spoke the same “language” as the state, but they belonged to the territory. In the 19th century, landowners in particular were recognised as the biggest stakeholders of the state, since they owned the land, the largest share of national wealth, and produced a corresponding portion of national income. Their interests as a class, therefore, were supposed to coincide, to a great extent, with those of the state, while, at the same time, they were assumed to represent individually the needs of the area they belonged to. The Faina enquiry already shows the limit of this model of collecting information: social struggles seemed to require a sort of filter, the technical delegates. The enquiry still necessarily involved questionnaires to state functionaries and notables, but agricultural experts, thanks to published reports, statistics, and long direct enquiries could also play a decisive role. In Chapter 5, I showed how agricultural experts claimed for themselves the task of translating and summarizing the de facto conditions of peasants and landowners.

The tendency towards the autonomy of techniques of investigation was stronger for the yearly statistics of agricultural output (agricultural statistics proper, in the words of Valenti). The lack of technical competency and the required discipline of observation¹ made it impossible for the organisations of landowners and the unspecialized branches of the state administration to deal with statistical data. The landed elites, which formed the natural trait d’union between national politics and local interests, and were the necessary contact points of the administration in the case of enquiries with time constraints, were ill-suited to sustain alone the protracted collection of data year after year. The failure of the *comizi agrari* as statistical offices in the 19th century, and the limited functionality of provincial statistical offices demonstrate this point ad abundantiam². It is important to notice once again, that I am not repeating here the views of present agricultural historians, but instead recalling the opinions of late 19th century statisticians

¹ Kathrine Park in [Daston and Lunbeck (2011)] has stressed the close link between observation and observance.

² [Marucco (1996), D’Autilia (1992)].

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and political actors. They considered the available statistics of agricultural output to be so bad that they asked for and obtained from the government the interruption of the statistical series in 1898.

In the new century the need for reliable statistics of agricultural production became more pressing. The influence of agricultural elites over the state apparatus had weakened compared to the growing importance of industrialists. They needed the statistics of production as a key instrument of political influence³. They wanted to show that they still dominated the production of national wealth and they also wanted the government to tune the Italian custom duties in a way that favored national agricultural production. Giolitti's commercial treaties with Austria, Switzerland, Germany, and other nations were signed, so claimed agriculturalists, without a clear view of Italy's production. Moreover, data on local productions were useful to differentiate government policies according to the peculiarities of Italy's many agricultural specializations. Associations of agriculturalists and the agriculturalist lobby in the parliament began campaigning for agricultural statistics.

Statistics require a persistent structure for the collection and elaboration of data. In contrast to enquiries, which were entrusted to traveling observers and resident informants, statistics demanded an adequate staff of specialists repeatedly engaging in observation. The Society of Italian Agriculturalists (SAI) and its main personalities such as Eugenio Faina, Edoardo Pantano, and Raffaele Cappelli obtained from Giolitti government finance for statistics. From outside the administration, Ghino Valenti, a former collaborator of the SAI, was summoned to direct what we can call a network of statistical observatories. This network consisted of a Bureau of Agricultural Statistics in Rome, at the Ministry of Agriculture, Industry, and Trade, and a variety of different institutions that collected and elaborated the data at local level. In Northern and Central Italy, statistics were collected by traveling chairs of agricultural economics under the supervision of local agricultural societies. In practice, landowners and large tenants controlled the work of agricultural economists, who engaged in the actual collection of data. In Southern Italy, instead, the role of public administration was still strong. Although the traveling chairs had contributed decisively to the statistics since 1908, the *prefetti* preserved their centrality.

³ [Favero (2011)] shows how a famous protectionist industrialist, Alessandro Rossi, tried to influence Italian trade policy by cooperating with statisticians.

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In the case of statistics, then, I used instead the term “networking observatories” for the constellation of committees that prepared the statistics of production under Giolitti, because this polycentric institutional arrangement responded to the same need for repeated numerical observations as more structured statistical offices.

The cooperation of landowners and the state in organizing and then running the statistical network suggested the definition of stakeholder statistics for this approach to the collection of statistics. The somewhat ironic reference is to the theory of participative democracy: the most important stakeholders of agricultural policies, the landowners, participated with the government in the making of statistics. This is consistent with what historians of the administration and of statistics have written about this period: the coopting of interest groups inside the state organs, the creation of “special bureaux” which “thanks to combination of exceptional circumstances held: the charisma of the office leaders, the quality of functionaries, the limited dimension, the clear identification of tasks, (...), the presence – outside the government – of conspicuous economic interests that assumed such bureaux as their privileged contact point within the state apparatus”⁴.

The main epistemic justification for stakeholder statistics lay in the proximity between observers and the territory they observed. This proximity was geographical, of course, and also social, due to the contacts with the rural classes that local agricultural experts inevitably had. Proximity was precious because of the peculiarities of agriculture. Local differentiation was crucial to agriculture in a way that it was not for industry (or so it seemed to agriculturalists and agricultural economists). Only a long apprenticeship in the specific local conditions guaranteed that the observer could understand what he saw. The ill defined concept of “typical farm”, for instance, was fundamental. Features of typicality, such as ordinariness, were clear to the trained eye of an expert. The seemingly impersonal statistics relied in fact on such trained eyes, and the tacit expertise of the beholders.

The tensions of the period 1908-1910 and then again the strikes and land occupations of 1911 should be underlined as a significant fracture. They almost brought about the collapse of the SAI, and the birth of other, more radical, associations of outraged large tenants and landowners. The arrival in 1911 of Nitti to the Ministry of Agriculture, Industry, and Trade marked another discontinuity. Symbolically, Nitti forced Valenti to resign, dismantled the separate Bureau of

⁴ [Melis (1985)], p. 1437.

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Agricultural Statistics and merged it into the General Directorate of Statistics and Labour. This was a defeat for the agriculturalists. They lost one of their main traits-d'union with the administration, at a moment when the new minister had put labor and manufacture at the heart of his program. Nitti fostered centralization, whereas agriculturalists and their referent Valenti, had preached decentralization and respect for regional differences. Yet, however weakened, the network of observatories survived.

Social tensions between landowners and tenants, between tenants and workers, stimulated research in the private economy of agricultural businesses, as a scientific approach to disputes. This field was dominated methodologically by the use of farm budgets. While the link between the state and the landowners became weaker, agricultural experts gained, in its place, in independence and professionalization. They presented their candidature for umpiring technically the disputes between labor and capital, between sharecroppers and estate owners, between tenants and daily labourers. The analysis of farm budgets was a great part of their expertise.

In Switzerland, budget accounts had been successfully collected since 1901 and the ensuing statistical elaborations were used for a variety of aims. The Swiss Ernst Laur put in place an office of farm accounting that systematically gathered and elaborated hundreds of budgets every year. Laur used these data to shape the Swiss political debate on foreign trade, and small properties, and obtained protectionist policies, support for the export of dairy products, and a law that privileged only one of the heirs of an agricultural property (*Anerbenrecht*). Laur's office offered the example of a well-functioning observatory of agriculture, where observations were repeated in longitudinal samples, with a great number of individuals observed, and the trends of the agricultural economy constantly monitored.

In Italy, farm budgets were supposed to shed light in particular on the distribution of income between the factors of production: labor, land, entrepreneurship, and capital. A direct intervention of the state in this field seemed counterproductive, since the data were too sensitive to be shared with authorities, but, in contrast to Switzerland, where the SBV had widespread support among the peasants, Italian agricultural economists could not count on similar organizations, partly because they focused on the conflicts among the agricultural classes rather than on the disputes between agriculturalists and industrialists. The Federazione Italiana dei Consorzi Agrari was probably the only private organization able to finance investigations into income distribution and farm budgets. Before and immediately after the Great War, under the

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leadership of the Giolittian Giovanni Raineri, they financed the research of Arrigo Serpieri and Giuseppe Tassinari.

The war, and the vitality acquired by mass parties largely exasperated social conflicts, bringing Giolitti's power to an end. State policies were forced to target great masses of peasants (smallholders, sharecroppers, small tenants). Consequently agricultural economists, whose integration in the state apparatus had been fostered by war, changed their focus from large estates to small farms. In this reassessment of peasant farms, a key role was played by the Swiss data that showed that the product per hectare and the marketable product per hectare of peasant farms were higher than those of large capitalist farms. Small holdings – in Italy – seemed the solution for rural poverty and deficient production. For agricultural economics, large latifundia were to a great extent anti-scientific, a deviation from good agronomic practices.

When the Fascist regime was established, it undeniably dispossessed local landed elites of many of their organizations, nationalizing traveling chairs and consortia, and bureaucratizing the *comizi agrari*. In this way, the landed elites lost control of the bases of their expertise. This was the end of the Giolittian paradigm in statistics, as well. The state presented itself as the centre of any input. The creation of ICS in 1926 and the new CA of 1929 correspond to this centralizing will, along the conventional line of development that has so far been explored by Italian historians of statistics, namely, that of a process of modernization of state apparatuses that sees quantitative data as privileged vehicles of information about the economy and the statisticians as masters of the techniques for collecting and handling this information. Detached technical observers in state funded observatories then became responsible for the observation of agriculture, and with time this institutional change led statisticians to abandon “typical farms” (whose identification was only possible to local insiders) and look for different criteria of representativeness⁵.

In addition, agricultural economists were absorbed in the administration, by the “*cappa burocratico-consortile*” that was imposed on Italian agriculture during the 1930s⁶. Their scientific activities and empirical research were centralized in Serpieri's INEA, but the character of their activity differed greatly from the *modus operandi* of statisticians. The INEA took over the study of farm budgets and the statistics of business.

⁵ This change has been touched upon by [Desrosières (1993)].

⁶ [Fumian (1983)], p. 211.

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The regime's rhetoric was pro-rural. Mussolini and his ministers spoke of tipping the balance between the city and the countryside again in favor of the countryside and of its virtues. Serpieri claimed that the "rural masses" had been without a voice until the Fascist regime. They had been indifferent to the unification process (the Risorgimento), and the socialist movement had represented only the day laborers, a residual class of workers without real bonds to the land. In Serpieri's view, only the Fascist regime had finally given a voice to the real interests of the countryside. The INEA served this rhetoric, giving scientific support to the image of the virtuous toiling peasant who would rather work than leave his land. I hope that the reader interested in the history of Italy and her elites will have found here an unconventional glimpse of the intellectual and professional background of the so called *tecnici agrari* of Fascism, and in particular of the group gathered around Serpieri.

Serpieri and his collaborators called observatories the local branches of the INEA that carried out research agricultural economics, collecting data on farms, crop rotation, techniques, and input and output prices. This name betrays the idea that, for them, the important characteristic of observatories of agricultural economy was a permanent closeness to the agents observed. Integration in the context observed, and technical knowledge guaranteed the quality of the observation. While statistical observatories, such as the ICS share a conception with the prototypical astronomical observatories of the 18th and 19th centuries – the mathematical techniques for treating large masses of numerical data – the INEA's local observatories counted on their embeddedness in the economic context to practice the virtue of *observantia* and repeat over time fine grained observations that numbers could not easily summarize.

The precondition for these observations was the exchange that took place, at least in principle, between the observer and the economic agents whom he observed: the observer must somehow be useful for those who were observed. We saw how strongly this condition affected the traveling chairs of agriculture in their role as data gatherers. The same held for INEA's observatories that were meant to fulfill tasks of assistance to peasants, alongside the collection of data.

I think that one of the major achievements of my work has been to stress how this kind of exchange contributed to make observation possible, and conditioned the way that it was carried out, by imposing feasibility constraints. As announced in the introduction, I focused on the links between observation and the transformation of agricultural life. These links were not unidirectional. Observation and transformation could not be detached, either in the case of enquiries or in that of farm studies. The contribution of agricultural economists to the

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modernization of agriculture created the conditions for their observations. But the last chapters should have made clear that the programs of observation that were actually carried out determined the development of theory and policy proposals by the agricultural economists. Agricultural economists (not only in Italy) shared a farm-centered methodology of observation in which the basic tool was farm accounting. This methodology translated into a farm-centered "ontology" that shaped decisively the way which social and production problems were understood.

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Kennis ter transformatie: drie manieren waarop agrarische economen Italië observeerden tussen 1900 en 1940

Het onderzoek waarop dit proefschrift is gebaseerd is uitgevoerd in het kader van een project gewijd aan de categorie van “observatie” in de economie. Het project, dat nu ten einde loopt, werd gefinancierd door de Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) en geleid door Dr. Harro Maas. Het concentreerde zich op drie “plaatsen van observatie” in de economie: het observatorium, het laboratorium en de leunstoel (te verstaan als introspectieve plaats van observatie). Het project stelde zich een gedetailleerde analyse ten doel van de manieren waarop economen de werkelijkheid observeerden en van de institutionele context die deze observatie mogelijk maakten. Dit proefschrift concentreert zich op de eerste van de genoemde “plaatsen van observatie”: het observatorium. Het poogt een reconstructie van de instituten en dataverzamelingmethoden van de agrarische economie in het Italië van het begin van de twintigste eeuw.

Het proefschrift volgt de ontwikkeling van drie observatiemethoden toegepast door Italiaanse agrarische economen in de eerste decennia van de twintigste eeuw. Het uitgangspunt is het in de statistische literatuur van het einde van de negentiende eeuw traditionele onderscheid tussen enquêtes, statistieken en monografieën. Voor deze literatuur waren *statistieken* verzamelingen van numerieke data over de sociale en economische conditie van een land. Dit numerieke karakter van de gegevens stond het bereiken van getalsmatig bepaalde conclusies, door middel van het berekenen van het gemiddelde en de variantie, toe en garandeerde een volstrekt onpersoonlijk karakter van de gegevens en conclusies.

De *enquêtes* vormden ook onderzoek naar economische en sociale problemen, maar zij bevatten ook kwalitatieve informatie, verzameld door eenieder die de kundigheid en interesse had om getuigenis af te leggen van wat hij wist van de problematiek rondom het object van onderzoek. Deze getuigenissen werden verzameld door middel van vragenlijsten en de antwoorden werden bovenal beoordeeld op basis van de geografische positie en sociale en professionele status van de respondenten. De onderzoekers hergroepeerden de ontvangen antwoorden, hun directe observaties van en de analyses van statistische data tot *algemene observaties*.

De monografieën ten slotte waren studies gewijd aan representatieve instanties van een bepaald type (families, agrarische bedrijven). Het centrale element van deze vorm van sociaal en economisch onderzoek was de balans (van familie of agrarisch bedrijf), waarin patrimoniale

SAMENVATTING

status, bronnen van inkomsten en resultaten van uitgaven van de onderzochte objecten opgesomd waren. Door het numerieke karakter van de data was het mogelijk met geschikte standaardiseringen een groot aantal van deze monografieën samen te voegen om de statistische data te ondersteunen. In dat geval werden de monografieën primair materiaal voor bredere statistieken, maar we moeten niet vergeten dat de keuze voor de typische familie of het representatieve bedrijf normaalgesproken door de onderzoeker gemaakt werd vóór de inzameling van de gegevens, vaak op basis van de *coup d'oeil* van de onderzoeker ter plaatse.

Hoofdstuk 4 en 5 volgen de ontwikkeling van de belangrijkste Italiaanse enquêtes over de landbouw tot de regering van Giolitti. Hoofdstuk 5 analyseert de problemen, die de zogenaamde technische delegaten ondervonden bij de enquête van Faina, die gericht was op het verzamelen van informatie, die zo veel mogelijk “wetenschappelijk” was, maar ook kon woren vertaald in een vorm die bruikbaar was in het politieke debat. Eén van de kernpunten van deze discussie is de typische opvatting van objectiviteit en subjectiviteit, kenmerkend voor de enquêtes van het begin van de twintigste eeuw. Deze is verbonden aan het probleem hoe een omstreden sociale realiteit vertaald kan worden in een technische en wetenschappelijke taal.

Hoofdstuk 5 en 6 zijn gewijd aan het agrarisch statistisch bureau geleid door Ghino Valenti tussen 1907 en 1911. Deze periode is onderzocht vanuit twee gezichtspunten. Het eerste is het technische gezichtspunt van de toegepaste statistische methodologie, gebaseerd op het agrarische kadaster van 1910. Het tweede gezichtspunt is hoe de boerenelites niet alleen betrokken werden bij, maar nauw verwickeld waren in de verzameling van de gegevens. Dit aspect is één van de kernpunten van dit proefschrift: de participatie van van economische actoren in de inzameling van de data in een vrijwel gelijkwaardige verhouding tot de staatsadministratie. Dit was een gegeven dat de regeringsperiode van Giolitti typeerde, maar dat ingrijpend zou veranderen met de komst van het fascisme. Ik duid dit fenomeen aan als ‘stakeholder statistics’.

Hoofdstuk 8 en 9 bespreken de bedrijfsmonografieën en de verzameling van gegevens over de balansen van de agrarische bedrijven. Hier ligt het accent op het concept “typisch”, dat verkend wordt in zijn verschillende betekenissen, afgeleid van taxatietheorie, van pure economie en van de wetenschappelijke praktijk, tussen het einde van de negentiende en de jaren dertig van de twintigste eeuw. De ontwikkelingen die in deze laatste hoofdstukken beschreven worden staan een analyse toe, in hoofdstuk 10, van de antwoorden voorgesteld door agrarische economen op de problemen van de Italiaanse modernisering en op de sociale spanningen die na de Eerste Wereldoorlog ontstonden.

Conoscere per trasformare: tre modi in cui gli economisti agrari hanno osservato l'Italia 1900-1940

Le ricerche su cui questa tesi si fonda sono state condotte nell'ambito di un progetto dedicato allo studio della categoria di "osservazione" in economia. Il progetto, che giunge adesso a conclusione, è stato finanziato dall'Organizzazione Neerlandese per la Ricerca Scientifica (NWO) e guidato dal Dr. Harro Maas. Esso era incentrato su tre "luoghi dell'osservazione" in economia: l'osservatorio, il laboratorio e la poltrona (intesa come luogo dell'osservazione introspettiva). Il progetto si proponeva un'analisi di dettaglio delle pratiche con cui gli economisti osservano la realtà e della cornice istituzionale che rende questa osservazione possibile. Questa tesi si occupa del primo dei "luoghi dell'osservazione" elencati: l'osservatorio. Vi si tenta una ricostruzione delle istituzioni e dei metodi di raccolta di dati sull'economia agraria dell'Italia al principio del Secolo XX.

La tesi segue lo sviluppo di tre metodi di osservazione usati dagli economisti agrari italiani nei primi decenni del secolo XX. Il punto di partenza è la distinzione, tradizionale nella letteratura statistica di fine Ottocento, fra inchieste, statistiche e monografie. Le statistiche, per questa letteratura erano collezioni di dati numerici sulla condizione sociale ed economica di un paese. Questo carattere numerico dei dati permetteva di raggiungere conclusioni numericamente determinate, mediante calcolo della media e della varianza, e garantiva il carattere assolutamente impersonale di dati e conclusioni. Anche le inchieste erano indagini di problemi economici e sociali ma includevano informazioni qualitative raccolte da tutti coloro che avessero abilità e interesse a testimoniare ciò che sapevano sui problemi oggetto d'indagine. Tali testimonianze erano raccolte mediante questionari e le risposte erano valutate anche e soprattutto in base alla posizione geografica, status sociale e professionale dei rispondenti. Gli inquirenti ricombinavano le risposte ricevute, le osservazioni dirette fatte dagli inquirenti, e le analisi di dati statistici in *osservazioni generali* a carattere consensuale. Le monografie infine era ricerche dedicate a istanze rappresentative di un tipo (famiglie, aziende agrarie). L'elemento centrale di questa forma di indagine sociale ed economica era il bilancio (bilancio di famiglia o di azienda agraria) nel quale erano elencati stato patrimoniale, fonti di reddito, esiti di spesa degli oggetti osservati. Solitamente la scelta della famiglia o dell'azienda tipica e rappresentativa era fatta prima della raccolta dei dati, spesso sulla base del "colpo d'occhio" del ricercatore sul campo.

SOMMARIO

I capitoli 4 e 5 seguono lo sviluppo delle principali inchieste italiane sull'agricoltura fino all'età giolittiana. In particolare il capitolo 5 analizza nel dettaglio i problemi incontrati dai delegati tecnici dell'inchiesta Faina, il cui compito era raccogliere un'informazione il più possibile "scientifica", ma politicamente rilevante e tradurla in forme che la rendessero funzionale al dibattito politico. I capitoli 6 e 7 sono dedicati all'Ufficio di statistica agraria diretto da Ghino Valenti negli anni 1907-1911, che si qualifica come network di osservatori della realtà agricola. Aspetto fondamentale è il coinvolgimento delle elites agricole e delle loro associazioni nella raccolta dei dati. Questo aspetto è uno dei nuclei centrali della tesi: la partecipazione degli attori economici alla raccolta dei dati in un rapporto quasi paritetico con le amministrazioni dello Stato è un elemento caratteristico dell'età giolittiana che il fascismo stravolgerà. Ho caratterizzato questo fenomeno con il nome di *statistiche degli stakeholders*.

I Capitoli 8 e 9 discutono invece le monografie di azienda e le raccolte di dati sui bilanci delle aziende agrarie dagli Osservatori provinciali per l'economia agraria. L'accento è sul concetto di "tipico" che viene esplorato nei suoi diversi significati derivati dalla teoria dell'estimo, dall'economia pura e dalla pratica scientifica, fra la fine dell'Ottocento e gli anni 1930. Gli sviluppi descritti in questi ultimi capitoli, permettono nel capitolo 10, un'analisi delle risposte proposte dagli economisti agrari ai problemi della modernizzazione dell'agricoltura italiana e alle tensioni sociali in particolare dopo la Prima Guerra Mondiale.

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