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Auteur

Jean-Daniel Boyer, Claude Diebolt and Michael Haupert

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https://www.beta-economics.fr/

Contact :
jaoulgrammare@beta-cnrs.unistra.fr

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Durkheim and the Roots of Cliometric Reasoning

Jean-Daniel Boyer[1], Claude Diebolt[2] and Michael Haupert[3]

Abstract: In the final chapter of *The Rules of Sociological Method* (1895), Émile Durkheim, the principal founder of French sociology, stresses the importance of adopting systematic quantitative comparisons in sociological research. First, quantitative methods enable the detection of previously unrecognized causalities and social laws that remain imperceptible through observation alone. Second, they assist in establishing and substantiating causal links. Durkheim even outlines two types of applications for serial quantitative analysis, distinguished by both static and dynamic perspectives. In this article, we argue that cliometrics offers a way to fulfill Durkheim's initial (but soon abandoned) ambitions and transform sociology from a narrative discipline to one that incorporates quantitative methods and the precision they can bring to the treatment of social facts. This epistemological shift could open new avenues for both sociology and cliometrics.

Keywords: Cliometrics; Durkheimian Sociology; Social Causality; Quantitative Methods; Epistemology of the Social Sciences; Social Physics.

JEL codes: B41; N01; Z13; A12.

Introduction

Although rarely formulated explicitly, the idea that Émile Durkheim's methodological ambitions could find fulfillment in modern cliometric approaches is gaining theoretical plausibility. Far from being a rupture with classical sociology, cliometrics—by embedding economic reasoning into historical inquiry—may even be seen as a contemporary realization of Durkheim's original aspiration: to construct a science of society based on observable regularities, theoretical coherence, and empirical causality.

Advantages of a cliometric approach to the study of sociology include bringing precision and accuracy to the study of societal facts. Data can be gathered, statistics can be analyzed, and their patterns and explanatory ability measured. In those instances when quantitative data are not available, text recognition software can be used to gather data that can be analyzed. As cliometric research has shown, numerical data are not the only data that can be studied (Wehrheim, 2024).

As early as *The Rules of Sociological Method* (1895), Durkheim outlined the need for sociology to establish itself as a science through the detection and testing of causal laws grounded in the empirical observation of regularities. Yet, as scholars such as Stephen Turner (1986, 2003) have shown, Durkheim's original project faltered in the face of competing epistemological models—particularly biology and psychology—which diverted him from a fully realized "social physics."

In the French intellectual tradition, Raymond Boudon (1977, 1979, 1995) took up this challenge by insisting on the explanatory power of rational action and the modeling of social mechanisms. For Boudon, sociology must uncover the intermediate variables and perverse effects that explain macro-social phenomena through micro-logics, a vision that aligns well with cliometric reasoning. His work

[1]Jean-Daniel Boyer, BETA/CNRS & University of Strasbourg (France). Email: boyer@unistra.fr

[2]Claude Diebolt, BETA/CNRS & University of Strasbourg (France). Email: cdiebolt@unistra.fr

[3]Michael Haupert, University of Wisconsin-La Crosse (USA). Email: mhaupert@uwlax.edu

serves as a bridge between Durkheimian structuralism and the rationalist formalism typical of contemporary quantitative sociology.

On the British side, John Goldthorpe (2000, 2015) has been a leading proponent of a sociology conceived as a population science, emphasizing the importance of probabilistic models and empirical testing in the study of social structures. Echoing Durkheim, Goldthorpe argues that sociology must move beyond impressionistic interpretation and develop tools capable of testing generalizable causal relationships. His approach supports the idea that statistical regularities are not merely descriptive but carry explanatory weight, thus laying conceptual groundwork for a "sociometrics".

At the crossroads of economics and sociology, Geoffrey Hodgson (2004) has explored the institutional dimension of social norms, treating them as emergent constraints rooted in collective behavior. His evolutionary institutionalism, while not directly linked to cliometrics, echoes Durkheim's view of the social fact as a constraint that precedes and structures individual action. Hodgson's work contributes to the theorization of how rules and regularities emerge historically—an insight that cliometricians have explored using long-run data.

The cliometric tradition itself, particularly as developed by Claude Diebolt (2016, 2025), has recently pushed the boundaries of historical economics by emphasizing the importance of combining explanation (*Erklären*) and understanding (*Verstehen*). Diebolt's vision expands cliometrics beyond the confines of economic history and into a broader social science methodology, capable of analyzing institutions, culture, and education through rigorous empirical models. Indeed, much of human behavior can be analyzed thusly. His call for a general framework linking quantitative reasoning with historical context resonates deeply with Durkheim's aspiration to build a science of society based on observable forces.

In sum, while Durkheim's project of a social physics was never fully realized in his own work, its foundational ideas continue to inspire renewed methodological ambitions. From Boudon's formal rationalism to Goldthorpe's probabilistic sociology, from Hodgson's institutionalism to Diebolt's integrative cliometrics, the contemporary landscape reflects a shared commitment to bridging social theory, causal inference, and empirical rigor.

In this article, we argue that Durkheim's ambition to establish a social physics may find its most effective realization in cliometrics. A sociological adaptation of cliometric tools could not only revitalize Durkheim's vision but also provide the scaffolding for a cumulative, comparative, and predictive social science—one fully consistent with his epistemological project.

Accordingly, we propose to reconsider Durkheim's epistemological framework and assess why it may be compatible with—or even fulfilled by—cliometrics (Section 1). In Section 2, we contend that cliometrics offers both the methodological instruments and the conceptual architecture needed to realize Durkheim's unachieved ambitions, thereby renewing the foundations of sociological inquiry. We conclude by suggesting that the application of cliometric methods to sociology is not only epistemologically viable but also has the potential to open new avenues for both disciplines.

1. Cliometrics, Sociology and Durkheim

1.1. Cliometrics and Sociology: a seemingly missing Link

Literally meaning *the measurement of history*, cliometrics is generally defined by three core dimensions (Diebolt & Haupert, 2018, 2019: v–viii, 2021). It involves the use of quantitative analysis to account for past economic processes and to study economic history. In this framework, measurement is understood as a methodological alternative to traditional narrative approaches. Figures can replace or complement the narrative to provide accuracy and precision to enhance an argument, creating a new historical discourse that depends on the mobilization of specific archival

data. This approach requires careful attention to data construction and relies on statistical and econometric tools to uncover regularities, trends, correlations, and potential causalities.

Beyond this descriptive aim, cliometrics also seeks to subject historical hypotheses or interpretations to empirical verification. By applying quantitative methods, it aims to assess the validity of such claims through systematic testing, thereby aligning itself with a Popperian scientific perspective (Popper, 1934) in which theories must be falsifiable and confronted with empirical evidence.

Moreover, cliometrics adopts hypothetico-deductive models (Diebolt, 2012)[4] that draw on sophisticated econometric techniques to represent mathematically the interactions among variables in a given context (Diebolt & Haupert, 2019: vi).[5] This modeling enables researchers to establish correlations or causal links and to measure the relative importance of various factors involved in economic evolution. When properly constructed, such models may even offer predictive insights and contribute to the formulation of effective economic policies.

Evoking a foundational debate in sociology, cliometrics explicitly aims "to move from *Verstehen*, or understanding, to *Erklären*, or explanatory epistemology" (Diebolt, 2012, 2016, 2025, Diebolt & Haupert, 2019: vii).[6] According to Diebolt and Haupert, cliometrics and its recent reorientation could also extend its influence to other social sciences—including law, sociology, political science, and geography—potentially prompting similar transformations (ibid.).[7]

Nevertheless, at first glance, the ambition to extend cliometrics to other social sciences, particularly sociology, appears unrealistic. It seems difficult to apply a cliometric framework to the study of social action in the Weberian sense—actions oriented by the meanings that individuals attach to them, taking into account the behavior of others (Weber, 1921: 4). Cliometrics seems equally unsuited to qualitative sociology and anthropology, where research primarily relies on observations, interviews, and life histories focused on the subjective meanings actors assign to their actions. Because social interactions are deeply embedded in specific local contexts and shaped by

[4]Fogel (1964, 1965) "[...] *defined the methodological features of cliometrics. He considers it fundamental that cliometrics should lay stress on measurements and that it should recognise the existence of close links between measurement and theory. Indeed, unless it is accompanied by statistical and/or econometric processing and systematic quantitative analysis, measurement is just another form of narrative history. It is true that it replaces words by figures but it does not bring in any new factors. In contrast, cliometrics is innovative when it is used to attempt to formulate all the explanations of past economic development in terms of valid hypothetico-deductive models. In other words, the main characteristics of cliometrics is the use of these hypothetico-deductive models that call on the closest econometric techniques with the aim of establishing the interaction between variables in a given situation in mathematical form. This generally consists of constructing a model – of general or partial equilibrium – that represents the various components of the economic evolution in question and showing the way in which they interact. Correlations and/or causalities can thus be established to measure the relative importance of each over a given period of time.*" (Diebolt, 2012: 53).

[5]A cliometric research agenda inspired by Diebolt's quantitative analysis of educational and cultural determinants of economic development (Diebolt & Hippe, 2019, 2022) could allow a more precise testing of Weber's assumptions. One could, for instance, build a panel dataset covering regions with differing levels of Calvinist penetration and model the relationship with per capita income growth, industrial development, or investment in human capital over time. Such a model would offer a more nuanced interpretation of the causal direction between ethics and capitalism.

[6][…] *to close the gap between the Geisteswissenschaften and the Naturwissenschaften, i.e., to move from the historical verstehen or understanding side to the economic erklären or explaining side or, much better, mixing both approaches, facts and stylized facts, explaining the economic experience of the past and understanding the ways in which economic factors influence social and political developments, for an increased knowledge of the past, present, and future economic and social development of developed and developing economies, for the achievement of a unified approach of the social sciences.* (Diebolt 2016: 3-4).

[7]Consult also the publications in *Cliometrica* (https://link.springer.com/journal/11698) for further examples.

participants (see e.g., Goffman, 1959, 1967, 1974), such observations are difficult to reproduce. Moreover, as social contexts evolve, comparing observations over time becomes increasingly challenging. Social experiments are similarly limited, especially since the presence of an observer may influence the interaction itself.

This explains why, according to Jean-Claude Passeron (1991), the scientific status of sociology—and by extension, the social sciences—belongs to a different order: a non-Popperian one. Such research is primarily narrative, grounded in the detailed description of observations and events. Social actions and interactions, in this view, are only intelligible in a Weberian sense (Weber, 1921: 4 and following). The central task of these comprehensive sciences is the interpretation of meaning. The kind of explanation they offer differs fundamentally from the explanations of the natural sciences. Accordingly, the objects of sociology and anthropology may be inaccessible to cliometric approaches, and their methods incommensurable with cliometric techniques. Sociology and anthropology would thus remain irreducible to cliometrics.

Surprisingly, however, Émile Durkheim—often considered the founder of French sociology—appears to anticipate some of the ambitions articulated by Diebolt and Haupert in his major methodological work. In the final chapter of *The Rules of Sociological Method*, titled "*Rules for the Demonstration of Sociological Proof*" (1895: VI), Durkheim contends that sociology must employ serial quantitative analysis.

According to Durkheim, quantitative methods can, first, reveal hidden causalities and laws of social life that escape direct observation. They provide a foundation for deductive reasoning grounded in empirical data. Second, such methods are essential for establishing causality. Durkheim insists that: *Nothing is proved when, as happens so often, one is content to demonstrate by a greater or lesser number of examples that in isolated cases the facts have varied according to the hypothesis. From these sporadic and fragmentary correlations no general conclusion can be drawn. To illustrate an idea is not to prove it. What must be done is not to compare isolated variations, but series of variations, systematically constituted, whose terms are correlated with each other in as continuous a gradation as possible and which moreover cover an adequate range. For the variations of a phenomenon only allow a law to be induced if they express clearly the way in which the phenomenon develops in any given circumstances... Moreover, the evolution which the variations represent must be sufficiently prolonged in length for the trend to be unquestionably apparent* (1895 VI, ii: 155).

Finally, Durkheim maintains that quantitative methods should be employed to test causal relationships derived a priori. He goes further by proposing two complementary applications of serial quantitative analysis—one static, the other dynamic (1895 VI, ii–iii). Moreover, this use of quantitative methods appears to be entirely consistent with the nature of the object of his sociology.

1.2. The Nature of the Social Fact and the Need for a Quantitative Analysis

Indeed, in *The Rules of Sociological Method*, first published in fragmentary form in 1894 in two issues of the *Revue philosophique de la France et de l'étranger*, Emile Durkheim proposed a specific object of study for the new discipline he aimed to establish. This was part of his effort to avoid preconceptions and to distinguish sociology from other fields of knowledge, particularly philosophy and psychology. According to Durkheim, it was necessary for sociology to take the natural sciences as a model. In his view, by adopting a rigorous and specific method, the natural sciences had succeeded in transcending preconceptions and freeing themselves from the influence of ideology and religion in order to advance objective scientific knowledge (Durkheim, 1895 II, ii: 72).

The advantage of cliometrics applied to sociology, as opposed to the application of a purely scientific approach (e.g. biology, physics), is the "clio" portion of cliometrics. Historical context, and its close cousin, cultural context, consitute one of the pillars of cliometrics. History and context are likewise important in understanding sociology, and are critical to the analysis of social facts as proposed by Durkheim.

Durkheim named the object of his sociology the "social fact." He defined the social fact as a force external to the individual, which exercises coercive power and shapes human behavior. This concept constitutes a form of social determination. As he famously stated:

A social fact is any way of acting, whether fixed or not, capable of exerting over the individual an external constraint; or which is general over the whole of a given society whilst having an existence of its own, independent of its individual manifestations (Durkheim, 1895 I: 59).

The social fact is thus presented as a moral obligation of a social nature, comparable to a social force, it appears as a social norm, whether formal—such as laws—or informal—such as customs or mores. It may be understood as a "*social obligation*" (see Lacroix, 1976: 232 ff). According to Durkheim, individuals are not innately endowed with normative capacity; rather, it is society that provides the framework of normativity (Cuin, 2011: 72). In this rejection of all forms of a priorism, Durkheim aimed to move beyond Kant's categorical imperative. The moral imperative, in his view, becomes that of the collective consciousness, the will of the collectivity. It is therefore not a universal and immutable moral law applicable to all eras and cultures (Coenen-Huther, 2010: 107). In this framework, individual desires and freedom are necessarily limited by external rules that function as social forces. These forces manifest as constraints and as social determinations.

Ultimately, Durkheim offers sociology a unique object of study: the social fact. This object is comparable to a social norm in its ability to exert decisive influence on individual behavior. Sociology thus becomes the science of social norms, social and moral obligations, and normative systems. It becomes, in essence, a science of social morality. Its fundamental task is to study the social fact as a determining force. In Durkheim's view, individuals are subject to social laws that constrain or incite behavior. These laws, social in nature, shape individual existence. When conceptualized as a force, each social fact is understood to possess three dimensions: a specific nature, a specific intensity, and a specific direction or telos—that is, a particular aim or finality. The goal of Durkheimian sociology is therefore to analyze these three dimensions by employing a methodology inspired by the physical sciences. Sociology becomes a "social physics."

The advancement of technology has expanded our ability to generate measurable data (Mitchener, 2015). Advances in text recognition software (Currie *et al.*, 2020) and the ability to link disparate databases (Bailey *et al.*, 2020a, 2020b, 2023, Ferrie, 1996, Ferrie & Altham, 2007, Ruggles, 2014) are just two examples of the ever-increasing ability to create and measure heretofore unavailable databases, thus increasing the likelihood that a priori data could be gathered for the type of analysis proposed by Durkheim.

However, several major difficulties arise in this project. First, while some social facts are easy to identify because they are explicitly codified in laws and regulations, many others are more informal and far less perceptible. This is particularly true when Durkheim refers to "*certain currents of opinion* (courants d'opinion), *whose intensity varies according to the time and country in which they occur, [and which] impel us, for example, towards marriage or suicide, towards higher or lower birth-rates, etc*." (*The Rules of Sociological Method*, 1895, I:54).

Often, individuals are unaware that they are subject to a social constraint. They may feel free, while in reality they are shaped and directed by invisible forces.

Second, it is especially difficult to estimate the intensity of these social constraints and moral obligations. Some obligations exert greater pressure than others. For instance, the moral imperative not to commit murder clearly holds more weight and has more tangible effects than norms concerning appropriate clothing. But the use of the economic concept of cost-benefit analysis could provide a possible avenue to quantify the intensity of social constraints and moral obligations.

Third, the purpose or finality of a social fact—and the way it influences behavior—is frequently hidden and difficult to determine.

To address these difficulties, Durkheim proposes a clear methodology. He argues that statistics must be used to uncover social facts that, like *currents of opinion*, are not immediately observable (Durkheim, 1895: ch. VI). In this respect, Durkheim's method closely resembles the perspective initiated by Adolphe Quetelet (1835).

At first sight, these currents of opinion seem inseparable from the forms they assume in individual cases. But statistics afford us a means of isolating them. They are not inaccurately represented by rates of births, marriages, and suicides—that is, by the result obtained after dividing the average annual totals of marriages, births, and voluntary homicides by the number of persons of an age to marry, produce children, or commit suicide. Since each of these statistics includes, without distinction, all individual cases, the specific circumstances that may have contributed to producing the phenomenon cancel each other out and, consequently, do not influence its essential nature. What these rates express is a certain state of the collective mind. That is what social phenomena are, once stripped of all extraneous elements (1895 I: 55).

To assess their strength, Durkheim advocates what he calls the method of concomitant variations, establishing correlations between phenomena in order to infer potential causal relationships. According to him, "*we have only one way of demonstrating that one phenomenon is the cause of another. This is to compare the cases where they are both simultaneously present or absent, so as to discover whether the variations they display in these different combinations of circumstances provide evidence that one depends upon the other*" (1895 VI: 147).

Because social phenomena cannot be artificially produced or manipulated at will, as in the natural sciences, Durkheim insists on the necessity of indirect experimentation: *We can only bring them together as they have been spontaneously produced* (1895 VI: 147).

Durkheim is also well aware that statistical correlation is not sufficient to establish causality. For this reason, the sociologist must rely on deduction in a continuous and rigorous interplay between theory and observation.

First we shall discover, with the help of deduction, how one of the two terms was capable of producing the other; then we shall attempt to verify the result of this induction with the aid of experiments, i.e. by making fresh comparisons. If the deduction proves possible and the verification is successful, we can therefore regard the proof as having been demonstrated (1895 VI, ii: 152).

The demonstration of sociological proof thus unfolds in a multi-step process. It begins with the use of quantitative methods to reveal the existence of social facts. It then proceeds through deductive reasoning to explore possible causal relationships. In a third phase, the explanation of social phenomena is grounded in empirical analysis that tests the proposed deductions through statistical comparisons. In a fourth and final phase, these correlations must be verified by replicating the analysis using additional quantitative data. Sociological proof is therefore constructed through an integrated methodology combining deduction, statistical analysis, and empirical testing.

In the end, Durkheim's methodological framework reveals a striking proximity to the central ambitions that define cliometrics, as outlined in our introduction. Both are committed to the use of quantitative analysis to identify hidden regularities and to test causal hypotheses. In fact, Durkheim articulates a rigorous conception of causality as the cornerstone of sociological explanation. He asserts that a social fact must be explained by another social fact that precedes it, rejecting psychological, individualistic, or utilitarian explanations. For Durkheim, a causal relationship is not a mere chronological association but an intelligible and unique connection that expresses the nature of the phenomena involved. He opposes the empiricist view, especially that of John Stuart Mill, which allows for multiple causes of a single effect, arguing instead that each effect has a single, determinate cause. Causality is thus absolute and necessary, forming the basis for discovering social laws. Since direct experimentation is often impossible in sociology, Durkheim emphasizes the comparative method—particularly the method of concomitant variation—as an indirect yet scientifically valid way to detect causal relationships. When two phenomena vary in a regular and

proportional manner, their connection may reveal a causal link, either direct or mediated by a common underlying factor. Nevertheless, he insists that the correlation must express an inner necessity, not a superficial resemblance.

Durkheim also draws a strict distinction between cause and function: the cause explains the origin of a social fact, while its function accounts for its role in maintaining the social order. These two dimensions must be analyzed separately to avoid the teleological fallacy of explaining a phenomenon by the utility it serves. Additionally, Durkheim firmly rejects psychological explanations of social facts, arguing that individual mental states are themselves shaped by social conditions and cannot serve as primary causes. Any tendency, desire, or motive must be treated as a social thing governed by laws, not as a self-sufficient explanatory principle. For Durkheim, social reality is external, objective, and coercive, and it should be approached like a natural reality governed by forces, currents, or systems of relations that are analogous to physical or chemical processes. Causality, in this sense, is modeled on the natural sciences: it involves forces and emergent properties rather than subjective intentions. As such, the social sciences can and must discover laws of the same kind as those in biology or physics. Causality, for Durkheim, is always synonymous with a law, regardless of how often it is observed; once a causal relationship is demonstrated, it holds universally within the same conditions. This conviction underlies his criticism of historians like Seignobos who deny the possibility of social laws due to the uniqueness of historical events. Durkheim, on the contrary, affirms that even singular occurrences can exemplify general principles if they express regularities inherent in the structure of social life. Ultimately, Durkheim's conception of causality is deeply realist, grounded in the conviction that social facts have an objective existence independent of individual consciousness and that scientific reason can uncover the deterministic relations that bind them. Causality is, for him, the very mechanism through which sociology becomes a science. In this regard, cliometrics may be understood as a contemporary realization—albeit in the economic field—of Durkheim's original epistemological project for sociology.

As Claude Diebolt has argued, the cliometric approach does not simply add econometrics to history, but transforms the epistemological status of historical knowledge itself (Diebolt, 2016). In this regard, the transposition of cliometric tools into sociology would not only expand the empirical reach of sociological analysis, but also reinforce its claim to scientificity. The ambition would be, as Diebolt wrote, to build bridges between statistical regularities and the historical singularity of social facts (Diebolt, 2025). From this perspective, applying the cliometric approach to sociology would give renewed substance to the model of social physics that Durkheim originally envisioned.

1.3. Society as a System of Forces: The Necessity of a Social Physics

By conceiving social facts as forces that determine human behavior, Durkheim proposes a physicalist understanding of society. If a social force determines individual action, it is also, in turn, determined by other social facts. This relational and dynamic perspective is especially evident in his Latin thesis devoted to Montesquieu (see Boyer, 2024). According to Montesquieu, every law is the product of other laws and conditions. The laws of government, for instance, are shaped not only by geo-climatic factors, but also by customs, commerce, population density, and demography. Laws are therefore neither autonomous nor independent (Montesquieu 1748, Book XIII and following).

In reading Montesquieu, Durkheim perceives that each law is both a product of external determinations and a source of determination itself (1892 IV, i). He thus recognizes that Montesquieu "*considers that social facts, and especially those he talks of most – namely, laws – follow a particular order and so are open to rational explanation*" (1892 IV, i). More broadly, Durkheim argues that any social fact is determined by other social facts, as explicitly emphasized in *The Rules of Sociological Method* (1895, Table of Contents V, ii).

Society, composed of the full set of social facts, is thus conceived as a coherent system of interdependent forces of varying nature and intensity. "*All these things are so interconnected that they cannot be understood, each just on its own, divorced from the others*" (1892 V, ii: 65e). The social world becomes a system of social facts understood as interconnected forces (on Montesquieu's system and Durkheim's reinterpretation, see Boyer 2024). A social fact can only be fully understood through its determined position within this larger structure. Its intensity and efficacy are relational, depending on the strength of other social forces with which it interacts. These forces are not static; they evolve and fluctuate over time.

In Montesquieu's framework, if laws form a system from which a spirit—*the spirit of the laws*—emerges, Durkheim adopts a similar stance. The system formed through the association of individuals, he argues, "*represents a specific reality which has its own characteristics.*" "*Society is not the mere sum of individuals*" (1895 V, ii: 129). From the aggregation of individual relations emerges the social, understood as a collective consciousness possessing a distinct nature and governed by its own laws. This consciousness does not originate in individual reason or will, nor from a social contract or convention. It is, rather, natural and synthetic (1895 V, iv). Once formed, society generates its own laws, which in turn become the causal forces behind observable social phenomena (1895 V, ii: 119).

Durkheim's ambition to establish a physicalist approach to the study of society is evident in his *Lectures on Sociology*, delivered in Bordeaux between 1890 and 1900, repeated at the Sorbonne in 1904 and 1912, and in various conferences prior to his death (Kubali, 1950: 5). These lectures were posthumously published in 1950 by Hüseyin Nail Kubali and Georges Davy. As its subtitle indicates, Durkheim sought to propose a "*Physics of Morals and Law*" (*Physique des mœurs et du droit*). Yet this "*physics"* appears to concentrate primarily on the morphological dimension of social facts; on formal laws. According to Durkheim: "*The physics of morals and law is concerned with the study of moral and legal facts. These facts consist of rules of sanctioned conduct. The problem that science faces is to investigate:*

1. *How these rules have developed historically, i.e. what are the causes that gave rise to them, the useful ends they serve, and the purposes they fulfil.*
2. *How they function in society, i.e. how they are applied by individuals.*" (1890-1900, Lesson 1: 41).

To study society as a system of social facts, a systemic analysis modeled on the physical sciences—what may be called a "*social physics*"—is required.

Following Durkheim's project, such an analysis should involve several fundamental steps.

First, after having precisely identified the social phenomenon under investigation, the sociologist must establish the potential social facts—i.e., the possible causes—that could be determining it.

Second, the sociologist must then select one of these potential causes and determine its nature, intensity, and finality. In this step, the social fact under analysis is conceived as a social force that partly determines the occurrence of the given phenomenon. The sociologist must clarify the specific effects of this force on the phenomenon from a static perspective.

Third, the sociologist must repeat this analysis for all the other potential causes. The aim here is to produce a systemic understanding of the phenomenon through the identification of all the relevant social facts—again considering their nature, intensity, and direction—in a comparative static perspective.

Fourth, the sociologist must analyze the causes of these social facts themselves. This involves determining the nature, strength, and finality of the forces that shape each of the causal social facts influencing the phenomenon in question. In this sense, the analysis becomes a layered, recursive mapping of social causality.

Fifth and finally, the sociologist must account for the evolution of the social phenomenon. This means analyzing how its causes have varied over time. Since the emergence and development of a social phenomenon are determined by the nature, intensity, and finality of the social forces acting upon it, the ultimate objective is to identify and explain the historical variations of these forces in a dynamic perspective.

In this way, the sociologist becomes an analyst of social systems, seeking to uncover both the structure and the movement of social forces. Durkheim's ambition thus closely parallels the analytical strategy proposed by cliometrics. Both are grounded in the conviction that social and economic phenomena can be scientifically explained by identifying causal relationships and systemic interdependencies, using quantitative data, theoretical models, and historical analysis. At its core, Durkheim's vision of a social physics anticipates the epistemological framework and methodological aspirations of cliometric inquiry.

2. Cliometrics as a Means to Fulfill Durkheim's Abandoned Ambitions

Nevertheless, and curiously enough, Durkheim ultimately failed to extend his initial project. In *Suicide*, he addresses the first three points of his methodology. He focuses on determining the social causes of suicide by employing quantitative analysis and applying the method of concomitant variations. However, he does not fully engage with points four and five. In particular, he does not consider the historical evolution of suicide rates by attempting to identify the causes of their variation. In his later research, Durkheim increasingly moves away from the project outlined in *The Rules of Sociological Method*.

2.1. Durkheim's 1888 Study on Suicide and Natality

In his early and relatively understudied article, *Le Suicide et la Natalité. Étude de statistique morale* (1888), Émile Durkheim lays the groundwork for his later and more developed sociological theory of suicide. The piece reflects an embryonic stage in his methodological thinking, revealing how he mobilized statistical data to explore correlations between seemingly unrelated moral phenomena—namely, suicide rates and birth rates—across different European countries. Drawing on official demographic and statistical reports, Durkheim observes a striking inverse correlation: where birth rates are high, suicide rates tend to be low, and vice versa. This statistical pattern, he argues, cannot be coincidental and must be indicative of deeper social mechanisms at play.

Durkheim treats these social facts—suicide and natality—not as isolated individual behaviors, but as collective manifestations reflecting the moral condition of society. He rejects purely biological or climatic explanations for variations in suicide and natality, insisting instead that the true causes are social in nature. The core argument is that both phenomena are indicators of the strength or weakness of moral and social integration. High birth rates are interpreted as a sign of strong familial cohesion and collective life, while high suicide rates signal moral disintegration and social atomization. Marriage, family life, and religious belief all function as mediating institutions that, when weakened, erode the individual's sense of social belonging.

Durkheim's use of statistical tables and cross-national comparisons aims to uncover "moral laws"—regularities in human behavior that are governed by the structure of social life rather than by individual will or biological necessity. This article thus illustrates Durkheim's early efforts to align sociology with the scientific method, treating moral facts as subject to empirical observation and generalization. Although his statistical tools are rudimentary and his causal reasoning still somewhat

speculative, the article reveals his conviction that social life operates according to observable regularities that can be studied systematically thanks to quantitative methods.

Importantly, Durkheim does not claim that statistical correlations alone constitute proof. Rather, he uses them to eliminate alternative (non-social) explanations and to construct a theoretical framework within which social causes can be inferred. Although he left aside such a quantitative analysis for almost ten years and did not use it in his tow theses of 1893, Durheim's methodological posture here anticipates the more sophisticated argument he would develop in *Suicide* (1897), where he formalizes the idea that social integration and regulation are key variables affecting suicide rates.

Reexamined through the lens of cliometrics, Durkheim's 1888 article emerges as a pioneering but incomplete attempt at empirical sociology. His insight—that macro-level regularities in demographic behavior reveal underlying social forces—is fully compatible with cliometric logic. However, his reliance on descriptive correlation, his limited engagement with causal identification techniques and the lack of formal econometric modeling, constrain the scientific robustness of his conclusions. We find these same limits, ten years later, in *Suicide*.

2.2. Suicide: A Sociological Study and a Potential Object for Cliometric Analysis

Suicide: A Study in Sociology (1897) is the work in which Durkheim most effectively applies the quantitative methods outlined in *The Rules*. Defined as "*all cases of death resulting directly or indirectly from a positive or negative act of the victim himself, which he knows will produce this result*" (Durkheim, 1897, Introduction I: xlii), suicide is conceived as a phenomenon determined by social facts. Even though no formal law commands individuals to commit suicide, Durkheim argues that suicide is nonetheless determined by broader social factors. He explicitly rejects the view that suicide can be explained solely by individual motivations or psychological predispositions (1897, Introduction II: xliv).

According to Durkheim, "*at each moment of its history […] each society has a definite aptitude for suicide. The relative intensity of this aptitude is measured by taking the proportion between the total number of voluntary deaths and the population of every age and sex*" (1897, Introduction II: xlv). Since this rate is "*constant for long periods, [and as] its invariability is even greater than that of leading demographic data*," suicide must be understood not as an individual act, but as a socially determined phenomenon. It is thus conceived as a normal social occurrence, in the sense that "*there is always and normally, in every society, a collective disposition taking the form of suicide*" (1897 I, iv, 2: 83, footnote). Suicide is therefore both a social fact and a manifestation of deeper social forces that are specific to each society.

Durkheim's central hypothesis is that certain invisible social forces determine individuals' propensity to commit suicide. Although these social forces are often imperceptible, their effects are concrete and measurable, making it possible to detect them indirectly. Variations in suicide rates thus become indicators of the underlying social realities that prevail in a given society. Since social phenomena cannot be artificially produced at will by the researcher—this is especially true of suicide—Durkheim chooses the method of indirect experimentation through the analysis of concomitant variations. Social facts are revealed by comparing the suicide rates across social categories, each defined by different characteristics.

By employing this method, Durkheim demonstrates that suicide rates vary significantly based on religion, marital status, urban versus rural residence, nationality, and the developmental state of the economy. Social facts can therefore be studied indirectly through their concrete effects, in this case through suicide rates, which make it possible to detect the presence and intensity of otherwise hidden social forces.

On this basis, Durkheim identifies two primary variables: the level of social integration and the level of social regulation. Each may be either excessive or insufficient within a given society or social group. This leads to the classification of four types of suicide: egoistic suicide (caused by a lack of

social integration; Durkheim 1897, II, 2–3), altruistic suicide (caused by an excess of social integration; Durkheim 1897, II, 4), anomic suicide (caused by insufficient regulation; Durkheim 1897, II, 5), and fatalistic suicide (caused by excessive regulation; Durkheim 1897, II, 5: 239, footnote).

For this reason, *Suicide* may be understood as "*an explicit research program [that] can be summarized as an investigation into the identification, measurement, and comparison of social forces – 'currents of egoism, altruism or anomy' (…) – that cause or inhibit suicide*" (Takla & Pope, 1985: 86).

2.3. Durkheim's Unrealized Project: The Impossible Epistemological Shift

Despite the promise held by *Suicide*, Durkheim ultimately abandons the broader scientific program he had initially outlined. He moves away from quantitative analysis and from an explanatory approach to sociology. Three main reasons may account for this epistemological shift.

First, Durkheim appears to have been too heavily influenced by the epistemological model of biology (Berthelot, 1995: 23 ff). He was shaped by a dominant scientific paradigm that emphasized biological explanation and discouraged the development of a social physics. Only his early Latin thesis on Montesquieu temporarily led him to diverge from this framework, and even then, only briefly (See Boyer 2024). Already in *The Rules*, Durkheim's methodological proposals reveal a tendency to import concepts not from physics but from biology, chemistry, and medicine.

Durkheim, for example, opens the second chapter of *The Rules of Sociological Method* with the methodological prescription that "*the first and most basic rule is to consider social facts as things*" (Durkheim, 1895, II: 60). He argues that social facts are things because "*they are the sole datum afforded the sociologist. A thing is in effect all that is given, all that is offered, or rather forces itself upon our observation*" (Durkheim 1895 II, i: 69). From this standpoint, the analogy seems justified: Durkheim wants to emphasize the concrete nature of social facts, even if they are immaterial and not directly observable.

He further insists that social facts must be studied "*from the outside, as external things*" (1895 II, i: 70). Yet Durkheim goes even further, asserting that "*social facts are things and must be treated as such*" (1895 II, i: 61). This methodological statement contradicts his earlier conception of social facts as forces. By embracing the analogy with "*things*," Durkheim implicitly adopts the epistemological model of biology. Social facts come to be understood as parts of a larger organism, whose functions must be identified and explained.

In doing so, Durkheim opens the door to organicist and biologistic interpretations, where the sociologist is likened to a vivisectionist performing a cold, clinical analysis of living tissue (1895 II, i: 73). By aligning sociology with biology, Durkheim distances himself from the notion of a physics of society. As Guillo (2006: 508) notes, this transposition is understandable within "*the general conceptual field common to all forms of sociology inspired by the biology of their time.*" Indeed, the broader intellectual and epistemological context of Durkheim's era was dominated by the triumph of biologism (Berthelot 1995: 23 ff). This biological analogy would profoundly shape Durkheimian sociology, transforming society into "a living species" (Berthelot 1995: 58 ff). This preconception, akin to a "*prenotion*," would distance him from social physics.

Durkheim also becomes deeply preoccupied with the health of society, understood as a kind of social organism (1895 III, i: 87–90). In this light, the sociologist's role is likened to that of a physician. Durkheim even embraces a biopolitical conception of governance akin to Foucault's later analyses (2004: 1):

"*The duty of the statesman is no longer to propel societies violently towards an ideal which appears attractive to him. His role is rather that of the doctor: he forestalls the outbreak of sickness by maintaining good hygiene, or when it does break out, seeks to cure it.*" (Durkheim, 1895 III, iii: 104)

To respond to social dysfunction, Durkheim proposes a kind of clinical sociology, one that aligns itself with the preservation of life (Tierney, 2010). However, this biologically inspired approach conflicts with his original definition of the social fact as a force. It also prevents him from completing his initial analytical project and steers sociology away from its potential as a social physics.

A second reason for Durkheim's shift may lie in his intellectual and spiritual transformation around 1895, when he experienced what he described as a revelation regarding "*the crucial role played by religion in social life.*" This insight was so profound that "*all [his] previous research had to be taken up afresh in order to be brought into harmony with these new views*" (1907 in Durkheim 1975: 404), marking a clear epistemological turning point. Several scholars have offered interpretations of this shift — notably Steiner (1994: 25) and Watts Miller (2022) — while others, such as Paoletti (2012), have questioned the idea of a rupture, emphasizing instead the continuity of Durkheim's religious concerns. Mucchielli (2004), for his part, has proposed a psychoanalytical reading of this transformation.

By turning to the study of religion, Durkheim began to focus more intensely on the meanings attributed to human actions. He moved toward a more qualitative sociology, as evidenced in *The Elementary Forms of Religious Life* (1912), in which religion is studied as a system of representations. As a result, Durkheim adjusts his methodology.

This spiritual turn brought with it a new epistemology (Sousa Fernandes 2008: 459), leading Durkheim further away from the ideal of a social physics. He became more concerned with social representations, which he now conceived not merely as external facts but as internalized forces that shape individual consciousness.

"*For society, that unique source of all that is sacred, is not satisfied to move us from outside and to affect us transitorily; it organizes itself lastingly within us. It arouses in us a whole world of ideas and feelings that express it but at the same time are an integral and permanent part of ourselves.*" (1912 II, 8, iv: 266)

Durkheim's focus thus shifts from objective, external realities to subjective, internal ones. The social fact takes on a dual nature: it is both external to the individual and internalized through socialization. As a norm, it is imposed from without, but once internalized, it operates from within and shapes behavior. By emphasizing this internal dimension, Durkheim distances himself from the conception of social facts as measurable external forces, effectively stepping back from the scientific project he had outlined in *The Rules of Sociological Method*. Instead, his attention turns to the analysis of collective representations and symbolic forms.

However, Durkheim offers a third reason to refrain from pursuing a form of social physics. This one seems to us to be particularly important: Durkheim believed that the methodological tools required for such an approach were not yet available. In particular, statistical methods remained too rudimentary.

As he puts it: *The methods employed by the physics of morals and law are of two kinds: firstly, there is comparative history and ethnography, which reveal the genesis of the rule, showing us its component elements dissociated and then progressively added to one another; secondly, there is comparative statistics, which allow us to measure the relative degree of authority with which this rule is invested in individual consciences, and to discover the causes according to which this authority varies. No doubt we are not at present in a position to treat every moral problem from either point of view, for very often statistical information is lacking. But it is not unimportant to note that a complete science must ask itself both questions.* (1890-1900, Lesson 1: 41–42).

Durkheim's scientific ambitions were thus seriously constrained by the scarcity of available statistical data. This may explain why, apart from his study on *Suicide*, he did not undertake any research that made significant use of quantitative analysis. The statistical resources available during Durkheim's time were too limited to uncover social causalities or to identify the general laws

governing the functioning of societies at the end of the 19th century. Furthermore, since statistical record-keeping was poorly developed prior to the 19th century, it was practically impossible to conduct a long-term historical or genealogical study of social facts using quantitative series. Moreover, at that time, statistical tools simply did not allow for the rigorous detection of causal relationships.

These limits were particularly well perceived by Stephen Turner (1996). In *Durkheim among the Statisticians*, Turner indeed offers a critical reassessment of Durkheim's relationship to statistical reasoning. He argues that Durkheim's actual engagement with statistical methods was more limited, conceptually ambiguous, and philosophically tenuous than is often assumed. While Durkheim famously advocated for the use of statistical data in sociology—most notably in *Le Suicide*—Turner shows that Durkheim neither developed nor deeply understood the statistical methods he championed. Rather, Durkheim relied on pre-existing tabulations from official sources (e.g., the French *Annuaires Statistiques*) without substantially engaging with the underlying methodological challenges of correlation, inference, or causality.

Turner contrasts Durkheim's approach with that of contemporary statisticians such as Adolphe Quetelet, who had already advanced a probabilistic and mathematically rigorous framework for social analysis. Durkheim adopted Quetelet's concept of the "average man" and the idea that moral facts could be treated as natural facts, yet stripped away their mathematical depth in favor of philosophical and moral arguments about the sui generis nature of social facts. As Turner notes, Durkheim used statistics less as instruments of discovery and more as rhetorical confirmation of his a priori theoretical constructs. A key critique is that Durkheim misunderstood or underutilized the logic of statistical variation. Instead of treating deviance as a meaningful variable, he framed it as mere fluctuation around a collective norm. Turner emphasizes that Durkheim's epistemology—deeply influenced by Comtean positivism and moral philosophy—conflicted with emerging statistical theories of causality and multivariate analysis. The result was a sociology that valorized regularity and social order but remained methodologically rigid and resistant to probabilistic thinking.

Turner concludes that Durkheim's methodological legacy created a lasting tension within sociology: a discipline committed to the scientific ideal of objectivity and generalization, but built on foundations that were empirically thin and conceptually ambiguous in relation to statistics. Durkheim's symbolic use of numbers gave sociology the appearance of scientific rigor without integrating the more complex, evolving techniques of statistical reasoning.

Seen from the perspective of cliometrics, Turner's critique reinforces the idea that Durkheim's aspirations for a quantitative social science were undercut by a philosophical discomfort with statistical uncertainty. While Durkheim insisted on treating social facts "as things," he lacked the formal tools to rigorously analyze them as probabilistic variables.

This leads us to three main conclusions.

1. The scope of sociology, as conceived by Durkheim in the form of a social physics, was limited by the availability of statistical data.
2. As sociology depends on data, it also requires institutions capable of producing and collecting that data. To fully realize Durkheim's project, both statistical infrastructures and quantitative methods would need to be developed (Tierney, 2010: 377-379).
3. Due to the lack of statistical data and statistical tools, Durkheim was ultimately forced to narrow the scope of his sociology and to abandon his broader ambition of establishing a social physics.

To be fair, these were not shortcomings of Durkheim's, but rather barriers that all social sciences faced to a certain degree. Statistical data were more available for business and economic analysis at that time, though certainly not to the extent that they are today. Cliometrics did not exist

until the late 1950s, and prior to that time, the field of economic history, like sociology, was dominated by a narrative approach to research.

Cliometrics, with its embrace of counterfactuals, econometric modeling, and causality testing, represents precisely the kind of quantitative sophistication that was absent from Durkheim's methodological toolkit. It enables contemporary scholars to revisit the ambition for a "social physics," but with a level of precision and formalization that Durkheim himself never achieved.

In addition, the grounding of cliometrics in the gathering of sound, reliable data that can be measured and analyzed, facilitates the Durkheimian approach. Measurement and reliable data are critical components of Durkheim's approach as they also are to cliometrics. Varian (2014), Gutman, et al (2018) and Diebolt & Haupert (2019b, forthcoming 2026) are among those who have addressed these issues, and while their focus is on cliometrics, their arguments apply equally to sociology. The discovery or creation of reliable databases and the ability to measure change are critical to our ability to understand causality.

By bridging theoretical models and historical analysis (Diebolt, 2020), cliometrics may offer a way forward—revitalizing the scientific project first articulated in *The Rules of Sociological Method* and opening new possibilities for a cumulative, predictive social science.

2.4. Using Durkheim's Methods and Cliometrics to Reveal Social Forces in a Static and Dynamic Analysis

By following the path originally laid out but later abandoned by Durkheim, it seems to us that a sociology similar to social physics, and focused on studying social facts conceived as social forces, could emerge. This approach could intersect meaningfully with some of the paths taken by cliometrics.

2.4.1. In a static perspective, the use of statistics could permit the revelation of social facts and their importance

The use of quantitative methods could reveal both the existence of social facts and the intensity of their force. These methods therefore allow researchers to uncover the strength of social determination. Returning to Durkheim's Latin thesis on Montesquieu (1892) and to Montesquieu's *The Spirit of the Laws* (1748), laws are explicitly defined as "*necessary relations* (rapports nécessaires) *deriving from the nature of things*" (1748 I, i: 1). The word *rapport* used by Montesquieu, and translated as "relation" in English, also carries the meaning of "*ratio*" in French. From this perspective, laws are understood as resulting from the confrontation of variables brought into relation. This also implies—although it was not Montesquieu's intention—that a law could be assessed and considered as a numerical ratio of the forces exerted by the elements in relation to one another.

For this reason, social force could, in theory, be quantified. It could be evaluated through mathematical or statistical analysis using descriptive statistics. In this light, a social fact also appears as a probabilistic ratio. Law would then be considered a tendency, a reflection of a social inclination to act. Summarized in Durkheimian terms, the statistical rate reveals a tendency to act that varies depending on an individual's membership in a particular social group. For instance, in Durkheim's study on suicide, a suicide rate indicates the propensity to commit suicide based on group affiliation. Descriptive statistics, then, reveal both the presence and magnitude of social facts.

By examining concomitant variations, it is also possible to isolate the different causes of a social phenomenon. For example, comparing the suicide rates of various populations enables researchers to isolate specific social facts and identify the social causes of the phenomenon. This causality can also be tested by replicating the analysis across comparable groups.

Therefore, the use of statistics enables the revelation of social facts and social determinations in a static perspective. Yet a dynamic perspective could also be developed.

2.4.2. In a dynamic perspective, sociology could aim to reconstruct the evolution of a phenomenon through methods inspired by cliometrics

This would require a focus on data construction and the use of statistical and econometric tools—herein renamed sociometric tools—to discover regularities, trends, correlations, or potential causal relationships. Indeed, this has been a hallmark of cliometrics over the past half century and has spawned a number of clever methods of constructing data sets using text (Kosnik, 2015), images (Liu & Tian, 2010, Swanson *et al.*, 2016), maps (Gregory *et al.*, 2010; Atack, 2013, 2024; Graham & Shelton, 2013), technology (Leicester & Oldfield, 2009, Cavallo & Rigobon, 2016), exploitation of unique sources (Antenucci *et al.*, 2014) and linking existing data sets to form new, larger, and richer data sets (Feigenbaum *et al*, 2021).

In this context, ratios should be examined over extended periods. The evolution of rates, to estimate the changes in their intensity over time, would need to be studied. Within this framework, it would be feasible to replicate Durkheim's analysis of suicide by examining the evolution of suicide rates across decades or centuries. For example, using the linked datasets created by Martha Bailey (2020a, 2020b, 2023), one could backward link death by suicide with earlier life demographic and episodic data (job change, move to new location, change in family structure - e.g. birth, death of family member, and situation - e.g. job loss, marriage).

Transposing the classical tools of cliometrics into sociology or history could also reveal previously invisible links and enable multi-focal analyses. For example, the econometric technique of identifying outliers could help detect atypical data points that influence the evolution of a time series (Darné & Diebolt, 2004). This method relies on identifying real shocks and thereby distinguishes between permanent and temporary effects on a series. As such, it is well suited for the historical analysis of social phenomena. This approach would allow researchers to identify abnormal periods or crisis moments that affect particular phenomena, indirectly revealing the impact of specific social contexts. Returning to the example of suicide, identifying atypical suicide rate data points could point to social crises that may—or may not—have been perceived by contemporaries or historians. It could also confirm the existence of periods of political, social, or economic upheaval by quantifying their scale and comparing them with other times.

Applying this method could provide a multi-dimensional perspective for describing a historical period, especially during times of crisis, by studying and comparing economic, political, and social dimensions simultaneously.

Following Diebolt and Doliger's (2006) work on long-term cycles in economic history, one may wonder whether similar patterns can be detected in the evolution of social indicators such as suicide rates, crime statistics, or fertility trends. Spectral analysis could thus be used not only to identify cycles, but to hypothesize about the periodic resurgence of structural tensions within society. These tensions, while sociologically invisible in short-term data, become evident when observed over longue durée.

The historical interpretations offered by historians, sociologists, or anthropologists using qualitative methods could thus be enriched and challenged through experimental analysis and the testing of quantitative data. Cliometrics has spawned network studies (Franzosi *et al.*, 2012, Pagé-Perron, 2018, Perrin, 2022, van Vugt, 2022), machine learning models (Grajzl & Murrell, 2024), topic modelling and text analysis (Blaydes, 2018, Risi *et al*, 2019, Gennaro & Ash, 2022), and even dabbled in augmented reality (Sherratt & Bagnall, 2019) in an effort to measure economic change. There is no reason that each of these could not be applied to the analysis of sociological data as well.

2.4.3. By employing cliometric methods, sociology could also test the theories of its founders and potentially validate or disprove longstanding theses

As with Durkheim's work on suicide, Max Weber's thesis on the elective affinities between the Protestant ethic and the spirit of capitalism could be subjected to empirical scrutiny and tested for falsifiability. Notably, Weber begins his book with a discussion on "*Religious Affiliation and Social Stratification.*" In a proto-cliometric fashion, Weber presents his sociological problem:

A glance at the occupational statistics of any country of mixed religious composition brings to light with remarkable frequency a situation which has several times provoked discussion in the Catholic press and literature, and in Catholic congresses in Germany, namely, the fact that business leaders and owners of capital, as well as the higher grades of skilled labor, and even more the higher technically and commercially trained personnel of modern enterprises, are overwhelmingly Protestant. (1904-1905: 3)

Weber states that economic development was greater in parts of the West marked by Calvinism and Protestant sects than in Lutheran regions (1904-1905: 10–12). However, despite the erudition and persuasive quality of his argument, the statistical evidence Weber refers to is not clearly presented. His analysis appears to rest more on an impression—a mere "*glance*" at data—than on systematic investigation. As Weber later admitted in his response to Felix Rachfahl's criticisms:

If I am now asked in all honesty how high I rate the importance of the Reformation [on the rise of the 'methodical life' and by extension on that of capitalism], my answer is that I rate it very highly indeed. I have constantly and scrupulously reflected on this question, and am not bothered that no 'numerical' ratio exists for historical attribution here. (1910: 120)

It seems evident that with the availability of modern data and advanced statistical tools, it is now possible to estimate these potential causal relationships and assess their strength. Cliometric methods could allow us to evaluate and empirically test Weber's inferences.

Furthermore, although Weber refers to an "*elective affinity*" between Protestantism and capitalism (Löwy 2004, Weber 1910: 94, 107), he in fact implies that the Protestant ethic was one of the driving forces behind the emergence of capitalism. According to Weber, *"'one of the fundamental elements' of the 'capitalist spirit' originated in the specifically 'bourgeois ethic of the calling'"* (Weber 1910: 95; see also Chalcraft: 11; Bakker 2003). However, this affinity might have had a completely different interpretation. The gradual emergence of capitalism, and the affirmation of a mercantile ethic, could have produced new cultural forms, social norms, and social facts—among them, the Protestant ethic itself. What Weber considers a cause may have, in fact, been an effect.

From this viewpoint, it seems worthwhile to re-examine Weber's hypotheses in a more systematic and generalized fashion, for example, by comparing the economic growth rates of various regions with levels of adherence to Reformed Christianity, while accounting for distinctions among Protestant traditions, particularly between Lutheranism, Calvinism, and Protestant sects. Ultimately, cliometric tools could test the correlations and causal relationships Weber proposed, clarifying their strength and the precise role of the Protestant ethic. In the same spirit as outlined in previous sections, a broader research program could be developed to investigate the social, economic, and political causes of the rise of capitalism.

2.4.4. Developing deterministic models to reconstruct the articulation of social facts

Finally, a fourth perspective would involve constructing models analogous to econometric models, transposed for use in sociology. These models would give rise to a discipline of sociometrics. The aim would be to link essential social phenomena with the social facts that potentially determine them. These phenomena would be connected through laws conceived as causal and probabilistic

relationships. In this way, a simplified model of the social system could be proposed, understood as a network of probabilistic causalities.

Once developed, such a model could be tested against historical data to assess its explanatory power. If proven robust, it could also be employed to forecast future trends in social phenomena, thereby endowing sociology with a predictive dimension. Patterns and trajectories in the evolution of societies could then be identified and empirically validated. In the spirit of cliometric modeling, sociology might adapt autoregressive frameworks to examine the influence of variables such as unemployment, inequality, or secularization on outcomes like suicide or crime. For example, the work of Diebolt, Perrin, and coauthors (2013, 2017a, 2017b, 2019, 2021, 2024) on gender equality and the determinants of long-run growth may serve as a methodological reference to better explain past experiences and to understand how, why, and when structural change occurs.

Conclusion

In conclusion, cliometric methods, when thoughtfully applied to sociology, may offer a promising path for reengaging with the scientific ambitions Durkheim articulated in his foundational work. Such a transposition could help realize the program outlined in *The Rules of Sociological Method* (1895), by adding a genuinely explanatory, testable, and cumulative dimension to sociological inquiry.

As John Goldthorpe (2015) has argued, sociology must be conceived as a population science, grounded in probabilistic reasoning and empirical generalization. In this light, cliometrics provides both the methodological tools and theoretical scaffolding needed to move beyond the fragmentation and relativism that Bernard Lahire (2023) identifies as a core weakness of contemporary social science.

Such an approach makes it possible to test causal hypotheses, quantify the strength of social forces, and extend sociological reasoning into historical time. In doing so, it reconnects the discipline with Durkheim's ambition to identify moral laws governing collective behavior. It also opens the door to predictive modeling, enabling sociology to engage not only with the past of societies, but also with their possible futures. What emerges is the prospect of a shared epistemological framework across the social sciences—one that bridges the particular and the general, explanation and understanding, theory and observation.

This reflection opens the possibility that cliometrics could be extended beyond economic history and analytical sociology to embrace a more comprehensive sociological framework—one that is compatible with the interpretive tradition rooted in the work of Wilhelm Dilthey.

Dilthey (Makkreel, 2021) emphasized *Verstehen* as the key to grasping lived experience and inner meaning, while also seeking to bridge the gap between understanding and explanation. Max Weber, building on Dilthey, placed *Verstehen* at the center of sociological method, arguing that the explanation of social action must remain grounded in the subjective intentions of individuals, but also formulated through conceptually coherent and causally intelligible models (Weber, 1922). In this spirit, cliometrics offers not merely a toolkit for empirical rigor, but a methodological stance that could reconcile interpretive depth with causal clarity. By formalizing narratives without discarding meaning, cliometric reasoning may contribute to the kind of "causal Verstehen" Weber envisioned—a science of action that is at once explanatory and interpretive.

In this spirit, a cliometric sociology inspired by Durkheim could restore coherence and cumulative progress to a field too often divided between interpretation and empiricism. By transforming social facts into explanatory variables and reintegrating theory at the heart of research, cliometrics fulfills the promise of a science of society—one Durkheim conceived but could not fully realize.

Seen from a broader historical perspective, the proposal to link Durkheim and cliometrics also resonates with the intellectual legacy of the *Annales* school founded by Marc Bloch and Lucien Febvre during their Strasbourg years (Diebolt & Hau, 2019). Their methodological renewal—moving from singular events toward the identification of long-term regularities and causal patterns—anticipated the cliometric ambition to integrate theory, quantitative methods, and historical context. More distantly, one might even situate this trajectory within the German historical school, whose presence in Strasbourg in the 1870s under Gustav Schmoller helped shape the intellectual environment in which Durkheim himself was trained. The cliometric project thus stands at the crossroads of these intertwined traditions: the sociological ambition of Durkheim, the historical vision of the *Annales*, and the institutional heritage of German historicism. In this sense, extending cliometrics into sociology is not a rupture, but the continuation of a much older dialogue between history, theory, and empirical science.

As Claude Diebolt has often emphasized, cliometrics is not limited to economic history. It is a generalizable approach that offers a unifying paradigm for the social sciences. Its power lies not only in its quantitative rigor but in its theoretical orientation. As Werner Sombart famously declared, *"No theory—no history! Theory is the pre-requisite to any scientific writing of history"* (1929). And as Gavin Wright (1971) argued, *"The distinctive contribution of the New Economic History has not been so much the use of econometrics but the use of economics."* Along these lines, sociology—like political science, demography, or anthropology—holds rich potential for extending the cliometric frontier. The door remains wide open!

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