

Christelle Rabier

Introduction: expertise in historical perspectives

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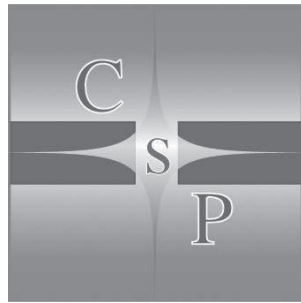
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Fields of Expertise:
A Comparative History of Expert Procedures
in Paris and London, 1600 to Present

Edited by

Christelle Rabier



Cambridge Scholars Publishing

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INTRODUCTION

EXPERTISE IN HISTORICAL PERSPECTIVES

Christelle Rabier

Experts have undoubtedly taken a central place in fields of public policy as well as non-governmental organizations. From environmental issues to the expanding use of audits, experts and expertise play a structural role in decision-making on all levels. But the mystery surrounding the practice and definition of expertise, and the ambiguity of experts' procedures persist in spite of the experts' omnipresence. Science studies, political science and sociology have each in their own disciplines attempted to grasp how expertise realigns the relationship between science and politics, the foundations of scientific legitimacy as well as the practice of democracy.¹ But the comparative history of these practices and their historical evolution from an interdisciplinary perspective has been left aside. Such a lacuna is all the more regrettable in that expertise has been marked by a undeniable composite evolution within a vast set of practices and contexts.

The etymology of the terms “experts” and “expertise” alone suggests the diversity at the heart of this concept across space and time. The terms have been historically elaborated within different European languages out of the Latin root “*experitus*,” from *experior*, to test or prove. By and large, most dictionaries agree on the knowledge-based dimension of such experience, which characterises an expert. More generally these definitions put emphasis on the “technical” or “scientific” domain of the above-

1. Maasen & Weingart, *Democratization*; Schudson, “The Trouble With Experts.” This introduction is the result of collective work on “Science, Capitals and Expertise.” I am very much indebted to all the participants of the project. Among them, I would like to warmly thank Alain Chatriot, Cécile Cuny, Claire Lemercier, Hélène Lemesle Susan Taponier and Jakob Vogel for very helpful comments on earlier versions of the text. Special thanks to Rob Iliffe and Stephen Sawyer for their kind help with clear expression of language.

mentioned knowledge: experts give their opinion, when partly technical issues are at stake at some level. This is particularly the case in Italian and Spanish, where “experts” are “experienced” (*periti* or *peritos*) in courts of justice or expert appraisals or “*tecnicisti*” (technician in Italian)/ “*tecnicos*” or “*consultores*” (experts or advisors in Spanish) when they give expert advice in decision-making or for damage insurance estimates, for instance.² Indeed, the French or English adjective “expert”—cf. “skilled” worker in Spanish (*obrero experto*)—is commonly defined, after the sixteenth century, as one who is skilled or experienced in a particular domain, especially in the areas of naval, military and public works. The French language defined the “expert” early on as an auxiliary of justice. This particular use of the term in French was complemented by the notion of “expertise,” a legal procedure by which an “expert” gives his or her opinion, to which one could compare the contemporary English “expert appraisal.” Out of these technical uses of “expert” and “expertise,” quite specific to the French language, expertise in the sense of particular competence in a specialized province of knowledge and know-how—like the German “*Fachmann*” and “*Fachkenntnis*”—came into use in English and Spanish from 1880 onwards. Only after the mid-nineteenth century did most European languages agree on the more general use of “expert” and “expertise,” in relation to technical or scientific competence in the service of a public administration. Still more recently, the notion of expertise has been redefined by social scientists as either the cognitive dimension of a particular administrative or legal practice of assessment, or the complex social setting in which the latter takes place as a “situation” or a “forum of expertise.”³

Amidst these various, competing and often times complementary definitions, we conceived a project to explore expertise in a historical and interdisciplinary perspective. A conference, held in Oxford in October

2. *Grand Robert*; Larousse, *Grand dictionnaire universel*; *Trésor de la langue française*; *Historischen Wörterbuch de Philosophie*; Moliner, *Diccionario*; cf. also Ash, *Power*, 16; MacLeod, *Government*, 256, footnote 11. NB: all translations from the French are mine, unless cited otherwise.

3. Cf. esp. Restier-Melleray, “Expertise;” Delmas, “Pour une définition;” Callon & Rip, “Humains;” Collins & Evans, “The Third Wave;” Barthe & Gilbert, “Impuretés;” Trepos, *La sociologie de l’expertise*.

2005, brought together researchers from various disciplines ranging from Political Science to Art History. As the project took form, the necessity for a historical and geographical comparison of “expert practices” was increasingly apparent. We were convinced that only a work of this kind could provide insight into the evolution of administrative, judicial or political decision-making procedures while at the same time taking into consideration the interdisciplinary nature of scholarship on expertise drawn from Sociology, Science Studies and Political Science. It is this vast but essential empire that *Fields of Expertise* seeks to explore. The following articles thus tell a history of the actors and the practices of “expert procedures” in the *longue-durée*, which apprehends the geographical, temporal, and disciplinary variety of these practices as a key component in the evolution of expertise.⁴

A comparison of this type both in time and space and across disciplines offers a rich opportunity for discovery, but only within certain limits. The limits imposed on this study have thus followed five general criteria. First, the case studies presented here are centered on the capital cities of Paris and London. These metropolises offer a rich context for reflecting on the different scales—ranging from urban government and local justice to national policy and international competition—of expert procedures.⁵ Secondly, the studies focus on the specific practices and the rich social settings of the “expert procedures” under consideration. Thirdly, the actors—or an analysis of the situation and social positioning of those involved in expertise—are targeted as essential for outlining the social relationships between expert practitioners, political or legal actors and commissioners, and institutions. The epistemological foundations of expertise form a fourth element in this investigation: the form and content of knowledge that was involved and produced in expert procedures has

4. Some papers collectively discussed have been published elsewhere: Andretta, “Anatomie du Vénérable;” Gouzevitch, *Augustin de Bétancourt*; Laboulais, “The Complicated Meeting;” Montègre, “L’expertise artistique;” Skornicki, “L’État, l’expert et le négociant.”

5. For reflections on expertise in the metropolis, see Stéphane Vandamme’s foreword in this volume; Dierig, Lachmund & Mendelsohn, “Science and the City,” 6–10; Dumons & Pollet, *Administrer la ville*; Van Damme, *Paris* and “Discipliner la ville”; Boucheron, *Le pouvoir de bâtir*, part 3; Ingold, *Négociant la ville*, Chapter 9; Bourillon & Coudroy de Lille, “La ville et l’expertise.”

had a decisive influence on its social and political dimensions. Lastly, the authors assess the normative dimension of expertise, in so far as these procedures involved complex power relationships between the two centers of an expert procedure, the “commissioner” and the “expert opinion supplier.” Indeed, historians have to analyse the construction of legitimacy implied by expert procedures, its principles and the debates that arose around it.

The Expert, the Civil Servant and the State

Twenty years ago, the first attempt to address the issue of expertise came from political historians.⁶ Roy MacLeod considered the expert, in the current sense of the word, as a key factor in the administrative modernization of the Victorian State. *Government and Expertise: Specialists, Administrators and Professionals, 1860–1919* explained the considerable growth of British administration in the nineteenth century by the emergence of experts within the civil service. Starting from Oliver McDonagh’s 1958 model for government growth in the nineteenth century, the contributors discussed how professionals—i.e. medical practitioners, engineers and lawyers—became instrumental to the administration, which extended its sphere of political action to social issues.⁷ McDonagh, as MacLeod underscored, suggested that the process of taking seriously into account new administrative and social problems gave momentum to an “internal dynamism of government,” where “expertise,” partly self-reinforcing, became vital for the process of legislation and the practice of statecraft, as the state widened the scope of its action and increased the number of civil servants, which quadrupled between 1881 and 1914. At last, civil servants gained autonomy in administrative decision-making. Convincingly, *Government and Expertise* discussed several issues in relation to “expertise.” MacLeod has emphasized first the new process of law-making when the political issues concerned pollution, health, sanitation, and other technical considerations, which gave new powers to specialists to design the best practical means

6. For general perspectives on expertise in political science, see Lascombes, *Expertise*.

7. McDonagh, “The Nineteenth Century Revolution.”

to solve the problems at hand; and secondly, the growth in number of civil servants—the inspectors—in order to apply the new regulations, as the state enlarged its powers over social or environmental issues. The volume supplemented a more politically-oriented analysis with sociological considerations on the parallel renewal of the status and statutes of the professions in the nineteenth century, from lawyers and physicians to the civil engineers whose importance McDonagh had already noticed.

While considering that this revolution in administration probably had its roots in centuries past, and certainly in the Tudor period, *Government and Expertise* only explored nineteenth-century issues. More recently, Eric Ash took up the challenge of addressing the problems raised by MacLeod for the Elizabethan State.⁸ As “expert” connoted experience as well as skill at the time, Ash used the concept of “expert mediator” to describe those that served the state as “experts” did in the Victorian era. According to him, the “expert mediator” could be defined on the one hand by his increasingly abstract knowledge and on the other, by his intermediary position: “he served as the intellectual, social and managerial bridge between the central administrators who were his patrons on the one hand, and the various far-flung objects of their control on the other.”⁹ In his view, they greatly helped the Tudor state in its attempt to secure its control over the provinces and the state’s imperial aspirations.

Most modern historians acknowledge the changing nature of experts and expertise after 1800. Historically, Michel Foucault may have been the first to link them, not to the outbreak of revolutionary times, but to a late eighteenth-century change in the conception of government practices. For France in the Enlightenment, Foucault has offered an original theory for thinking the complex and changing relationships between scientific knowledge and the state, a drastic change which he termed the “birth of biopolitics.” In particular, Foucault linked together the extended state attributions with the emergence of what he called a “regime of veridiction.” In his lecture on January 17, 1979, he set a clear theoretical framework for his empirical studies of French administrative practices between 1700 and 1850. He subsumed these governmental practices

8. Ash, *Power, Knowledge and Expertise*.

9. *Ibid.*, 8.

under the concept of “police:” “[Unlimited governmentality] was precisely what characterized, then, the police, what was to be called, by the end of the eighteenth century, ‘the police state,’ from an already backward point of view.”¹⁰ This new governmentality brings together a conception of distributive justice, which underlies the rules and regulations preventing fraud, for instance, economic theories which were then developed and government practices which include specialists and new methods meant to solve a series of economic problems. Thus, in Foucault’s opinion, the emergence of the modern state, with extended attributions in social and economic issues, went hand-in-hand with theories and governing tools, which were embodied at the same time by expert civil servants—the “technicians”—and a “place of veridiction” in which every dimension of this model could be verified.

The post-1800 changing nature of “experts” has been particularly well studied for France, which inherited from the Old Regime and revolutionary times a number of scientific institutions and engineering *Écoles*, whose *alumni* consistently served the French State, bridging the Bourbon monarchy to the Republic and the Empire. Recent research on French state institutions or urban administration has drawn attention to the various ways public authority was delegated to special committees when referring to technical consultations, thus creating a new category of civil servants. Joining Roy MacLeod in addressing the problem of administrative revolution in the Victorian era, historians have recently filled the gap in the political history of nineteenth-century France.¹¹ They have studied how various technical boards, in which the *ingénieurs des Corps* (Mines and Ponts-et-Chaussées) played a decisive role. These new administrative experts invaded the French administration: for instance, at the departmental level, *conseils de préfecture*, which dealt with local administrative litigation from Year VIII to 1926, devoted a substantial part of their activity to technical disputes.¹² Indeed, the extension of administrative attributions, partly delegated to “professionals” in the English sense of medical practitioners or engineers, rather

10. Foucault, “Leçon du 17 janvier 1979,” 38.

11. Moullier, “Le Ministère de l’Intérieur;” Karila-Cohen, “L’État des esprits.”

12. For instance, Baret-Bourgoin, *La ville et ses poisons*.

than the practical changes made the vacillating limits between science or technical know-how and decision-making more apparent, while it contributed to the development of new administrative discourse and know-how.¹³

Among these changes, the analysis of the emergence of administrative science in the eighteenth century has been re-enacted by European studies on cameralist science and resulted in reassessing the traditional distinction between scientists and political decision-makers. In German states, scholars have compared the growth of experts with the emerging “Öffentlichkeit,” the concept of “public opinion” developed by Jürgen Habermas.¹⁴ For France, the path-breaking works by Alain Desrosières and Éric Brian on the genesis of statistics and demography have shown how mathematical knowledge was developed in the service of the state, mediated through different social groups, including Academicians, but high-ranking civil servants also played a important role and either mutually reinforced their social positions or contested them.¹⁵ Arnault Skornicki has recently shown how a small group around the *Intendant* Vincent de Gournay defined state expertise for political economy, based on prescriptions deriving from the administrative experience within the *Bureau du commerce*, from British scholarship and from the publication of translations and pamphlets to secure the Gournay “clique” views.¹⁶ Forerunners of this advisory position in the eighteenth-century, French academies confirmed their particular function as state advisors after the Revolution and participated in the extension of the scope of state political issues, particularly with the institution of the Académie des Sciences Morales et Politiques.¹⁷ In this volume, Sayaka Oki clearly demonstrates how the Royal Academy of Science’s expertise shifted from the appraisal of inventions to advising the state on major social issues when it was required to give an opinion on the rebuilding of the Hôtel-Dieu hospital, under the influence of the government and opinion leaders, such as Dupont de Nemours. In her case

13. For Germany, see Szöllösi-Janze, “Die institutionelle Umgestaltung” and “Wissensgesellschaft;” Raphael, *Recht und Ordnung*.

14. Engstrom *et al.*, *Figurationen des Experten*; Audren *et al.*, *Les sciences camérales*.

15. Brian, *La mesure de l’État*; Desrosières, *La politique des grands nombres*.

16. Skornicki, “L’État, l’expert et le négociant.”

17. Delmas, *Instituer des savoirs d’État*.

study, the promoting of political economy and arithmetics for Parisian sanitation issues was seen by both the Ministers and the Academicians as an opportunity to support the decision and to foster their respective role as political leaders and state advisors.

Recent perspectives in political science have acknowledged the role of expert procedures and practices in the “making of politics” (*fabrique du politique*), as these procedures constituted “tools for governing and a way to legitimize political powers.”¹⁸ This perspective, which opens up issues drawn from various disciplines—sociology of professions, political anthropology and science studies—has been adopted for similar attempts in history of the law.

The Legal Perspective: Experts in the Courts

Research on the history of experts has recently been renewed by attention to expert witnessing practices in political and legal history. Ash, whom we mentioned earlier, has shown how expert opinion was used in trials where Queen Elisabeth’s monopoly on mines was under attack, thus making use of adversarial procedure for the construction of the early modern state.¹⁹ Expert witnessing as a historical issue in legal studies has been recently treated by Tal Golan, who has reassessed the role of expert witnesses in the British and American adversarial systems since the late eighteenth century.²⁰ He has portrayed the complex interactions between scientists and judges, heard either as the “only witnesses that can be called” on complex matters, such as the silting up of a Norwich harbour, or as evidence providers for adversarial parties. As a historian of science, he has met concerns shared by French and British jurists who have shown recent interest in experts as auxiliaries of justice.²¹

Early attempts to historically trace their importance are to be found in the history of medicine, with analyses of the medical practitioner in court.

18. Dumoulin *et al.*, *Le recours aux experts*, 9.

19. Ash, *Power, Knowledge and Expertise*, Chapter 1.

20. Golan, *Laws of Nature, Laws of Men*. See also Golan, “The History.”

21. Jones, *Expert Witnesses*; Leclerc, *Le juge et l’expert*.

In England, Catherine Crawford has paved the way for the eighteenth century with *Legal Medicine in History* (1996).²² Leaving aside narrow perspectives concerned with reassessing the profession of legal medicine, her research has engendered new prospects for the study of early modern European medicine.²³ Among the results of this historical reassessment is the insight that medical practices informed by legal procedures preceded the nineteenth century, in times and places when and where no formal treatise or regulation gave them a clear theoretical or legal framework.²⁴ They also involved many professions within medicine.²⁵

Historical studies help map the changing nature of the practices of these experts and expert witnesses in courtrooms. Most early-modern legal histories reveal the use of experts, particularly medical experts, even in areas where specific expertise as such was disputable. Indeed, both juries and judges relied on experienced people in technical fields in Europe, with varying legal status, ranging from witnesses to auxiliary legal officers, or even arbiters. In eighteenth-century London and Paris courts—as I show in my chapter on surgeons’ witnesses and experts—as well as other European courts, issues at stake in trials involving medical practitioners as witnesses changed over time. These depended on social interests, central regulations and local practices. Next to the laboratory, the courtroom thus proved to be a social space where science studies issues regarding knowledge-based authority and controversies were prevalent.

Historians of science have particularly stressed the nature of evidence, which determined the involvement of men of science in courtrooms, in order to assess the particular nature of scientists’ legal authority and confront it with the expanding presence of lawyers.²⁶ In Counter-Reformation Rome, the practice of calling experts into the courtroom on technical matters modelled on *consilium sapientes*, senior legal experts, had been widely acknowledged and paid for since medieval times. However, their judicial status remained a matter of controversy, as jurists and physicians

22. Clark & Crawford, *Legal Medicine*; see also Crawford, “The emergence.”

23. Fischer-Homberger, *Medizin*; Pastore, *Il Medico*; Barras & Porret, “Homo criminalis.”

24. Contrary to the opinion of e.g. Chauvaud, *Les Experts du crime*. See e. g. Brock & Crawford, “Forensic Medicine.”

25. Pastore, *Il Medico in tribunale*.

26. Shapiro, *Beyond Reasonable Doubt*; Golan, “The History.”

discussed the binding power of medical witnesses over the judge. Following jurist Giovanni Battista De Luca, De Renzi acknowledges a fundamental distinction between two categories of *periti* (experts): “those appointed to give testimony (*ad testificandum*) and those appointed to judge (*ad iudicandum*).”²⁷ The former were allowed to give testimony only on what they had experienced with their senses; the latter might use reasoning. “As to the *periti ad iudicandum* their status is similar to that of expert jurists giving a piece of advice, but De Luca’s discussion is convoluted and the figure of the *peritus ad iudicandum* oscillates between that of an impartial actor and that of a consultant of the parties.”²⁸ This analysis helps understand the ambiguous historical figure of the expert: a witness under oath, the legal expert vacillates between a mere witness whose testimony is one piece of evidence among others, and a professional whose authority is equal to the judge’s. Many legal texts, which continually objected to the powerful status of professional expert alongside the judge, may hint at the challenge experts offered to legal justice.

Cultural historians have discussed the role of medical professionals in the court rulings. This historical assessment of the experts’ influence on the outcome of trials until 1800 has had interesting results: for instance, medical practitioners may have played a major role in trials by introducing doubt as to the defendant’s culpability.²⁹ As far as the decisive importance of forensic alienists is concerned, opinions vary and help construct a subtle interpretation of what an “expert” was in the eyes of judges. Where Jan Goldstein has seen a token of “professional achievement,” resulting in the 1838 law and the creation of a national network of asylums, Marc Renneville has explained the alienists’ success by the particular efficiency of the new medical theories in maintaining social order and values, even if consensus was not always reached.³⁰ In this regard, close attention to actual legal practices moderate this judgment. Comparing local assize courts in Versailles and Rennes, Laurence Guignard has discussed the contrasting power of medical practitioners against that of judges in making legal decisions. She has concluded

27. De Renzi, “Witnesses of the Body,” 224.

28. *Ibid.*, 225.

29. Crawford, “The emergence,” Chapter 3.

30. Goldstein, *Console*; Renneville, *La médecine du crime*.

that magistrates used their authority to impose legal-medical expertise, to the great displeasure of alienists who could not control who gave expert opinions; in a way, from their authority derived that of expert opinion itself.³¹ Judges employed a variety of means for producing evidence—interviews, witness cross-examination—among which legal medical assessment reports were under the tight control of magistrates and were understood through the traditional judicial techniques in which the judges were experts.³² Legal medicine for the insane was thus a token of more general “professional achievement” for the medical practitioners, limited by recurrent cases through which jurists reinforced their authority, either in law or jurisprudence.

In another domain of justice, legal and social historians have raised other interesting issues. Robert Carvais, with his important study on the *Chambre des Bâtiments* (Paris Court of Building), has discussed the institutionalization of expert practices in surveying and masonry litigation, which found a specific autonomy in the seventeenth century and the development of academic and legal knowledge in this particular area of litigation.³³ This study helps reassess the unclear limits of legal and occupational litigations, as specifically addressed by the issue of arbitration, which can be defined as a form of a delegation of power by the judge to a specialist of the economic domain under litigation. In this case, the arbitrator was considered as a legal “expert.” Historically, in the French legal system, when occupational litigation was concerned, authority came not only from the legal power of the judge, but also from the order of the *métiers* and occupations. As far as work disputes were concerned, the authority of the arbitrator was delegated to the main representatives of the *métier*. In the eighteenth-century Paris court of Châtelet, or in consular jurisdiction, depending on occupations and cases, the arbitrator was either a sworn-master among his *métier* fellows, the head of the guild or an officer from the Court who had expertise in the litigated case.³⁴ Indeed, this arbitral authority of experts in the particular realms of manufacturing

31. Guignard, “L’expertise médico-légale,” 60.

32. *Ibid.*, 67. For detailed analysis of nineteenth-century French forensic alienism, see Guignard, “Juger la folie,” Chapter 9.

33. Carvais, “La Chambre des Bâtiments.”

34. Lafon, “L’arbitre;” Kessler, “From Virtue.”

seems to have persisted since the early modern period; consular jurisdictions were renamed Courts of Commerce (“*tribunaux de commerce*”) in 1790, while labor litigation which also made use of arbiters was dealt with elsewhere.³⁵ Claire Lemercier’s chapter in this volume opens up a new way of thinking about judges’ expertise and questions the complex nature of *arbitres* for trade litigation in nineteenth-century Paris. In this case, law history meets the sociology of professions.

The Professional as an Expert: Frameworks in Social Sciences for Expertise Studies

Expertise as competent knowledge was first considered by the sociology of professions. The first sociological theories were interested in the religious forms of modern society and the secularization process, of which the professions were a part. Émile Durkheim based modern societies on the professions at large. In the Preface to the second edition of *On the Division of Social Labor*, he argued that the professions ought to become the elementary framework of our modern societies, as systems of national corporations. Occupations—“*métiers*” or “*professions*” in French—would then substitute for the Church’s power over society. When Durkheim aimed at re-establishing the social bond in modern societies, occupations (*professions*) proved a good model as they disposed of powers and social coherence that were not solely derived from the secular or religious authorities. For American sociologists of professions, the powers of professions have been substantial since the end of the eighteenth century: some, which rendered a vital service to society that once belonged to the Church—lawyers, medical practitioners, etc.—constituted themselves in associations, demanding and gaining professional monopolies, and maintaining a certain degree of independence from the states.³⁶

Expertise generally considered as an attribute of occupations or professions proves to be a useful category for historical considerations on experts, with a view to the secularization process and to labor organization changes. These early foundations in the sociology of professions

35. On French justices of peace and labor arbitration, see Margairaz, “Entre conciliation.”

36. Carr-Saunders & Wilson, *The Professions*.

explain how the term “expert” has often—particularly in political science and science studies—been coupled with “layman,” the former having access to transcendence, thanks to specific knowledge or “expertise.” Political scientists have debated whether the evolution of the “layman” into a public services “user” did not participate in new secularisation processes. A series of arguments derives from the major changes that occurred in continental legal practices, where technical legislation proved sufficiently vague to allow judges to substitute for the lack of regulations or bills in the creation of standards. Thus, under the attacks of environmentalists, the authority of parliamentary institutions has been partly dissolved in favor of broader democracy.³⁷ This hypothesis is discussed in this volume by Cécile Cuny, who addresses the political issue of laymen representation in city council committees, and compares it to that of “notables” in eighteenth-century Paris consultation processes. She shows how contemporary public consultations, which socially disqualify the “laymen,” reject local knowledge which could be historically considered as consubstantial to the city government into the sphere of illegitimacy.

Expertise as an analytical category for political science has also been used as such by sociologists of professions, among which medicine enjoys a special status. Expertise as legally-assessed knowledge may therefore be understood as a natural category by the social group of medical practitioners that claimed a monopoly on medical practise and health issues. The first proposal to explain such a monopoly historically came from Eliot Freidson. According to him, medical practitioners had slowly developed the public’s medical knowledge and trust in their power of healing. In so doing, they constituted a clientele and aimed at market control. Freidson uncovered how apparent control mechanisms set on the profession, meant to establish the public’s confidence, were informally done by medical practitioners themselves, castigating deviant behaviours, networking clientele within the established group. Thanks to this particularly efficient strategy, they succeeded in gaining the leading position of “experts” in political decision-making bodies regarding sanitation, hospital administration, etc. In the case of medicine, there is a monopoly of knowledge and

37. Pollack, “La régulation technologique.” See also Maasen & Weingart, *The Democratization of Expertise*; Rosanvallon, *La Contre-démocratie*.

power by the medical practitioner, who has become influential in the politics of health. The medical model has helped sketch out a large social framework for experts and expertise, in which the historian must take into account the social and institutional definition of an expert group, its knowledge, its political and economical powers, and the particular practices by which they are enforced.

This model of professional expertise is particularly useful to reflect more widely on the historical evolution of labor organization. This dimension has been forcefully brought out by Andrew Abbott, who has noticed how the technical expertise of occupations has changed over time and how occupations have fought over what must be considered as their expertise. In *The System of Professions* (1988), he invites us to consider what fed this constant competition among occupations. “Jurisdictional boundaries,” he states, “are perpetually in dispute, both in local practices and in national claims. It is the history of jurisdictional disputes that is the real, determining history of the professions.”³⁸ He wished to solve the problem of the occupational group’s achievement in the permanent competition for legal recognition for expertise. He then invites historians to assess how the articulation of formal knowledge/ procedural practices proved superior at one time and helped shape the legal and professional power of professions. For instance, this model helped to rethink the growing role of legal medicine in justice and in the emergence of new disciplines—e. g. toxicology, scientific police—up to its institutionalization.³⁹ Indeed, the study of the historical dynamics of the professions will benefit from closer attention to the theory and know-how they used to maintain “legal jurisdiction.” In this volume, Rob Iliffe discusses the particular social positioning of expert mediators who operated in seventeenth-century London, between the Royal Society and the instrument makers, whose expertise was acknowledged in the worlds of mathematics, engineering, finance, and lecturing in experimental philosophy and partly characterised by their ability to move into these various social and urban spaces. From a different point of view, Stephen Sawyer argues that Paris mayors discussed the power of the Prefect of Paris—nominated by the national government—by challenging the body of specialized medical practitioners

38. Abbott, *The System of Professions*, 2.

39. Burney, *Bodies of Evidence*; Dumoulin, “La médecine légale;” Becker, *Verderbnis*.

the latter wished to create to certify death.

Indeed, expertise as an analytical category may be particularly helpful in shedding a new light on the history of guilds, as it has been recently reassessed for France.⁴⁰ For instance, guilds, which were in part defined by technical competence, also had *de facto* legal jurisdiction over an urban territory. Abbott's model may therefore help delineate how technical jurisdiction was enforced over members and non-members, and how the power of the guilds was maintained and developed in a larger political setting. In this respect, Robert Carvais's research on the Paris *Chambre des Bâtiments* has opened the way for historical research on surveying litigation.⁴¹ In this volume, Raphaël Morera takes up the challenge of studying the limits of the Parisian guilds' jurisdiction over the surveying of one major Henri IV's projects, the Briare Canal, and discusses its relationships with the King's determination to enforce economic policy.

New perspectives on the history of labor and professions and on legal and political studies of experts, as they are implied by considerations of expertise as technical skill or social jurisdiction, invite us to take technique, science and skill into account as social artefacts, in the footsteps of science studies.

From Adversarial Systems to Rational Domination: Epistemological Models of Expertise

Expert procedures have been of particular interest to historians and sociologists of science, because of the status of the implied knowledge and the complex social settings in which they are activated, far removed from controversies of "pure science." One of the first thought-provoking interdisciplinary attempts to discuss the cognitive status of expert procedures came from *La Terre outragée: les experts sont formels* (1992), in which philosophers, historians, sociologists, linguists and anthropologists dissected case studies on expertise within their own theoretical frameworks. This collection discussed in depth epistemological models that governed expert assessments and produced results which have since been enriched.

40. Kaplan & Minard, *La fin du corporatisme*.

41. Carvais, "La Chambre des bâtiments."

Among epistemological interpretations of expert procedures, the dialectical nature of expertise has been underlined by many scholars, who have detected, in adversarial procedures in Anglo-American law or in contradictory procedures in continental legal systems, a dialectical model based on Karl Popper's epistemology: scientific and expert knowledge is validated or true because it contains the conditions of its refutation. Recent research has emphasized the strength of this epistemological model. Law historians have argued that scientific and technical expert assessments in legal procedures scientifically guarantee judgements; as a counterpart, scientific and technical assessments have acknowledged the adversarial model of argumentation.⁴² Some historians went so far as to explain the legal role of experts by the very existence of the adversarial procedure, which emerged at the end of the eighteenth century in Britain. Tal Golan has argued that the expert witness was superseded at the turn of nineteenth century by a "distinct legal entity," a process which was obtained "indirectly by curtailing the privileges of all other sources of specialized information."⁴³ By requesting the support of technical experts, parties have delegated to these professionals the last word on the subject in question, which could only be discussed by experts whose authority was also indisputable.

Inasmuch as some argue that a Popperian ideal of knowledge govern expert legal procedures, one may wonder which epistemological models may apply to administrative expert appraisals, which do not formally acknowledge the adversarial procedure and could be more easily compared with the authority of revealed truth—and authoritative exercise of power. In this regard, it is crucial to reconsider the results science studies have had in examining the social construction of knowledge, in order to historically qualify science-conception prejudices. Historians have explored a number of issues which are of interest for this qualification of expertise, ranging from material considerations to social distinction.⁴⁴ Along these lines, historians have recently put emphasis on the historical construction of the legitimacy of science. After his monumental *Social History of Truth* in which he explored the social settings that gave

42. Dalbignat-Deharo, *Vérité scientifique*.

43. Golan, "The History," 10.

44. For a French survey, see Pestre, "Pour une histoire," and Martin, *Sociologie*.

Boyle's natural philosophy its legitimacy in the seventeenth century, Steven Shapin has explored the social foundations of public support for the medical practitioner George Cheyne and how he managed to earn the trust of his high-ranking patients with his dietetic prescriptions.⁴⁵ Other historians have stressed experts' proximity to power to understand their epistemological success: studies on eighteenth-century French academies have underlined that experts clearly supported the monarchy, the Republican state or the Napoleonic state in order to maintain or increase their social status.⁴⁶ These views may also help reconsider some battles that were fought in the eighteenth century between tradesmen and guild masters on the one hand and architects or natural philosophers on the other, over their respective expertise in courtrooms or in art.⁴⁷

Stepping aside from the issue of expert knowledge as "true" discourse, ethnomethodologists have fruitfully discussed its nature as "action." Firstly, they have argued that expertise is a bodily competence and offered to articulate the making of expert opinion to the issue of "tacit knowledge" that science sociologists have recently addressed.⁴⁸ In art history or the history of medicine, this perspective proved crucial for correct description of expert assessments in which the senses of the medical practitioner are involved and the "eye" of art *amateur* is necessary. In a similar perspective, as regard public procurement expert procedures, H el ene Lemesle shows in this volume how foremen of works were required not only to assess the work capacity of their firms thanks to an inspection of their premises but also to evaluate entrepreneurs' credit by means of intimate knowledge of neighborhood. Expert legitimacy, in this theoretical framework, consists in the bodily testing of knowledge gained from theory and experience. Other social scientists have paid attention to the particular formal dimension of expert assessments, with a view to the importance of the procedural nature of expertise.

Is there a net into which one can gather all these rich science studies perspectives for expertise studies? One of the more accomplished

45. Shapin, *A Social History of Truth* and "Trusting George Cheyne."

46. Denis, "Normandie;" Bret, *L' tat, l'arm e*; Alder, *Engineering the Revolution*. In this regard, against a depoliticized reading of expert procedures, see Sarfatti Larson, "The Production of Expertise" and "  propos."

47. Carvais, "La Chambre des b timents;" Golan, *Laws of nature*; Mont gre, "L'expertise."

48. Bessy & Chateauraynaud, *Experts et faussaires* and "Les ressorts de l'expertise."

sociological model of expert assessments is the “hybrid forum,” a concept by which Michel Callon and Arie Rip have proposed to define the “whole socio-technical system which creates the conditions of making consensus” on technical norms and decision-making.⁴⁹ Within this forum, they distinguish three centers: the scientific-technical center, where knowledge on nature or artefacts is determined; the socio-political and economic center, which is made up of “human actors, with a certain competence, characterised by projects, interests or expectations;” and the regulatory center, that of procedures and rules for experts’ work.⁵⁰ The Callon and Rip model of “hybrid forum” is conceived as a social space, in which the different actors of expert assessments interact, but also as a “performing” space, in the manner of an “act of speech,” where actors and their identities are determined, along with the technical issues, the nature of supporting evidence and the epistemological choices, and where, in short, technical society is created.⁵¹ Indeed, their model is an invitation to fully understand the complex issues at hand with expert procedures. Thus, historians must set themselves the task of analyzing concrete situations of expertise, in which actors may take on competing dimensions from the three “centers” Callon and Rip have distinguished and depict ideals of justice and truth as well as the social and political constraints that regulate these situations of expertise.

Another particularly fruitful modelling of expertise situations lies in Max Weber’s concept of “rational domination” as it has been exemplified by bureaucracy.⁵² In opposition to other types of domination, he proposed to consider the type of belief on which domination over human being is founded as “rational,” i.e. based on reason. In this sense, what characterises the modern state is its legitimacy principle, its “conformity to reason.” This model is particularly useful not to characterize Science and the State as different and separate instances, as state agents have a specific interest in formal rationalization, inasmuch as it protects them from arbitrary political power; and as science refers to a whole set of practices acknowledged as “scientific,” whose qualification as such is an essential issue.⁵³

49. Callon & Rip, “Humains, non-humains.”

50. *Ibid.*, 169.

51. *Ibid.*, 174–7.

52. Weber, “Bureaucracy.”

53. De l’Estoile, “Science de l’homme,” 296–9.

This concept has been useful in showing how academic knowledge have served as an example for colonial administrators, both in their instrumental dimension—identification and analysis knowledge production—and in the legitimating dimension within the administration.⁵⁴ “Bureaucracy benefits on the one hand from rationalization of knowledge instruments; on the other hand, from the guarantee of rationality which science provides. Besides these two dimensions of rational domination are not independent: The use of ‘rational’ instruments of science contributes to producing belief in the possibility of managing a complex reality, that would legitimate domination in the eyes of those who exert it.”⁵⁵ For instance, in the historical configuration of the inter-war period, the colonial state fostered the developing of a scientific approach to indigenous populations under the pressure of two social groups, sharing an interest in rationalization and indigenous expertise. “These shared interests supplied with the foundation of an alliance between those who promoted rationalization projects of colonial domination—projects which resulted in a redefinition of the civil servant as an “indigenous specialist”—and the scholars who depended on the colonial state for the existence of their institution and on its agents for data collecting. One can indeed analyze the relationship between colonial administration and ethnology, as it emerged during the institutionalization process, as a form of competitive interdependence between groups linked to the state, for which conditions were historically modified.”⁵⁶ Within this model of “rational domination,” the importance of communication and the protection of the state has been underlined by Max Weber, when he considered the specific power endowed by the Chinese Literati.⁵⁷ Weber’s model is therefore particularly useful in order to apprehend historical categories of science and legitimacy, as well as legal rationality, along with the actual instruments of rational domination.⁵⁸

In considering the problem of risk in modern societies, social scientists have discussed epistemological models of expertise and given

54. On governmental sciences since the nineteenth century, Ihl *et al.*, *Les sciences*; Collin & Horstmann, *Das Wissen des Staates*.

55. *Ibid.*, 318–9.

56. *Ibid.*, 319.

57. Weber, “The Chinese Literati.”

58. On the importance of communication for establishing rational domination, see e.g. Jas, *Au carrefour*, 122–3.

prescriptions of what expert procedures ought to be. Since “scientific knowledge holds that expertise is of value only insofar as it is joined to the extent which it articulated to a decision-making process and the value of expertise arises precisely through this connection with such articulation,” “real expertise,” according to Philippe Roqueplo, “supposes that a contentious confrontation be systematically managed in order to have, from the contention itself, the ‘scientific controversy’ it contains mapped out,” so that experts’ results be constructed in an acceptable way.⁵⁹ Similarly, sociologists Michel Callon and Yannick Barthe, with political scientist Pierre Lascoumes, have discussed the political problem of risk in contemporary societies and brought forth normative perspectives on what technical and scientific expertise ought to be, in the light of the crisis of scientific authority in modern democracies.⁶⁰ However disputable this analysis may be, it may open up perspectives in re-defining expertise and decision-making. Harry Collins and Robert Evans view the recent extension of the domain of technical decision-making as a political issue, as it has diluted the boundaries between experts and the public. They propose to give a better sociological description for expertise and science, in which political legitimacy would be taken into account.⁶¹

Studies of science have thus helped to reconsider the historical stance of expertise and legitimacy. They have also fostered a reassessment of the production of norms and standards in history.

The Normative Turn: From Economic Litigation to Art History

Recent research carried out on the late-nineteenth or early twentieth-century economic realms has shed light on the historical categories of legal “expert” and expert witnessing, as historians paid more attention to standards and regulations in which analogous forms of expert procedures were involved.

A key insight, which benefited from perspectives in economic sociology, came from research on the constitution of market norms, which

59. Roqueplo, “L’expertise,” 193 and 190. See also *Idem*, *Entre savoir et décision*.

60. Callon, Lascoumes & Barthe, *Agir*; see also “L’expertise scientifique.”

61. Collins & Evans, “The Third Wave.”

pointed out how experts and expertise were constantly adapted to new regulations and in turn, shaped the marketing of products.⁶² These studies redefined the category of “expertise” in delineating the rich social and political relationships involved in defining norms and economic regulations. Various industrial products have been studied from this standpoint, ranging from technical artifacts, drugs to food products. The Industrial Revolution has been revised by analyzing the very different systems of invention approval or patenting.⁶³ However, the subject of patenting inventions is not foreign to the administrative government of innovations, especially when inventors used public opinion’s appraisal as a mode of recognition: following this thread, Marie Thébaud-Sorger shows how the management of chemical inventions among inventors, Academies, municipal government and central administration led to the invention of renovated modes of administration in late eighteenth-century France, as well as it strengthened the new chemical knowledge promoted by Academicians, such as Lavoisier. Drug regulation also proved a stimulating way of thinking about interactions between production, chemical analysis, clinical trials and the state. In the *longue durée*, the history of French pharmacy regulation between the eighteenth and the nineteenth centuries, which evolved from a royal monopoly given to apothecaries and which forbade the manufacturing “secret remedies” down to setting drug marketing approval procedures, helps conceive complex and antagonistic social and economic structures in which firms, pharmacists, medical practitioners and patients—the latter being more difficult to document—played a role in defining “sanitary security” norms, which were then endowed by the state in its administrative, police and justice functions.⁶⁴

Economic historians have thus distinguished two types of expert advice in the constitution of market norms. First, historians have studied expert committees that have helped government or parliament define market laws or economic policies.⁶⁵ They have discovered that lobbies played on their expert status in order to get political representation which was theoretic-

62. Swedberg, *Principles of Economic Sociology*.

63. MacLeod, *Inventing the Industrial Revolution*; Hilaire-Pérez, *L'invention technique*.

64. Chauveau, “Genèse.” For a comparison with the British Isles marketing of drugs, Andreas-Holger, *Drugs on Trial*.

65. Only early cases regarding consultative assemblies on food, see Ferrières, *Histoire des peurs*.

cally denied to them. This issue has been explored for the Paris Chambre de Commerce in the nineteenth century, the Conseil Économique after 1914, and consumer associations in modern times.⁶⁶ In this volume, Alain Chatriot defines how the Conseil Économique founded its legitimacy by proffering “neutral” expert advice on debated social and economic issues. Recent research has assessed the role of inspection for trade regulation; its importance in France can be related to that of trade litigation, which employed similar practices in expert procedures.⁶⁷

Historians have also paid attention to technical expert procedures concerning product processes. In the last chapters of his *Histoire de la qualité alimentaire, France, XIX^e-XX^e siècles*, Alessandro Stanziani has remarkably shown how “applications of food standards bring to light the behaviors and perceptions of the actors, the close interlocking of legal regulations and economic action. The latter—calculation, anticipation, decision—never occurred in a institutional vacuum.”⁶⁸ On the contrary, they depended closely upon available know-how, the institutional framework, relationships between public administrations—justice, customs—and local authorities, customers and manufacturers’ expectations. For the later nineteenth-century food industry, Stanziani has used the concept of the “legal construction of the market” and thus acknowledged the importance of ex-ante and ex-post expert processes in defining standards.⁶⁹ In this volume, Alessandro Stanziani and Peter Atkins discuss in depth how laboratory expertise with regard to food products succeed quite differently in Paris and London and explore the various contexts—administrative, economic, legal, chemical—of these growing differences.

Among the particular issues discussed in this normative turn, the problem of defining expertise and value has been shared by the history and sociology of art, which has been enriched by perspectives from anthropology and the history of science.⁷⁰ In this process, the role of experts, acknowledged more for their expertise on attribution and authentication,

66. Lemercier, *Un si discret pouvoir*; Chatriot, *La démocratie sociale*; Chatriot et al., *The Expert Consumer*.

67. Minard, *La Fortune du colbertisme*.

68. Stanziani, *Histoire de la qualité alimentaire*, 415.

69. On standards’ definition, see Bourdieu et al., *Nomenclatures*.

70. See e.g. on mathematicians expert advising on architecture, see Dubourg-Glatigny & Leblanc, “Architecture.”

has proved crucial. In particular, a recent study by Gilles Montègre has shown how Rome, which attracted artists and antique *amateurs*, also welcomed mineralogists who offered new methods for authenticating ancient statues. This expert opinion, which confronted that of traditional experts, merchants and artisans who worked the marble, was circulated within cosmopolitan Roman social life and found a new audience among antiquarians, who in turn offered a new interpretation of art history.⁷¹ Mineralogist criteria, which determined new ideas on the copying of antique statues and scale of value, no longer based on age but on perfected style, were recognized as such first by the circulation of information among local centers of power, and then by political authority derived from Napoleonic translations of art work from Rome to Paris. In this volume, Charlotte Guichard discusses a similar problem for graphic art, revealing a new form of artistic expertise derived from the development of a specific book culture, the privileged access to art works in private collections, and the modification of procedures, from appraisal to authentication.

If expert procedure studies have been instrumental in renewing perspectives in political, economic and art history, expertise has also been elaborated as concept in sociology of professions and history of science, which in turn can be useful for historians.

Experts and Powers in Capital Cities

In order to articulate the issues we had identified, *Fields of Expertise* chose to focus on two capital cities: Paris and London. Capital cities represent urban spaces with peculiar characteristics in terms of population, economic market and cultural activity, because of their scale and their historical dynamics. In this regard, Paris and London have followed a similar path since the seventeenth century, and added to urban planning issues, those of cultural and political competition at the international level. Indeed, these two cities proved to be interesting laboratories for expertise studies.

Fields of Expertise offers a survey of these various issues based on detailed case studies. In the first part, authors have discussed the social status

71. Montègre, "L'expertise artistique."

and positions of experts. Cécile CUNY compares citizen consultations in early modern Paris and modern Berlin and discusses the categories of “notables” and “laymen” as they have been used to qualify citizens armed with local knowledge and maps out the social and political determinations of experts in local assemblies. Rob ILIFFE shows how expert mediators proved crucial in promoting theoretical science in instrument-making in seventeenth-century London, which benefited from its large market for precision instruments, as well as scientists and strong guilds. I throw light on the surgical profession in Paris and London courtrooms between 1760 and 1790: I discuss legal frameworks and jurisdictional conflicts in which medical practitioners operated in order to understand how expert witnessing was shared among different medical occupations and how the surgeons’ expertise was quite unchallenged in the late eighteenth century. Claire LEMERCIER opens up the issue of trade arbitration in nineteenth-century Paris at a time when the Court of Commerce experimented with ways of obtaining technical advice on complex procedures, among which the experiment of collective expert arbitrator proved a success, and thus modelled the new trade legal system fostered in the nineteenth century Paris.

In the second part, the authors focus on specific situations of expert assessment procedures, which range from expert reporting at the request of public administrations to art work authentication. Sayaka OKI, with the subject of the rebuilding of the Paris Hôtel-Dieu, analyzes how a public health issue was referred to the Académie royale des Sciences, allowing it to widen the scope of its state-advisory action at the national level. Charlotte GUICHARD points out the changing artistic expertise at the end of the eighteenth century in Paris and London in an art world evolving from *amateurs’ milieu* to the art market: experts developed specific knowledge based on a specific book knowledge dealing with lives of artists and art treatises and also on personal experience of art works, acquired through specific social spaces, in art collections and Academies. Hélène LEMESLE’s study of firm selection for public procurement by the late nineteenth-century Paris municipality helps unravel the two-tiered system of expert evaluation, between foremen of works of the Ponts et Chaussées Department, in charge of evaluating the firms’ managers, and the town councillors who devised the criteria to select them. In the interwar period,

Alain CHATRIOT shows how the French National Economic Council constructed its legitimacy as an expert body over social and economic issues: at the core of the legitimacy of the Conseil Économique lay the genuine representation of the social and economical forces of the country.

In the third part, the authors explore the theme of expert procedures as instruments for city government. Raphaël MORERA discusses the management of the Briare Canal project in the early seventeenth century to show how traditional surveying by masons' guilds was used by the central state to carry out an ambitious public works policy—or abandon it. Marie THÉBAUD-SORGER shows that eighteenth-century chemical inventions implied specific management by local and central administrations, a development that bolstered the advisory role of the Académie des sciences as well as it fostered new chemical theories. Stephen W. SAWYER discusses how the issue of certifying deaths was seized by the Paris mayors to challenge the powers of the Prefect, a representative of the central state. Peter ATKINS and Alessandro STANZIANI contrast the issue of food testing in Paris and London between 1870 and 1914: paying close attention to procedures which were hotly debated among tradesmen, scientists and civil servants, they explain how food adulteration became a political issue for municipalities and modern states.

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