The Social Foundations of Positivism: The Case of Late Nineteenth Century Italy

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Abstract

What is the connection between positivism, the claim that the social world can be studied like the natural world, and capitalism? Most theories claim that positivism develops from industrial capitalism. According to this position the social institutions of capitalism appear to its agents as a quantifiable second nature. Because of this capitalism tends to produce a social science that self-consciously mimics natural science by analogically extending its methods to the social. Drawing on the example of late nineteenth century Italy, this paper argues that positivism can develop on very different social foundations. We show that positivism in Italy was widespread in the late nineteenth century, but cannot plausibly be linked to industrial capitalism. Instead it was rooted in agrarian capitalism. Like positivists in industrial contexts, Italian positivists also tried to construct a quantifying and objectifying social science. But they did not do so by attempting to construct an analogy between social science and natural science. Instead, in Italy positivists tended blur the distinction between society and nature, and to treat sociology as a branch of biology. We argue that this was rooted in the lack of a clear physical distinction between the natural environment and human institutions in many parts of Italy. The blending between the two was particularly evident in the deeply entrenched regimes of agrarian production that had altered the physical landscape through irrigation practices in the valley of the Po.

Introduction

The argument that positivism (a position characterized by the claim that the social world can be studied in fundamentally the same way as the natural world) is associated with industrial capitalism is one of the standard claims of critical social theory. The argument has been most developed in the synthetic work of Lukács, the Frankfurt School and their followers (Horkheimer and Adorno 1993:3-42; Lukács 1971:83-222; Marcuse 1964: 172; Marx 1977:163-177; Sewell 2005; Steinmetz 2005). These scholars combined Marx's theory of commodity fetishism with Weber and Simmel's accounts of rationality as calculability, to create a powerful explanation for the rise of positivist social science in industrial capitalist societies (Marx 1977; Simmel 1930; Weber 1978:86-90). The argument also appears in some histories of sociology. For example Gouldner argues that functionalist sociology, one important strand of which is sociological positivism, is an ideology of industrialized societies (Gouldner 1970:113-114). More Generally Giddens (1971:xii; 1978:4-5) claims that industrialization formed the context of classical sociology which includes a strongly positivist component, especially in the Durkheimian tradition.

Our paper uses evidence from a rather little known, but important branch of positivism that developed in Italy in the late nineteenth century, to challenge the generality of this account. We argue that positivism in Italy was an agrarian ideology, not an industrial capitalist one. In this case, the impetus to naturalize and quantify the social did not come from any analogy between industrial capitalist institutions and nature. Instead positivism in Italy was based on the assimilation of society to nature in a way that

fit in easily with character of Italian agrarian capitalism. Thus, we suggest that while the Marx/Weber synthesis, and also the non-Marxian critical accounts such as those of Giddens and Gouldner, correctly focus on the relationship between the broader political economy, and styles of social thought, they do not adequately account for the various sorts of political economy that can support positivism.

The Theoretical Debate About Positivism and Capitalism

The theoretical discussion about the relationship between capitalism and positivism has two main intellectual sources: Marx's theory of commodity fetishism and Weber's account of rationalization. Most contemporary work on the relationship between positivism and capitalism derives in some way from the powerful synthesis of these two positions effected by Lukács and the Frankfurt School.

Marx's Account

Although Marx's work predates the emergence of positivism as a major position in social thought, he developed an argument that anticipates many contemporary analyses of positivism in the social sciences. For Marx, the transformation of use-values into commodities, was associated with their conversion into objects whose social character then became inscrutable. Thus as Marx (1977:149) put it in his analysis of value,

> The coat…seems to be endowed with its equivalent form, its property of direct exchangeability, by nature, just as much as its property of being heavy or its ability to keep us warm.

Thus, in a society of commodity production social cooperation manifests itself in the exchangeability of objects (Marx 1977:165-166). The cooperative element in human production appears to be a characteristic of objects, rather than a characteristic of human

social relations. In this context, forms of social knowledge emerged that described the social world as a quasi-natural environment. However these "…forms of thought…are socially valid, and therefore objective, for the relations of production belonging to this historically determined mode of social production", but not for all forms of production (Marx 1977:169). In short for Marx positivism, or what he would have called "bourgeois economics" was the social science of capitalism.

Marx's analysis identified the characteristic social science of capitalism as one that treated social relations as things, an objective second nature which "possess[ed] the fixed quality of natural forms of social life" (Marx 1977:168). However Marx did not emphasize quantification as a major feature of social thought under capitalism, perhaps because his key examples were English classical economists such as Ricardo, Smith and Say, who were not highly quantitative.

Weber and Simmel

The second main account of positivism derives from Max Weber's notion of rationalization. Weber famously argued that modern civilization was characterized by the progressive predominance of a rational world-view in which men and women acted on the basis of calculability. Although he adduced many causes of rationalization, including centrally Calvinism, he also strongly associated rationalization with commodification. This is clearest in his analysis of the "rational capitalistic establishment" (Weber 1992:275). Weber argued that the "rational capitalistic establishment" depended on double entry bookkeeping, a method that allowed firms to compare the costs of their operations with their profits (Weber 1978:91). One of the most important presuppositions of double entry book keeping is the commodification of inputs, and centrally the

commodification of labor (Weber 1978:91-93; Weber 1992:276-277). Commodification promotes rational enterprise because by assigning a price to all inputs, and creating a market for goods, it allows the entrepreneur to estimate beforehand his or her expected profits, and to compare this estimation, after the fact, with actual profits (Weber 1978:91). Under these conditions the enterprise can operate rationally, and can become ever more rational as it incorporates information from repeated cycles of production. Thus, for Weber, there is close relationship between rationality as calculability and the extension of commodification.

Weber's contemporary and close intellectual interlocutor Georg Simmel, was perhaps the first scholar to state a more general relationship between commodification and rationality. Simmel argued that money allowed people for the first to compare widely disparate objects in terms of a common measure. This encouraged people to see objects as fungible equivalents for one another that could be quantified. He then established a rough analogy between the money economy and the scientific world-view. There were three main similarities between them. First, both abstract from individuality and treat instances only as quantitatively comparable cases. Second, both view the world as a massive interconnected cosmos held together by a common substance: energy in the case of nature, money in the case of society. Finally, both the money economy and modern science are based on calculation and quantification (Simmel 1930:482-483, 488, 495, 498).

The Weber/Simmel argument, like Marx's, emphasizes a connection between capitalism and positivism. But whereas Marx stressed the naturalization of the social world, Weber and Simmel pointed to its quantification. To some degree this may reflect

the different times in which they writing, for as we suggested above, Marx's main work occurred before the rise of a mathematically sophisticated social science, while both Weber and Simmel were highly aware of quantification as a central feature of modern culture.

The Classical Synthesis of Critical Theory and its Contemporary Outgrowths

Georg Lukács creatively extended both the Marxian and Weberian accounts of the relationship between positivism and capitalism by combining Marx's focus on the naturalization of society, with Weber and Simmel's emphasis on quantification. Lukács (1971:83) began, as did Marx, with the commodity. He argued that in capitalist society social relations take on the appearance of relations among things. But Lukács added to this claim the notion that capitalism also produced a distinctively calculating and rationalized world-view[1]. His term for this combination of naturalization and quantification was "reification" or "thingification". As a world-view, reification is characterized by a high degree of individual calculation proceeding with a social context treated as a quasi-natural reality. Positivist social science for Lukács is an intellectual reflection of this basic existential situation (Lukács 1971:84, 119-120).

[1] This is a major innovation, but it is often hard to see, because Lukács did not advertise the profound Weberian and Simmelian influence on his work. The innovation is most evident in precisely those places where Lukács claims greatest textual fidelity to Marx. For example Lukács claims that the development of capitalist production "from the handicraft via co-operation and manufacture to machine industry" reveals "a continuous trend toward greater rationalization" which he interprets as extension of calculability (Lukács 1971:88). As evidence of the Marxist credentials of this argument, he cites some passages in Capital concerned with the development of machinery and large-scale industry. But these passages do not in fact refer to rationalization as calculability, nor is calculability a central theme of Marx's work. In fact, it was Lukács, not Marx, who linked the idea of commodity fetishism as the naturalization of the social, to rationality as calculability.

The Frankfurt School and particularly Herbert Marcuse developed these arguments further in the mid-twentieth century. Marcuse suggested, following Pollock (1992:78) and Neumann (1944:255-261), that twentieth century capitalism was no longer integrated by the automatic workings of the market. Rather it had entered an "essentially political era" (Pollock 1992:78) in which markets were created by vast advertising budgets, and prices were determined through a process of back door political bargaining bringing together leaders of industry and the state. Marcuse (1964:155; 1992:138-162) argued that the dominant ideology of this new period was technological rationality characterized by a masking of political decisions under the guise of technical necessity.

Recently, Steinmetz and Sewell (2005: 173-4) have produced yet another version of this argument. They argue that positivism "resonates" with the experience of organized or "Fordist" capitalism characterized by "Keynesian management of aggregate demand, full employment strategies, welfare state institutions, and highly bureaucratized forms of both public and private management" (Sewell 2005:80). Fordism partially counteracts the fundamental problem of capitalism: the inability of individual capitalists to predict future demand and invest accordingly by combining Taylorist methods of mass production in which the work process is organized according to the methods of scientific management, a policy of relatively high wages, and a concerted effort to control the consumption patterns of the working class through cultural mechanisms . Fordism is thus a "mode of regulation" aiming to counteract the tendency of the rate of profit to fall by establishing the conditions for stable effective demand. Steinmetz and Sewell argue that this stabilized form of capitalist makes the application of natural scientific models to the social world plausible (Sewell 2005:180-181; Steinmetz 2005:299).

Despite the great richness and theoretical sophistication of this discussion, all of its participants share two fundamental assumptions: that positivism, understood as a world-view that naturalizes the social and is partial to quantitative techniques, has some close relationship to industrial capitalism (whether Fordist or not). Second, they all see this relationship in terms of analogical process in which the methods of the natural sciences come to be applied to the social realm. In the sections that follow, we present some evidence from a very important case of positivism that does not correspond to either of these claims: Italian positivism. We will show, first, that in Italy positivism was not an industrial capitalist ideology, but rather an agrarian capitalist one. Second we will argue that its conceptual link to the natural sciences was different from that posited by the Weberians and Marxists. Instead of an analogical link to the natural sciences, Italian positivism drew an ontological one, assimilating the social sciences directly to a branch of biology.

Italian Positivism

During the late 1870s and 1880s a particularly radical form of positivism swept Italian intellectual life (Burgalassi 1996:48-56; 145-146; Espinas 1880:157-172; Gentile 1921:318-319; Restaino 1985b:265, 270). The rise of positivism, however, did not in Italy correspond to the triumph of industrial capitalism, which remained very unevenly established on the Italian peninsula. Despite a few pockets of growth toward the later nineteenth century in Genoa, Milan, and Turin, factory production on a large scale, Weber's "rationalist capitalistic establishment" was little in evidence (Fenoaltea 2011:10-14, 19-21; Gershenkron 1968:98-124; Milward and Saul 1977:253-264). Furthermore Italian industrialization, even where it did develop, always maintained a close

relationship to agriculture as the earliest factories were devoted to processing agricultural products, and workers often maintained connections to their rural roots (Mayer 1981: 30-31; Zamagni 1993:83-88, 122). The social elite also remained profoundly agrarian, and even the capitalist agrarians of the north depended on low wages for their profits (Corner 2002:289). Thus, the Italian case seems paradoxical. Here an overwhelmingly agrarian country produced a highly positivistic form of social thought.

However Italian positivism was marked by two important particularities that are important to emphasize. First it was strongly biologically reductionist. Indeed one of the most comprehensive analyses (Burgalassi 1996:49) characterizes Italian sociology, the *locus classicus* of positivism, in this period as "centered on the axiom of a substantive continuity between the biological and social world". The particular connection that this current of thought established between the natural and the social world was ontological rather than methodological.

The second distinctive feature of Italian positivism was its hostility to cities. Italian positivists saw the city as the site of corruption and social disintegration. They were thus deeply concerned with maintaining the integrity of rural life.

Two figures perhaps best exemplify Italian positivism as a world-view: Cesare Lombroso (1835-1909) and Corrado Gini (1884-1965). Cesare Lombroso was a doctor born in Verona. He had been a medical official in Calabria in 1862 during the struggles against *brigantaggio* (brigandage) that followed Italian unification (Pick 1986:61-63). Initially he had believed in a political solution to the problems of regional uneven development that plagued the newly unified state. However as regional disparities persisted he shifted his thinking toward a biologically reductionist view that interpreted

regional differences as racial differences (Petraccone 2005:79-80). His views were first laid in *L'uomo delinquente* (Criminal Man)– a treatise on criminal anthropology that tried to link cranial measurements to criminal types. Although ostensibly the book was not directly focused on region, Lombroso's tabulations clearly implied the prevalence of different cranial types in different parts of the peninsula.

[Figure 1 About Here]

Figure 1 is a table from the book that tabulates types of criminals "murderers", "thieves", "robbers", "arsonists", and "swindlers" by region. The table purports to show for example that Piedmontese murders had a higher skull capacity (1501 millimeters squared) than either Calabrian or Neopolitan murderers (with figures of 1493 and 1480 respectively). In general, wrote Lombroso (1876:17 see also 24), the "stature of delinquents almost always reproduces the regional type". Lombroso's version of positivism thus put the perennial problem of Italian regional uneven development on a new racial foundation.

Lombroso, aside from espousing a radical form of biological reductionism, was also quite hostile cities. One of his central arguments was that contact among large numbers of people led to a loss of inhibition and therefore criminal behavior (Lombroso 1876:130-132). As he put the point (Lombroso 1876:131),

> Whoever has studied man, or better still himself, in the midst of social groups, of whatever sort they may be, will have observed how often he transforms himself, and from the honest and pudic man that he was and still is by himself and among the domestic walls, becomes licentious, and even immoral.

For this reason, argued Lombroso (1876:132), crimes against morality, above all prostitution, were fundamentally urban phenomena. Parallel arguments emerged in a broad stream of positivist work on "crowd psychology" which linked urban disturbances to the loss of inhibitions due to suggestion (Burgalassi 1996:68-69). Thus with Lombroso two themes are important: radical biological reductionism, and anti-urbanism.

The second figure who exemplifies Italian positivism is the eminent statistician Corrado Gini. He held views there were broadly similar to Lombroso. Gini argued that nations were biological entities that are born reach maturity, and then decline (Lanaro 1979:45). The position of each nation on this developmental arc depended on the differential fertility of its social classes. Wealthier nations had a greater proportion of the population in higher social classes with a low fertility rate. Poorer nations had a greater proportion of the population in lower social classes with a high fertility rate. The optimum situation for Gini occurred when the demographic excess of the lower classes replaced the demographic "vacuum" of the upper social classes (De Grazia 1992:53; Ipsen 1996:222; Lanaro 1979:47). Distinctively in Gini's conception, the lower, more fertile, social classes were the reservoir from which new elites would be formed (Cassata 2006:21). Gini tried to establish a close analogy between this process and biological ones. Thus he (Gini 1912:34) stated,

> Now, just as the parabola of the life of organisms finds its explanation in the diverse activities of their exchange, thus – I think – the curve of the evolution of peoples can be put into relation with the diverse stages of the demographic exchange among the various social classes.

Here a cyclical view of historical development was given a biological interpretation.

Writing from this perspective, Gini entered into some of the key political debates of the first decade of the twentieth century, particularly the debate on emigration. Gini argued that in 1912 in Italy the upper classes were still fertile enough to replace themselves, and that this forced members of the lower classes to emigrate (Bertaux 1999:575; Lanaro 1979:47). In the future, as the fertility of the upper classes declined, Italy would face the problem of an ageing population (Bertaux 1999:575). Furthermore as the most vigorous Italians emigrated, those who remained to replenish the infertile elites would be demographically weaker than before (Cassata 2006:21).

This biological reductionism was also accompanied the rise of a serious attempt to construct a quantitative social science. For example Gini was perhaps the key figure in establishing statistics as an autonomous discipline in Italian intellectual life. He conducted ground-breaking work in statistical methodology and created an index for the measurement of inequality that is still widely used in contemporary social science (Prévost 2009:22-57).

One particularly important feature of Gini's social thought is its strict reduction of society to biology. Thus society was a living being to be cultivated through the use of science. Individuals within it were cells closely linked to the social whole. Gini's statements are exemplary here: "the individuals of a society are like the cells of an organism", "just as the parabola of the life of an organism can be explained as a result of variations of their exchange, so, I think – the curve of the evolution of peoples can be put into relationship with the different stages of demographic exchange among their various social classes", "the market is like a sick stomach that cannot digest the food that has

been given to it" (Gini 1912:9,34,45). As Gini stated in 1927, distinguishing the liberal from the nationalist theory:

> The liberal theory assumes that society consists of an aggregate of individuals who must look after their own interests and it regards the state as an emanation of individual wills intended to eliminate the conflicts between the interests of individuals. The nationalistic theory, on the contrary, views society as a true and distinct organism of a rank superior that of the individuals who compose it, an organism endowed with a life of its own and interests of its own.

Society as an organism was thus more important than the individuals who made it up. The purpose and value of individual persons could be determined by their place in this organic whole.

The most dramatic consequence of Gini's embrace of the organic metaphor is his rejection of sampling techniques, and his suspicion of statistical inference. Although Gini's technical arguments against sampling are somewhat complicated and controversial, most historians of his work suggest that part of his motivation for rejecting sampling was that he was attached to the Italian tradition of descriptive monographs, which tended to assume that all aspects of a given territory were inseparably linked to one another in some kind of inseparable whole, so that individuals within the territory could not be treated as fungible units (Baffigi 2007:54-57; Cassata 2006:144; Prévost 2009:167-168). In sum Italian positivism operated with a model of social reality as a tightly integrated living system. The level of reality to which it reduced society was really biological reality, not physical reality as such.

Another important dimension of Gini's thought was its anti-urbanism. At the basis of the social organism, for Gini, stood agriculture. The first symptom of the decline of a society is the depopulation of the countryside as farm labor migrates to the city and abroad, creating a chronic shortage of labor (Gini 1912:40, 82). As Gini (1930:695) put the point to an English speaking audience in 1930,

> Nor must we forget the damage caused to the race by forsaking the free life of the fields for the unhealthy life of the city. Mussolini has personally called attention to the progressive decline of the birthrate as a consequence of the monstrous growth of cities.

For Gini, in sum, the city constituted a threat to the organic and natural social order of the countryside.

Italian intellectuals across the political spectrum widely shared Lombroso and Gini's biological reductionism as the popularity of eugenics attests. At the beginning of the second decade of the twentieth century, a eugenics lobby began to emerge. In 1912, a number of prominent Italian statisticians (including Gini) attended an international eugenics conference in London organized by Leonard Darwin (Charles Darwin's son) (Cassata 2006:19; Pogliano 1984:61). In the same year as the conference, the first university position in "social eugenics" was established at Genova (Pogliano 1984:62). In 1913, the *Società romana d'antropologia* (Roman Society of Anthropology) established a committee on eugenics (Cassata 2006a:19; Pogliano 1984:62). World War I gave a further boost to the eugenics movement (Pogliano 1984:64). By 1915, eugenics societies and university professorships in the field were established (Pogliano 1984:62–64).

This interest in eugenics led to the foundation of three prestigious eugenics organizations in the early twenties: the *Lega italiana di igiene e profilassi mentale* (Italian League of Mental Hygiene and Prophylaxis), the *Istituto italiano di igiene, previdenza ed assistenza sociale* (The Italian Institute of Hygiene, Insurance, and Social Welfare), and the *Societá italiana di genetica ed eugenica* (The Italian Society of Genetics and Eugenics—SIGE) (Pogliano 1984:69–71). Such ideas were far from being considered reactionary, as moderate reformists promoting public health supported these organizations (Pogliano 1984:70).

The decade of the 1880s was also the period during which the nascent Italian social sciences began to develop as independent disciplines in close relationship with the rise of positivism as a world-view and biological reductionism. In the 1880s the new social sciences developed most strikingly as criminal anthropology (as we showed with Lombroso) a discipline exactly at the border between law and medicine: the two most established intellectual professions on the peninsula in the nineteenth century (Mangoni 1985:111). Older legal studies had focused on the concept of guilt and the associated idea that criminal action should be understood the product of a rational intention (Burgalassi 1996:60). The criminal anthropologists, who gathered around Cesare Lombroso in Turin during the 1880s, however shifted their focus away from the criminal act and toward the criminal himself (Burgalassi 1996:60; Gentile 1921:165; Mangoni 1985:111). The Italian school of criminal anthropology focused on two things. First its members attempted to classify criminals into different types, and second it tried to explain criminal behavior as the outcome of a series of natural and social factors ranging from "climate" and "race" to

population dynamics (Burgalassi 1996:65, 79). Thus a highly reductive positivism emerged in the later nineteenth century in Italy and became very popular.

The Consiglio Generale di Statistica

To get a more precise sense of the development of Italian positivism, we have constructed a prosopography or collective biography (Stone 1971) of the organization that most institutionalized Italian social science at least until the end of World War II: The *Consiglio Generale di Statistica* (CGS). This was a collegial body responsible for overseeing the collection of official statistics in Italy. The body was designed to give deliberative power to a group of scientific experts and therefore to create a separate structure of information collection from the many administrative methods already in existence on the Italian peninsula. Stefano Castagnola, the minister of agriculture, industry and commerce at the time of unification provides a very clear summary of its general purpose. As he stated in a letter Victor Emanuel (Ministerio d'agricoltura, industria e commercio 1872: 1-2):

> If it is reasonable, when dealing with material of an administrative character, that decisions should be taken exclusively by those who have government responsibility and requires only that the persons who are most able in every branch business assist them with their council, [the matter is different] when treating instead of research aimed at collecting facts and figures, according to scientific norms, and with no other thought but that of knowing the truth[. In this case] it is manifestly opportune that these should be undertaken by competent persons, and persons distinct from the

> administration, and that this last should limit itself to executing the decisions made by these [competent persons].

In sum, the CGS had the purpose of subordinating administrators to "eminent persons in the statistical and economic disciplines" (Ministerio d'agricoltura, industria e commercio 1872:3). Given its mission, "collecting facts and figures according to scientific norms", the CGS drew the cream of the crop of Italian social scientists at least prior to the end of World War II. Thus a prosopographical examination of its members can be used to get some sense of two key issues: the historical trajectory of the Italian social thought, and its regional bases.

We begin our analysis with a brief discussion of the evidence. In 1936 the statistical agency ISTAT published a celebratory volume on the history of the agency and its activities. Included in this publication is a list of elective members of the CGS. The information also contains evidence on the CGS's predecessor, the *Giunta consultiva di statistica*. By cross checking these names with entries in the *Dizionario biografico Italiano* (*Italian Biographical Dictionary*) and other scattered sources, we have been able to build a list of the men on the CGS and thus a "sample" of the most prominent social scientists at different periods up until the rise of fascism. We use this evidence first to examine the careers of Italian positivists focusing on the "core" group of the CGS, defined as men who were on the council more than two times, in two main periods: 1861-1901, and 1910-1941.

From 1861 to 1901 twenty-four men comprised the core group of the CGS. Table one presents six sorts of information about this group: pre-unification region of birth, "Region", whether or not they were a senator, "Senator", whether or not they were a

parliamentary deputy, "Deputy", whether or not they had a position in a local Communal Council, somewhat akin to being an alderman, "CC", whether or not they took part in the *Risorgimento* movement form national unification, "Risorg", and their discipline, "Discipline". Two noteworthy pieces of information are evident about the group as a whole. First almost all them had political careers. Only Luigi Bodio, who was a career bureaucrat, had no discernible political career being neither a deputy, nor a senator, nor a councilor, nor a participant in the Risorgimento. Second almost none of these men could be described a professional statistician. The disciplines in which they made their careers were mostly law and economics. The only statistician again was Luigi Bodio who was really a state employee.

[Table One About Here]

Unfortunately from 1901 to 1910 there is a gap in the evidence on the membership of the CGS, but the series picks up again in 1910. This allows us to develop some idea of what the CGS looked like in the turbulent years immediately prior to the rise of fascism, and during the fascist regime itself. From 1910 to 1941 there were eighteen core members of the CGS. As Table Two shows this group is very different from the previous one. First, unlike the first group where the majority of the members had political careers less than half of this group was made up of parliamentary deputies. This shift in the career pattern of the members is particularly striking among Lombard Venetian members, an important subgroup as we note below. In the earlier period, all of the Lombard Venetians, with the exception of Luigi Bodio, had political careers either as parliamentary deputies, or as senators, or activists in the movement for Italian unification. In the later period none of the Lombard Venetians had political careers. Further the

disciplinary specialization of the members of the CGS shifted in this period. In the earlier period only one man, Luigi Bodio, could be classified as a "statistician", and he was not a particularly sophisticated methodologist. In the latter period statistics emerges as the dominant career, with eleven of the eighteen members identifying themselves primarily as a statistician. Further in no case did the statisticians have a parliamentary career. This evidence shows then a striking shift toward a positivist world-view on the council.

[Table Two About Here]

Thus, to conclude, the data from the CGS show that important Italian social thinkers became more reductionist and more scientistic, in sum more positivist, toward the first decade of the twentieth century. By 1912 a highly positivistic world-view dominated this institution. As we have already shown in the previous section, this transformation resonated in Italian intellectual life as positivism swept through the social sciences in general (Burgalassi 1996:38). This positivism had one distinctive characteristic that is worth keeping in mind. Most explanations of positivism generally treat it as an application or extension of natural scientific methods to the social world. The justification for this extension is that the two domains are somehow basically alike (Giddens 1978:3; Steinmetz 2005:283). Italian positivism made a stronger claim. Figures like Gini and Lombroso did not just argue that analogies could drawn between the natural and social world. Instead they tended toward a stronger claim that the social world itself was an extension of the natural world, and particularly the social world was shaped directly by biological factors. Thus, Italian positivism was in some respects distinctively ambitious. It claimed that the social world was part of the natural world, not just that it was analogous to the natural world.

The Regions of Positivism

We have discussed the evidence at hand so far in terms of what it says about when Italian positivism became dominant. The regional distribution of Italian positivism, however, is at least as interesting. The evidence below shows that a distinctive regional patterning of members on the CGS emerged as positivists more and more dominated this institution.

[Table Three About Here]

Table three breaks down the evidence according to post-unification region, instead of pre-unification state. Column one shows the percentage of the population in each region in 1861. Column two shows the percentage of the membership on the CGS born in that region between 1861 and 1900. Column three, "Representation", presents the result of subtracting column one from column two. If the result is negative it shows that this region was under-represented on the council, if positive it shows the opposite. Column four shows the percentage of population in agriculture in 1881, column five the percentage of population in manufacturing in that year, and column six the percentage of the agrarian population consisting of "owner operators". This last column is a good indicator of the degree to which self-sufficient peasant agriculture predominated in the region.

At this level of detail, for this period (1861-1900), the table does not show a strong regional pattern, exception for the Veneto. Basilicata, Lombardy, Piedmont, Sardinia, Sicily, and Tuscany were all slightly over represented on the council in this period. This group of regions ranges widely in terms of levels of industrialization. For example seventy-seven percent of the population of Basilicata was in agriculture in 1881, while only a relatively low sixty-six percent was in agriculture in 1881 in Piedmont. The

Veneto did produce a large percentage of the core group of the CGS in this period. But this region was not terribly distinctive in terms of industry. Sixty-four percent of its population was in agriculture, with only sixteen percent in industry. Suggestively this lack of a regional pattern is characteristic of a period during which positivists were relatively weak on the CGS as we showed in the above section. The regional diversity of the members was mirrored in a relatively diversity of views of social science as well.

[Table Four About Here]

A more pronounced regional pattern is evident in Table Four. This table shows the same type of evidence as in Table Three, but instead of the 1881 census it uses the 1911 census and it covers the CGS in the years 1910-1940. Compared with the first period discussed above, the second shows a sharp drop in the number of regions overrepresented on the council. During this period only four regions were overrepresented, Emilia-Romagna, Lombardy, Marche and the Veneto. During this period, Basilicata, Piedmont, Sardinia, Sicily and Tuscany all became underrepresented among the core group, while the Marche and Emilia emerged as important regional bases for the CGS. Thus a regional concentration of members occurred, as the council itself became more rigidly positivist.

This regional patterning is extremely suggestive. Emilia-Romagna, Lombardy, the Marche, and the Veneto form a contiguous group encompassing the valley of the Po, historically the area with the most productive form of capitalist agriculture on the peninsula. As the table shows, all four of these regions were marked by relatively low percentages of "owner operators", suggesting that farming here was big business, carried on either by large landholders, or large scale tenant farmers. Among the regions that were over-represented, Lombardy was the only one with a substantial share of its population in

manufacturing (thirty percent in 1911). However, the two other manufacturing regions, Piedmont and Liguria (twenty-two and twenty-five percent respectively) were also regions in which "owner operators" predominated in agriculture. These regions were also under represented on the council during the period 1910-1940. During this period, then, Italian positivism, on this evidence, seems to have concentrated not in areas in which industrial capitalism dominated, but rather in areas of agrarian capitalism.

What are the implications of this evidence for the Marxian and Weberian theories discussed above? These theories predict, for the Italian case, a concentration of "positivism" in Lombardy, Liguria and Piedmont, because these were the most industrialized regions of the peninsula. Our evidence shows however little regional patterning for the first period (1861-1900), and for the second period a regional patterning of Emilia-Romagna, Lombardy, the Marche, and the Veneto. Lombardy is an ambiguous region because it possessed both a strong industrial base, and capitalist agriculture. However Emilia-Romagna, the Marche and the Veneto were not industrial regions, although they did have capitalist agriculture. Conversely, Piedmont and Liguria were industrial regions, but with a large "peasant" agricultural sector. Taken together this evidence strongly suggests that positivism in Italy was an ideology of agrarian capitalism. This became more true as it became a more harshly reductionist "biopolitical" positivism similar to the positivisms of other parts of Europe.

A Closer Look at the Prosopography

Up until now we have treated region of birth as a rough indicator of the connection, or lack of connection, between members of the CGS and industrial capitalism. In this section we focus in more tightly on the biographies themselves in three ways. We ask

first, what was the place of birth of each member of the CGS? The evidence shows that even those who came from the most industrialized regions, such as Lombardy, were usually born in small outlying towns. Second, we try to give some sense of the family backgrounds of the core group. Here the evidence shows that most of these men came from non-industrial family backgrounds, and many from backgrounds of landholders. Finally we try to give some sense of their interests. This evidence shows that agricultural development was the overwhelming concern of most of these people.

During the period from 1861 to 1940 six of the men comprising the core group of the CGS were Savoyard or Piedmontese: Gerolamo Boccardo, Vittorio Ellena, Carlo Francesco Ferraris, Maggiorino Ferraris, Annibale Ferrero, and Antonio Ponsiglioni. Boccardo was born in Genova, a major metropolitan center, in 1829. His father was a lawyer and fiscal official, and his mother was the daughter of a Napoleonic general. He was a classical political economist and a moderate close to the political positions of the liberal father of the Italian nation count Benso Camillo di Cavour during the *Risorgimento.* In 1850 he worked as the secretary for the Accademia di filosofia italica, an organization established to work out an explicitly Italian school of philosophy. In this context he argued sharply against idealist positions and in favor of positivism. He played a key role as a conduit linking European currents of political economy to Italy. Boccardo was the first person to translate both Karl Marx's *Capital* and Jevons' *Theory of Political Economy* into Italian (Vialetto and Ancona 1969). Vittorio Ellena was born in Saluzzo, a small town in western Piedmont near the French border, in 1844. We do not what his father did, but his biography states that he was "from a modest social background". Ellena rose through the ranks of the *Ministero di agricoltura, industria e commercio*

(MAIC) where he began to work as a clerk. He was a career bureaucrat and politician active mostly in the areas of tariff and trade policy, subjects, about which he published several works (Guidi 1993). He played a central role in the establishment of protective tariffs on Italian industry and agriculture in 1887 – a piece of legislation known as the "Ellena Tariff". Carlo Francesco Ferraris was born in Moncalvo, a village in southwestern Piedmont, in 1850 to a landowning family. Intellectually he was interested in agricultural development, credit, and insurance (Beneduce 1996). Maggiorino Ferraris was born in Acqui, a spa resort town in southern Piedmont, to a baker. Despite these modest origins emerged as a major political figure in the late nineteenth century. He was a conservative reformer equally worried about balanced budgets and social unrest, but not a major intellectual (De Longis 1996). Annibale Ferrero was born in Turin in 1839, but we have found no information about his family background. He was a mathematician, geographer, engineer, and military man (De Caprariis 1997). Antonio Ponsiglioni was born in Cagliari, the largest city in the mostly agricultural island of Sardinia in 1842. He had fought with Garibaldi during the wars of Italian unification, and received a *laurea* in jurisprudence, and later become a professor of political economy at Genova and wrote a textbook on the subject (Ponsiglioni 1880:1; Senato della Repubblica(a)). Two things are striking about this group. First, none of the Piedmontese had an "industrial bourgeois" class background, with the possible exception of Annibale Ferrero, whose was born in the city of Turin, and about whom we have no family information. Second, most of these men, with the exception of Boccardo and Ferrero, came from clearly pre-industrial places: either small towns in the Piedmontese hinterland, or large cities in agrarian regions (Cagliari). In terms of their interests, the Piedmontese group seems to have been

attracted to issues of government policy like taxes and tariffs, and classical political economy. Only Carlo Francesco Ferraris was explicitly engaged with issues of agricultural development.

The Lombard Venetian group, as we have already seen, dominated the CGS. Over the entire period from 1861 to 1940 the group included seventeen men: Ridolfo Benini, Luigi Bodio, Attilio Brunialti, Giuseppe Colombo, Cesare Correnti, Corrado Gini, Fedele Lampertico, Luigi Luzzatti, Paolo Mantegazza, Angelo Messedaglia, Alessandro Molinari, Giorgio Mortara, Gaetano Pietra, Franco Savorgnan, and Francesco Schupfer. Rodolfo Benini was born in Cremona in 1862. He began studying political economy, and his first job was at the University of Bari in the "History of Commerce". In 1897 he moved to Pavia where he taught statistics, and then ended up at the Bocconi in Milan. Benini differed from the early members of the Lombard-Venetian school because in addition to his interest in political economy he also did serious work in demography and statistical methodology. His distinctive methodological contribution was to link statistics to theories of probability, and thereby to change the discipline from a method of observation, to a method of induction (Dall'Aglio 1966). Luigi Bodio was born in the industrial city of Milan in 1840 to a family of small traders. Later, he became a career bureaucrat. The majority of his writings were government reports composed in relation to the activities of the national directorate of statistics. He saw the main purposes of statistics as providing information to political economy, and to track changes brought about by industrialization (Bonelli 1969). Attilio Brunialti was born in Vicenza, a town in the western Veneto, in 1848, but there is no information that we can find about his family background. He studied jurisprudence at Padova, where he was a student of another

major Lombard-Venetian positivist, Luigi Luzzatti. Brunialti emerged in the late nineteenth century as a politician, legal theorist and supporter of Italian colonial expansion (D'Amelio 1972). Giuseppe Colombo was born in Milan in 1836, the son of a jeweler. He studied philosophy and mathematics at the university of Pavia and made a career teaching engineers, industrialists, skilled workers, and artisans at the *Società di incorragiamento d'arti e mestieri* (The Society for the Improvement of Arts and Crafts). From 1861 he also taught at the Carlo Cattaneo technical institute where he established a circle a gifted engineers many of whom later became major Italian industrialists. Colombo entered the Italian parliament in 1886 representing a productivist bloc of Milanese entrepreneurs and workers, which supported state intervention and was strongly opposed to *liberismo* (Cambria 1972). Cesare Correnti was born in Milan in 1853 to a very old Patrician family (Massarani 1907:21-23). As such his family probably owned considerable land at some point. He was a moderate liberal active in the movement of Italian unification and was close friends with some of the most important figures of the Italian Risorgimento in Milan (Greenfield 1965:160). During the 1840s Correnti formed part of the Lombard immigration to Piedmont. After unification he had an important parliamentary career (Ambrosoli 1983). Corrado Gini, whose work we discussed above, was born in Treviso, a town in the eastern Veneto, in 1884 to a "privileged family of the high agrarian bourgeoisie" (Federici 2000:18). He studied jurisprudence at Bologna, but his interests were very broad: focusing on statistics, economics, mathematics and biology. Gini's first job was at the university of Cagliari where he taught statistics. He then moved to Padova, and finally to Rome. Gini had a distinctively technocratic vision of the connection between statistics and politics: one that would profoundly influence the

development of Italian statistics under fascism (Federici 2000). Fedele Lampertico was born in Vicenza in 1833 to a large landholding family. He was an important local political figure and a parliamentary deputy in the late nineteenth century. Lampertico was also an amateur economist who initially supported strictly free-trade positions, but shifted to a more interventionist stance after the Paris Commune of 1871 (Monsagrati 2004). Luigi Luzzatti was born in Venice in 1841. He came from a well off family of Jewish industrialists. His father owned two factories, one dedicated to wool processing and another to hemp processing, industries closely tied to agriculture. He had an important parliamentary career, and was close to the Lombard world of finance, banking and industry, as well as being centrally concerned with agriculture. He was a central figure in establishing the *Associazione industriale italiana* (Pecorari and Ballini 2007). Paolo Mantegezza was born in Monza, a town in western Lombardy, in 1831. There is little information about his father, Giovanni Battista Mantegezza. However his mother, Laura Solera, was an important social reformer in the late nineteenth century. Mantegazza, unusually for this group, was a biologist and moralist rather than a political economist (Armocida and Rigo 2007). Mantegazza was also distinctive in anticipating eugenic ideas that would become more important at the turn of the century. Further Mantegazza, although he did participate in the Risorgimento, did not have a parliamentary career. Intellectually the most important figure of the Lombard Venetia group was Angelo Messedaglia who was born in the provincial center of Verona in 1820. He was the son of the communal secretary. Messedaglia became one of the key figures in Italian political economy in the late nineteenth century. He represented a historicist position close to the German "Socialism of the Chair". Further he had a substantial political career as a

parliamentary deputy serving on numerous commissions, and in later life he became a senator (Cafarelli 2009). Alessandro Molinari was born in Vicenza in 1898 and studied economics and commerce at the Bocconi. He began his career at ISTAT under Gini, and was a key figure in the censuses of 1931 and 1936. He was also interested in economic planning and the problem of the Italian south (Barberi 1962:408). Giorgio Mortara was born in the small town of Mantova in 1885 to a prominent laicized Jewish family, which later moved to Naples. Mortara graduated from the University of Naples in 1905 with a thesis on demography (Magnani 2012). Gaetano Pietra was born near Mantova in 1879. He was a statistical methodologist also closely associated with Corrado Gini (Fortunati 1961[?]). Franco Savorgnan was born in Trieste on the Adriatic coast in 1879 and studied with race theorist and social Darwinist Gumplowicz. Savorgnan was very interested in demography and eugenics (De Meo 1963[?]). Francesco Schupfer was born in Chioggia, a suburb of Venice, in 1833, and had an illustrious academic career. He was a well know legal historian who composed several books on German and Italian law, and became a senator in 1898 (Treccani(a)). Of these seventeen men, only Bodio, Colombo, and Correnti were born in the industrial city of Milan. With the exception of Luzzatti, who was born in the ancient port city of Venice, all of the other members were born in provincial towns. Further only one of these men, Luigi Luzzatti, could be considered an offspring of the industrial bourgeoisie. Even in this case Luzzatti's family had made its fortune in industries closely linked to agriculture. Colombo would become an important industrialist, but he came from a background of small artisans. Conversely there were several landowners in this group, probably including Correnti, and certainly Gini and Lampertico. Finally agricultural issues were a central theme of many of these people

including: Lampertico, Gini, Luzzatti, and Messedaglia who had written extensively on Malthus. As a group the Lombard Venetians tended to me more interested in highly historically specific empirical investigations, compared with their Piedmontese or southern counterparts, and relatively less interested in contributing to abstract economic theory per se.

Two members of the core group were from former Grand Duchy of Tuscany: Giuseppe Mantellini, and Sidney Sonnino. Mantellini was born in Florence in 1816. He was a celebrated lawyer and politician whose main intellectual concern was administrative law (Chiavistelli 2007). Sonnino was born in 1847 in Pisa to a noble family. He held a degree in law, and initially became famous for co-authoring a massive inquiry into agrarian conditions. He went on to have an important political career as one of the main people responsible for Italian intervention in the First World, and a leading light in conservative liberal intellectual circles (Tor 1936). These two figures fit very much the overall pattern of the CGS as a whole. Although we cannot not be certain it is unlikely that Mantellini came from an industrialist class background, and we are certain that Sonnino did not. Further Sonnino became famous precisely by discussing agrarian problems.

Nine members of the core group were from the Papal States: Marcello Boldrini, Francesco Coletti, Gaspare Finali, Livio Livi, Gino Olivetti, Maffeo Pantaleoni, Settimio Piperno, Arrigo Serpieri, and Pietro Sitta. Boldrini was born in Matelica, a village in the Marche, in 1890. His father was a poet, elementary school teacher and school inspector. He graduated from the Bocconi with a degree in statistics. He later studied with Corrado Gini, and became interested in demography and the comparative study of races

(Locorotondo 1988). Francesco Coletti (Boldrini's teacher in Milan) was born to a land owning family of the minor nobility in San Severino, another village in the Marche, in 1866. He began his university studies in jurisprudence at *La Sapienza* in Rome. There he came under the influence of Angelo Messedaglia. After a period teaching in Macerata, Coletti went north to teach at both Pavia and Milan. For Coletti the role of statistics was to track the conditions of the population, especially its least affluent members (Magnarelli 1982). Finali was born in Cesena, a town in southeastern Emilia Romagna, in 1829, the son of a notary who studied jurisprudence at the University of Rome. He became a major political figure in the years immediately preceding and following Italian unification. A conservative reformer, he held several ministerial posts and important appointments on various parliamentary commissions. He was responsible for the establishment of a major parliamentary inquest on the conditions of the agrarian classes in the south (Orsolini 1997). Livi was born in Rome in 1891, but his parents were Tuscan. His father was a doctor and anthropologist, and his maternal grandfather had been mayor of Prato. He studied jurisprudence at the University of Rome under the technically sophisticated Maffeo Pantaleoni among others. In 1921 he won a position in statistics at the University of Modena. Most of his publications were on demography, and he was influenced by eugenics (Farcomeni 2005). Gino Olivetti was born to a Jewish family in the small town of Urbino in 1880, but he grew up in Turin. He became a lawyer and one of the main figures behind the formation of the Italian industrialists' organization – *Confindustria* (Adler 1995:40; Belloni 2011:11-12). Maffeo Pantaleoni was born in Frascatti, a small town south of Rome, in 1857. His father was a doctor, politician, and friend of Cavour. He studied classics in Germany, and then returned to Italy for a brilliant

career in economics where he became a major exponent of Austrian style economics, and the new marginalism of Alfred Marshall (De Viti de Marco 1925; Treccani(b)). Settimio Piperno was an economist born in Rome in the 1830s. He published a book popularizing political economy in 1878 (Piperno 1878). This was not a terribly original text, but contained a section about economics and ethics in which Piperno claimed that education was the key to both morality and economic growth (Piperno 1878:168). Pietro Sitta was born in Ferrara in 1866 to a landowning family. He studied accounting, economics, statistics and law at the *Scuola superior di commercio* in Venice. Sitta began his teaching career in Padova, and then moved back to Ferrara, where he published numerous articles on agrarian problems in the valley of the Po (Senato della Repubblica (b)). Serpieri was born in Bologna 1877 (Prampolini 1976:172). We do not known much about his family background, but studied at Perugia, Milan and Florence. He was deeply influenced by the model of Lombard agriculture. One of his biographers writes that, "Lombardy did not constitute for Serpieri just a simple geographical expression, but also a specific cultural model that found in Carlo Cattaneo its natural point of reference" (Prampolini 1976:172). As is true of the other groups, with the exception of a couple of figures who came from the pre-industrial city of Rome, all of these men came from provincial towns and cities. Like the other three groups we have discussed this group is notable for its lack of industrialists. Gino Olivetti seems to be the exception, but he did not come from an industrialist class background, although he became one of the central figures in the political world of Italian industry. Men from the landowner and intellectual social backgrounds make up the rest of the group. Further, agriculture was a central interest for many of these men. This was true of Coletti, Finali, Serpieri and Sitta.

In addition to these members of the core group, there were also eight members from the Kingdom of the Two Sicilies: Luigi Amoroso, Napoleone Colajanni, Antonio De Viti de Marco, Francesco Ferrara, Alfredo Niceforo. Pietro Nocito, Antonio Scialoja, Francesco Saverio Nitti, and Francesco Tenerelli. Luigi Amoroso was born in Naples, one of largest cities in Italy, in 1886. He received a degree in mathematics and then taught political economy in Naples and then Rome. Amoroso's main intellectual project was to provide a dynamic interpretation of the equilibrium models of Pareto and Walras. He later became a major theorist of Italian corporatism (Giva 1988). Ferrara was born in Palermo, the biggest city in Siciliy, in 1810. His father was a court attendant of a Sicilian marquis. He then had a career as an extremely well known economist, and political figure; Ferrara was sharply critical of the "Lombard-Venetian" school of political economy that he identified as "Germanstic", blindly empiricist, and overly supportive of state interventionism (Faucci 1975: 458-459; Faucci 1975:661-663; 1996). Francesco Saverio Nitti was born in Melfi, a small town in Basilicata, in 1868. His father was anti-Bourbon activist, and his grandfather was a doctor. He earned a law degree in 1890. In contrast to Ferrara, who was a dogmatic free trader, he was quite open to state interventionism, and was influenced by the Lombard-Venetian school. For example, he dedicated his book on population to one of its key representatives, the famous positivist philosopher and social scientist Achille Loria (Nitti 1894:vi). Nitti also had an important parliamentary career being elected as a deputy for the first time in 1904 at the age of 36. He was also the last prime minister in Italy before the rise of Mussolini's Fascism (Barone 2013). Pietro Nocito was born in the Sicilian village of Calatafimi in 1841, but we have found no information about his family. Nocito was a legal scholar who defended

liberal jurisprudence against the emergence of biological theories of crime that began to emerge in the late nineteenth century. Elected to parliament in 1876, he played an important role in struggles over the Italian code (Isotton 2013). Antonio Scialoja was born in Naples in 1817, but we have been unable to find much information about his family background. He was a liberal political economist who had worked with Cavour in Piedmont in the eighteen-forties, and was also Garibaldi's minister of finance during his brief dictatorship over the Kingdom of the Two Sicilies. After unification Scialoja became both a parliamentary deputy and a senator (Maturi 1936). He argued, following *liberista* principles that Italian growth would be best promoted by lowering trade barriers to favor agricultural exports (Gioli 2012). Francesco Tenerelli was born in Catania, the second largest city in Sicily in 1839, but we know nothing about his family. He earned a degree in law, and then later became mayor. In this position he was closely linked to Catania's local industry that concentrated on sulfur production and the export of agricultural products (Barone 1992:44). Napoleone Colajanni was born in the Sicilian town of Enna in 1847, the son of a sulfur industrialist. He fought with Garibaldi, and after unification had a career as a publicist and politician. Colajanni underwent a number of political conversions from Mazzinian Republican to fascist sympathizer (Ganci 1982). De Viti de Marco was born in Lecce, a mid size city in southern Puglia, to a noble family of landowners in 1858. His father was a lawyer, and his grandfather had worked for the treasury of the Kingdom of Naples. Together with Maffeo Pantaleoni and another figure named Ugo Mazzola, De Viti de Marco purchased the *Giornale degli economisti* in attempt to introduce economic marginalism to Italy (Cardini and Faucci 1991). Niceforo was born in the village Castiglione di Sicilia in 1876. His father was a well-known lawyer

who worked at the Palermo court of appeals. Niceforo studied anthropology in Rome and wrote a thesis on criminal delinquency in Sardinia. He argued that different regional levels of development in northern and southern Italy were racially determined, and argued that northern Italians were celtic while southern Italians were Mediterranean (Guanieri 2013; Salvadori 1960:191-192).

The general pattern evident among the other regional groups was also evident here. All of these men came from fundamentally pre-industrial cities, although they often from larger urban agglomerations than their northern counterparts. Further, aside from Colajanni and Tenerelli who were linked to sulfur mining, these men all had intellectual or landowner social backgrounds. One interesting difference between the southerners and the Lombard Venetian group in particular, is that the southerners seem to have been more interested in theoretical contributions, and were relatively less inclined to empirical investigation.

This more detailed investigation of the prosopography, to conclude, reinforces the basic findings from the previous section. Men from an agrarian background dominated Italian positivism. The main Italian positivists came from mostly small, overwhelmingly pre-industrial towns. Many of them came from landowner or traditional "free profession" backgrounds. The number of men of industrialist backgrounds, or even within geographical origins in industrial cities was extremely small. Positivism in Italy then was fundamentally an agrarian ideology.

Conclusion

The analysis above draws on the Italian case to challenge and extend the Marx/Weber discussion of the relationship between positivism and capitalism. Our paper proceeded in

three major steps. First we showed that although positivism was dominant in Italy from 1880 until at least the first decade of the twentieth century, industrial capitalism was not. We also argued in this section that Italian positivism was in some respects more radical than other positivisms, because rather drawing an analogy between society and nature, Italian positivists argued that society was itself naturally determined. The second section of our paper analyzed the regional distribution of this particular form of positivism by drawing on evidence from the CGS. We showed that the regions that disproportionately produced members on this council formed a contiguous area stretching from Lombardy and the Veneto in the north to the Marche in the south. This zone included the heartland of capitalist agriculture in Italy. However two of the major manufacturing regions, Liguria and Piedmont, were under-represented on the council. This evidence suggests that positivists mostly came from regions where capitalist agriculture dominated, not regions where industrial capitalism prevailed. In the third section we examined the prosopography more closely. Here, we showed that most Italian positivists either came from landowning social backgrounds, or were from the traditional "free professions" of law and medicine. By contrast, there were very few industrialists among them. Further not only did Italian positivists tend to come from rural regions, they tended to be from relatively small provincial towns within those regions. How do our findings relate to contemporary debates on positivism and the social sciences?

The mid twentieth century US, unlike Italy in the late nineteenth century was obviously a fully developed capitalist society (at least in the north). Positivism has also been a dominant position in US social sciences, with the exception of anthropology, at least since 1945. It also seems reasonable to argue that the attempt to treat the social

world as a quasi-natural environment, subject to law like regularities, resonates with industrial capitalist economies.

The Italian case however shows that positivism can arise under different conditions as well. It is not only the world of industry that can appear as a "second nature"; agriculture can be looked at this way as well. This is perhaps particularly true of the agriculture of the valley of the Po based on an extremely old and very elaborate system of irrigation requiring complex social cooperation to work effectively. Perhaps it is not surprising given this political economy which had grown up as a "gradual adaptation of a society to the singular geography and climate of its place of habitation" (Greenfield 1934:32), that positivists, who tried to theorize society as an organically connected closely linked to nature, should have overwhelmingly hailed from precisely this region.

However it is not just that different political economies can support similar positivist social sciences. In fact Italian positivism espoused a peculiarly radical program that distinguishes it from positivism in more industrialized contexts. This raises a question about how we should think about the relationship between capitalism and positivism in general. For although industrial capitalism may produce social experiences that mimic natural ones, its markets, class relations and organizations are also clearly social phenomena. This may explain why positivism in industrial capitalist settings tends to be characterized by an analogic, rather than ontological, extension from the realm of nature to society. After all many positivist thinkers, included Comte, had a strong sense of the reality of the social.

Italian positivism, however, arose under different circumstances. Italian capitalist agriculture had for centuries transformed the landscape of the valley of the Po so that it was a mixed natural and social environment. Further although market relations and class struggles were emerging in these zones, they took on a particularly intimate face-to-face form. These features of Italian society were reflected in Italian positivism, and particularly its difficulty in defining a distinctive level of social reality. In the absence of a robust notion of society, Italian positivists treated social science as a branch of biology, rather than a domain that could be studied like the natural world (Burgalassi 1996:72-92).

Thus our paper suggests generally that the connection between positivism and political economy is more varied than the Marxian and Weberian position discussed at the beginning. Perhaps industrial capitalism does promote a particular form of naturalizing social sciences. But other political economies have positivisms associated with them as well.

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Figure 1

Numero dei reati	REATO	Altezza	Peso del corpo	Diametro Antero-posteriore mm.	Diametro Trasverso mm.	Circonferenza del capo mm.	Curva Longitudinale mm.	Curva Trasversale mm.	Fronte Larga cent.	Fronte Alta cent.	Dinamometria Pugno	Dinamometria Trazione	Indice cefalico cent.	Totale capacità mm.	Angolo facciale
	Siciliani.														
23	Omicidj. . .	1.650	65.625	191	149	552	326	283	14	4	113	31	78	1501	74°
15	Furti	1.623	60.610	190	148	542	326	274	14	5	106	30	77	1480	72°
13	Grassazioni.	1.605	60.500	189	149	539	324	275	14	4	102	31	78	1476	76°
8	Incendj. . .	1.660	69.500	188	141	542	315	302	—	—	—	58	74	1488	—
1	Falso e truffa	1.585	59.900	190	160	580	350	275	13	4	114	16	84	1555	—
	Sardi.														
2	Omicidj. . .	—	—	197	134	530	—	—	—	—	—	—	68	—	—
5	Furti	—	—	180	144	560	—	—	—	—	—	—	80	—	—
3	Grassazioni.	1.557	58.933	193	142	543	328	276	14	5	89	24	73	1482	71.6
1	Diserzione .	1.620	58.400	200	144	545	340	290	13	5	110	20	72	1519	69°
4	Incogniti . .	—	—	192	146	560	—	—	—	—	—	—	76	—	70
	Calabresi.														
16	Omicidj. . .	1.652	63.177	196	146	544	324	283	13	4	120	36	73	1493	75°
2	Furti	1.600	64.725	187	142	532	320	280	14	4	100	25	75	1461	78°
4	Brigantaggio	1.623	67.473	194	152	540	333	253	13	4	101	31	78	1472	78°
2	Stupri. . . .	1.700	64.200	192	140	552	—	—	—	—	—	—	72.9	—	—
2	Grassazioni.	1.626	63.500	196	150	520	348	286	15	5	95	23	76.5	1500	75°
	Napoletani.														
35	Omicidj. . .	1.624	70.000	182	148	540	323	287	13	4	115	34	81.3	1480	82°
11	Brigantaggio	1.618	66.360	182	151	540	327	283	14	4	103	34	82.9	1483	74°
21	Grassazioni.	1.640	73.750	180	150	545	314	295	13	4	103	35	83	1484	76°
2	Riv. forza ar.	1.635	61.000	197	157	550	325	275	14	5	82	28	70	1504	—
3	Furti	1.560	66.610	190	148	546	315	283	14	5	101	31	77	1482	74°
1	Incendj. . .	1.604	69.555	190	135	550	315	305	13	4	—	23	71	1495	—
1	Truffa. . . .	1.650	63.000	195	150	560	350	330	12	4	180	25	75	1585	—
6	Stupri. . . .	1.604	69.000	189	151	550	301	306	12	4	173	37	79.3	1497	77°
	Piemontesi.														
11	Omicidj. . .	1.632	68.940	183	155	542	329	304	16	5	140	26	85	1513	70°
15	Grassazioni.	1.630	68.269	185	159	546	327	305	16	5	112	22	86.4	1522	69°
1	Furto. . . .	1.600	66.000	191	154	560	350	290	15	6	—	—	80.6	1545	71°
1	Incendio . .	1.530	52.000	185	150	550	320	320	14	5	190	33	81	1525	—
7	Falsi e truffe	1.650	67.700	181	156	545	321	304	15	5	137	21	86.4	1497	71°
	Genovesi.														
2	Omicidj. . .	1.630	71.100	193	155	567	330	300	16	4	138	39	80	1545	74°
2	Furti	1.590	58.100	186	151	550	335	285	17	5	52	25	81	1507	72°
3	Grassazioni.	1.590	64.800	180	142	570	340	305	19	7	100	40	78	1537	—
	Lombardi.														
16	Omicidj. . .	1.663	62.500	189	155	546	328	292	15	5	113	23	82	1510	73°
17	Furti	1.640	60.526	186	152	560	330	300	17	5	99	60	80	1528	—
9	Grassazioni.	1.673	68.316	184	154	546	318	284	15	5	116	23	83.6	1486	73°
1	Stupro . . .	1.600	60.000	175	140	560	310	330	11	6	240	60	80	1595	—
6	Falsi	1.590	58.600	191	158	563	350	320	20	7	93	45	82.7	1582	77°

Table One Core Group of the CGS from 1861-1900

		Region	Senator	Deputy	CC	Risorg	Discipline
Boccardo	Girolamo	Savoy	Yes	No	Yes	Yes	Economics
Ellena	Vittorio	Savoy	No	Yes	Yes	No	Economics
Ferraris	Carlo Francesco	Savoy	Yes	Yes	No	No	Law
Ferraris	Maggiorino	Savoy	No	Yes	No	No	Law
Ferrero	Annibale	Savoy	No	No	No	Yes	Mathematics
Ponsiglioni	Antonio	Savoy	Yes	Yes	No	Yes	Economist
Bodio	Luigi	Lombardy-Veneto	No	No	No	No	Statistician
Brunialti	Attilio	Lombardy-Veneto	No	Yes	No	No	Law
Colombo	Giuseppe	Lombardy-Veneto	Yes	Yes	Yes	Yes	Engineering
Correnti	Cesare	Lombardy-Veneto	Yes	Yes	No	Yes	Law
Lampertico	Fedele	Lombardy-Veneto	Yes	Yes	Yes	No	Economics
Luzzatti	Luigi	Lombady-Veneto	Yes	Yes	No	No	Economics
Mantegazza	Paolo	Lombardy-Veneto	No	No	No	Yes	Medicine
Messdeaglia	Angelo	Lombardy-Veneto	Yes	Yes	No	No	Economics
Schupfer	Francesco	Lombardy-Veneto	Yes	No	No	No	Law
Mantellini	Giuseppe	Tuscany	No	Yes	Yes	No	Law
Sonnino	Sydney	Tuscany	Yes	Yes	No	No	Law
Finali	Gaspare	Papal States	Yes	Yes	No	Yes	Law
Ferrara	Francesco	KTS	No	Yes	No	No	Economics
Nitti	Francesco Saverio	KTS	No	Yes	No	No	Law
Nocito	Pietro	KTS	No	Yes	No	No	Law
Scialoja	Antonio	KTS	Yes	Yes	No	Yes	Law
Tenerelli	Francesco	KTS	Yes	Yes	Yes	No	Law

Table Two: Core Group of the CGS from 1910-1940

		Region	Senator	Deputy	CC	Risorg	Discipline
Ferraris	Carlo Francesco	Savoy	Yes	Yes	No	No	Law
Benini	Ridolfo	Lombardy-Veneto	No	No	No	No	Statistics
Bodio	Luigi	Lombardy-Veneto	No	No	No	No	Statistics
Gini	Corrado	Lombardy-Veneto	No	No	No	No	Statistics
Molinari	Alessandro	Lombardy-Veneto	No	No	No	No	Statistics
Mortara	Giorgio	Lombardy-Veneto	No	No	No	No	Statistics
Pietra	Gaetano	Lombardy-Veneto	No	No	No	No	Statistics
Savorgnan	Franco	Lombardy-Veneto	No	No	No	No	Statistics
Boldrini	Marcello	Papal States	No	No	No	No	Statistics
Coletti	Francesco	Papal States	No	No	No	No	Statistics
Livi	Livio	Papal States	No	No	No	No	Statistics
Olivetti	Gino	Papal States	No	Yes	No	No	Law
Pantaleoni	Maffeo	Papal States	No	Yes	No	No	Economics
Serpieri	Arrigo	Papal States	Yes	Yes	No	No	Economics
Sitta	Pietro	Papal States	Yes	Yes	No	No	Economics
Amoroso	Luigi	KTS	No	No	No	No	Economics
Colajanni	Napoleone	KTS	No	Yes	No	Yes	Economics
De Viti de Marco	Antonio	KTS	No	Yes	No	No	Economics
Niceforo	Alfredo	KTS	No	No	No	No	Statistics

Table Three Regional Representation of CGS 1861-1900

Region	Percentage of Population in 1861	Percentage of Membership on the CGS 1861-1900	Representation	Percentage of the Population in Agriculture 1881	Percentage of the Population in Manufacturing 1881	Percentage of the Agrarian Population Consisting of Owner Operators in 1881
Abruzzo	5	0	-5	76	10	22
Basilicata	2	4	2	77	10	15
Calabria	5	0	-5	67	13	8
Campania	11	4	-7	54	17	11
Emilia-Romagna	8	4	-4	64	14	10
Lombardia	13	17	4	56	24	13
Marche	4	0	-4	70	13	8
Piemonte	15	17	2	66	16	32
Puglia	5	0	-5	65	13	13
Sardegna	2	4	2	62	9	20
Sicilia	10	13	3	56	15	12
Toscana	8	9	1	59	18	11
Umbria	2	0	-2	75	10	11
Veneto	10	22	12	64	16	14

Source for Population Estimates: © 1999/2002 "populstat" site maintained by Jan Lahmeyer.
Source of population in agriculture and industry is Zamagni 1987.

Table Four Regional Representation of CGS 1910-1940

Region	Percentage of Population in 1911	Percentage of Membership on the CGS 1910-1940	Representation	Population in Agriculture in 1911	Population in Manufacturing in 1911	Perecentage of the Agrarian Population Consisting of Owner Operators in 1911
Abruzzo	4	0	-4	80	9	32
Basilicata	1	0	-1	79	9	16
Calabria	4	0	-4	74	11	9
Campania	10	5	-5	55	18	17
Emilia-Romagna	**8**	**11**	**3**	64	16	13
Liguria	3	0	-3	39	25	39
Lombardia	**14**	**21**	**7**	47	30	18
Marche	**3**	**11**	**8**	72	14	12
Piemonte	10	5	-5	58	22	43
Puglia	6	5	-1	65	14	8
Sardegna	2	0	-2	61	12	12
Sicilia	11	11	0	54	14	8
Toscana	8	0	-8	57	22	12
Umbria	2	0	-2	74	12	12
Veneto	**10**	**16**	**6**	64	16	22

Source for Population Estimates: © 1999/2002 "populstat" site maintained by Jan Lahmeyer. Source of population in agriculture and industry is Zamagni 1987, 1993.

Table Three Regional Representation of CGS 1861-1900

Region	Percentage of Population in 1861	Percentage of Membership on the CGS 1861-1900	Representation	Percentage of the Population in Agriculture 1881	Percentage of the Population in Manufacturing 1881	Percenta of the Agraria Populati Consisti of Own Operato in 188
Abruzzo	5	0	-5	76	10	22
Basilicata	2	4	2	77	10	15
Calabria	5	0	-5	67	13	8
Campania	11	4	-7	54	17	11
Emilia-Romagna	8	4	-4	64	14	10
Lombardia	13	17	4	56	24	13
Marche	4	0	-4	70	13	8
Piemonte	15	17	2	66	16	32
Puglia	5	0	-5	65	13	13
Sardegna	2	4	2	62	9	20
Sicilia	10	13	3	56	15	12
Toscana	8	9	1	59	18	11
Umbria	2	0	-2	75	10	11
Veneto	10	22	12	64	16	14

Source for Population Estimates: © 1999/2002 "populstat" site maintained by Jan Lahmeyer.
Source of population in agriculture and industry is Zamagni 1987.