

# Fields of Expertise



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

Edited by

Christelle Rabier



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The project could not have come into being without the financial support of the Maison Française d’Oxford, the Ville de Paris and the CNRS (UMR 8560 centre Alexandre-Koyré/CRHST). I wish to express my warmest thanks to the Médiathèque d’histoire de sciences (Cité des Sciences et de l’Industrie) for its scholarly help in acquiring many European books on the history of expertise which could not be found elsewhere in Paris. Thanks are due to the Cité des sciences et de l’Industrie and the École des Hautes Études en Sciences Sociales, which have hosted preparatory meetings, and to Stéphane Pouyllau and Delphine Usal, for their help with technical matters.

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We have usually kept the original French in italics, providing, at times an appropriate translation for the first occurrence.

## FOREWORD

### EXPERTISE IN CAPITAL CITIES

Stéphane Van Damme

*Fields of Expertise* is the result of an important workshop held at the Maison Française in October 2005. It was conceived as part of a Centre National de la Recherche Scientifique (CNRS) Research Program on “Sciences and Europeans capitals,” in collaboration with the University of Oxford and several other institutional partners in Britain. In the globalized world of today, the metropolis and the capital city offer privileged sites of observation for understanding the intellectual and political meanings associated with the place and the centrality of science in the shaping of modernity.<sup>1</sup>

Addressing the question of the urban context in the history of science is hardly new, but it leads today to the definition of an urban history of science which is epitomised by a new way of considering the production and circulation of science.<sup>2</sup> Metropolitan circulation has long fed the history of science, the cultural history of capital cities and also social studies of science.<sup>3</sup> Recent works in cultural anthropology have put the theme of circulation and mobility back onto the agenda of the history of science as a new paradigm for a possible multi-sited ethnography of the scientific world.<sup>4</sup> By focusing on the circulation of objects, groups, metaphors and individuals, cultural anthropology helped question the monographic

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1. For this interpretation in urban studies, see the emblematic books of Harvey, *The Urbanization of Capital* and Sassen, *The Global City*.

2. Dierig *et al.*, “Science and the City.”

3. Livingstone, *Putting Science in its Place*; for recent assessment of capital cities’ cultural history issues, Charle & Roche, *Capitales culturelles*.

4. Clifford, *Routes. Travel and Translation*.

framework, as well as static and institutional approaches. It has promoted new methodological tools to trace the multiple sites where scientific activities or groups could have been established.<sup>5</sup> On the cultural history side, historians have paid attention to different cultures of mobility in Europe, opening up perspectives beyond the study of specific practices of great travelling scholars. In the case of scientists, philosophers and professors, many studies have revealed a wide range of long-distance practices of circulation which have included alongside the *perigrinatio academica*, the “grand tour” and scientific expeditions. Against the perspective of the history of ideas of a seamless “European Scientific Revolution,” social studies of science have considered urban circulation as a site of knowledge construction like a strategic angle that opens crucial perspectives and makes it possible to understand the universalization of scientific knowledge. Turning away from the explanations in terms of center and periphery, they suggested focusing attention on the urban space through the circulation of materials, artifacts, and texts, through the trajectory of “immutable mobile inscriptions.”

The circulation of knowledge thesis transforms the universalization of science into a succession of local negotiations, and depicts all scientific knowledge as situated knowledge. Hence, one has to take seriously practices of appropriation, accommodation and negotiation as opposed to practices of vertical diffusion. By adopting a “cultural geography of science,” we have to examine closely the localizing strategies that question scientific practices, and the making of a new metropolitan identity based on the development of modern science within the major capital cities.<sup>6</sup> If in modern science learned networks seem to be increasingly less linked to or dependent on a local culture, in the early modern period, conversely, mobility does not oppose identity. What is the role played by locality or localism, local culture in the making of a scientific agenda? How is one to understand in these metropolitan contexts the mobilization of science that the labels of “Paris Science” and “London Science” expressed? As David Livingstone pointed out, “the place-name adjectives in these designations attest to scientific practices that were

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5. Marcus, “Ethnography in/of the world system.” See in cultural history, the appraisal made by Bonnell & Hunt, *Beyond the Cultural Turn*.

6. Clifford, *Routes*, 245; Martin, “Anthropology and Cultural Study of Science.”

constituted in different ways by different urban cultures.<sup>77</sup> From the anthropology of science, historians have learned that the territory of modern science could be depicted as a network form and have offered to trace the peregrinations of all kinds between field and laboratory.<sup>8</sup> The movement of instruments is the most beautiful metaphor or image of this kind of network.<sup>9</sup> However, in the urban context, cultures of scientific mobility have not only been affected by the local environment, they also had an effect on it. Circulation of knowledge is a way of building space and territory, but also of gaining political representation, intellectual identity and global recognition.<sup>10</sup>

This collective enquiry lies at the intersection of these recent historiographical developments and understandings. It is an attempt to re-examine the nature of scientific circulation found in the metropolitan context from the Renaissance to the modern period. These urban practices of sciences grew in the wake of the emergence of global cities in Europe, which transformed the urban space into a field and object of investigation, invented a new relationship with the city and produced multiple representations.

The reflections defined by Christelle Rabier and her research team therefore scrutinize the relationships between knowledge and the metropolis in Europe in the early modern period, at an age when capital cities were also centers of knowledge. The research project seeks to investigate the connection between the world of learning and scholars on the one hand and the emergence of urban identities in Europe on the other. Broadly speaking, what the program has set out to do was to grasp how knowledge shaped the making of the great cultural metropolises. Methodologically, it is an attempt to bring into contact the history of science with urban history under an interdisciplinary gaze. In order to envisage the complexity of these relations from the Renaissance to the nineteenth century, three themes organized the reflections.

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7. Livingstone, *Putting Science in its Place*, 108.

8. Latour & Woolgar, *Laboratory Life*. For historical uses, see the remarkable analysis of Raj, *Relocating Modern Science*.

9. Bourguet *et al.*, *Instruments, Travel and Science*.

10. Ophir & Shapin, "The Place of Knowledge;" Shapin, "Placing the View."

*Territory of sciences.* The first one considers the physical presence of science within the urban space. The aim is not only to produce a map of intellectual networks within the city and locate scientific institutions or places of knowledge, but also to open up onto other perspectives. The research team is aware of the difficulties of considering capital cities like other metropolises.<sup>11</sup> The political dimension imposed by court society and bureaucracy needs to be taken into account. But this circulation was neither fluid nor easy during the Old Regime. By focusing on the implementation of modern science, one can understand the obstacles put forward to delineate the emergent metropolitan order of knowledge in terms of policing, censorship and regulation.

*Capitalization of knowledge.* Secondly, the study of capital cities fostered new attention on material culture and the practices of accumulation and capitalization of knowledge that characterized both the growth of urban populations and the emergence of metropolitan cultures in the major capital cities. In order to identify the consumption of science in the metropolitan context, the inventory of shops specialized in the sale of instruments or natural specimens was envisaged. Similarly, the various practices of centralization and storage of knowledge, which became crucial with the growth of colonial empires, was examined. Scholars have shown how capital cities like Rome, Paris, London, or Amsterdam became warehouses of natural specimens.<sup>12</sup> Moreover, techniques of conservation and strategies of collection and gathering allowed capital cities to redistribute goods and information, creating their own networks and establishing their centrality by means of monopolizing first-hand information.

*Assessing knowledge. Public sphere of science and capitals.* The third theme concerns the making of the so-called “public sphere” of sciences within capital cities and questions the Habermasian definition of the public sphere in this context. The multiplication of affairs and polemics about new knowledge and modern sciences in the major capitals gave new functions to central scientific institutions to judge and define good science. This judicial function of scientific institutions articulated the reshaping of science and the reframing of the metropolis by providing experts with

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11. On this point, see Sawyer, “Locating Paris.”

12. Boutier *et al.*, *Naples, Rome, Florence*.

new issues—water supply, bridges and roads, etc. This production of norms in an age of uncertainty and rapid changes in the architecture of knowledge allowed the development of field of scientific activity that can be characterized as “expertise,” even if the word is unknown in the early modern period.

This book is therefore original in its conception because it is based on historiographical experimentation with regards to an emergent space and culture—the metropolis—and because it attempts to understand the many historical assumptions on which scientific expertise is based. It does not take for granted the activity of expertise in a too anachronistic or retrospective manner, but seeks to follow the construction and the negotiation of expertise in action within the framework of different types of fieldwork in which “expertise” took shape between the Old Regime and the modern period. The perception of *longue durée* is a very helpful foundation for an historical interpretation of these practices that could seem atemporal. It is also helpful in avoiding the presentism that sometimes threatens science studies today. By articulating these two constraints, a new field of social and professional practices and a very localized observation rooted within the capital city, the book is a good example of an urban history of science committed to connecting local context with general issues by tracing the circulation of actors, artifacts and knowledge.

Four threads organize this collection of essays.

*Contextualizing expertise in an urban framework.* The starting point was to understand a long-term history of expertise, encompassing more than the contemporary period. First, the articles avoided a narrow disciplinary approach, that tends to inscribe the questions within the sole process of professionalization, concerning legal and medical practitioners and engineers.<sup>13</sup> Secondly, the investigators felt the necessity to go beyond the opposition between “pure science” and “applied science”, a category into which the knowledge of expertise was classified. The regime of knowledge of expertise is so strongly dependant on institutions or urban power. Expertise is not a fact, but a product and process. Expertise has a texture and, in the end, it could produce a shift in the boundaries of sciences and disciplines themselves. Therefore, the book opens large avenues of

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13. For fascist Milan, see also Ingold, *Négociier la ville*, Chapter 9.

research and questions. To what extent did situations of expertise produce a formalization of knowledge? To what extent did they lead to a redefinition of the world of scholars? Many chapters encourage a more complex vision of the world of experts and choose to highlight the overlapping between these two spheres of competences and practices, rather than their separation.

*Expert capitals.* The second thread lies in the metropolitan dimension of expertise. Related to our understanding of sciences and capitals, the workshop invited scholars to investigate the role of capitals as tribunals of knowledge. Authors have subsequently paid attention to the process of recognition of knowledge that could play at a local or international level. Capitals are used as a scene of production of norms and universal judgment. Indeed these representations are not stable but are part of a conflicting process and a competition between capital cities. The metaphor of the “courtroom” (*tribunal*) is very often used by scientists or natural philosophers to discredit institutions or, on the contrary, to legitimate them.

*Expertise in the metropolis.* The third thread considers the question of the expert fieldwork within the capital. The global city became the theater of technical expertise through the emergence of the metropolitan agenda: demographic and urban problems, sanitary issues, etc.<sup>14</sup> The Metropolis became an object of scientific investigation. Indeed, urban bodies fostered local expertise on urban planning projects, problems of public water systems, hospital construction and so on. On the other hand, the way in which international judgments and assessments are made in the world of science required analysis.

*Politics of expertise.* Finally, the book seeks to confront another difficulty, the strict opposition between the sphere of expertise and the urban political sphere. *Fields of Expertise* provides an important contribution to the study of the instrumentalization of knowledge by local powers. Obviously, the capital’s scale is not neutral but rather imposes a set of questions about the political centrality of the forms of judgment produced by expertise. In this domain, the dramatic dimensions of expert procedures, which are evidenced by the rhetoric used by experts, must be highlighted in a few public stages—*ad hoc* commissions, academies, courtrooms.

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14. Dierig, *et al.*, “Science and the City,” 6–10; Stewart, *The Rise of Public Science*.

With this collective book, the reader is invited to reflect on the growing acceptance of experts in such arenas as linked to a form of politicization of scientific spheres.

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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.<sup>1</sup> 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 “*expertus*,” 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-

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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 Lemerrier, 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 “*tecnici*” (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.<sup>2</sup> 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.”<sup>3</sup>

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

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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.<sup>4</sup>

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.<sup>5</sup> 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

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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, *Négociier 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.<sup>6</sup> 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.<sup>7</sup> 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

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6. For general perspectives on expertise in political science, see Lascoumes, *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.<sup>8</sup> 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.”<sup>9</sup> 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

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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.”<sup>10</sup> 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.<sup>11</sup> 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.<sup>12</sup> Indeed, the extension of administrative attributions, partly delegated to “professionals” in the English sense of medical practitioners or engineers, rather

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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.<sup>13</sup>

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.<sup>14</sup> 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 an important role and either mutually reinforced their social positions or contested them.<sup>15</sup> 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.<sup>16</sup> 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.<sup>17</sup> 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

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13. For Germany, see Szöllösi-Janze, “Die institutionelle Umgestaltung” and “Wissengesellschaft;” 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.”<sup>18</sup> 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.<sup>19</sup> 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.<sup>20</sup> 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.<sup>21</sup>

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

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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).<sup>22</sup> 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.<sup>23</sup> 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.<sup>24</sup> They also involved many professions within medicine.<sup>25</sup>

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.<sup>26</sup> 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

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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*).”<sup>27</sup> 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.”<sup>28</sup> 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.<sup>29</sup> 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.<sup>30</sup> In this regard, close attention to actual legal practices moderate this judgement. 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.<sup>31</sup> 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.<sup>32</sup> 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.<sup>33</sup> 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.<sup>34</sup> Indeed, this arbitral authority of experts in the particular realms of manufacturing

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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.<sup>35</sup> 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.<sup>36</sup>

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

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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.<sup>37</sup> 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

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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.”<sup>38</sup> 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.<sup>39</sup> 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

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

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