

A note on Gilles Filleau des Billettes

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Corrections

None.

This note provides biographical details of Gilles Filleau des Billettes (1634–1720), one of a group of ‘technicians’ recruited to work on the project for an encyclopedic ‘description of trades’ (*Description des arts et métiers*), carried out under the direction of the Académie royale des Sciences in Paris. A brief account of this work, and Des Billettes’s part in it, is also given, which includes references to his text on stencilling that is transcribed and translated elsewhere in this volume. Additional remarks describe the fate of the project in the later eighteenth century.

Gilles Filleau des Billettes, the compiler of the text on stencilling that is transcribed and translated in this volume of *Typography papers* (see pp. 66–86), was born at Poitiers in 1634, the youngest of the three sons of Nicolas Filleau of Orleans and Françoise Belliard from a family of the region of Poitou. As Catholics, the family of Nicolas Filleau had moved to Poitou from Orleans in order to evade what they perceived as its prevailing Calvinist tendency. The title ‘Des Billettes’ derived from an estate in Poitou of which Gilles Filleau became the proprietor in 1659. In 1660 he married Françoise Sicard, the daughter of a landowner.¹

Gilles Filleau des Billettes was devoutly Catholic. He was also influenced by the contemporary spirit of scientific enquiry and he counted Pascal, and later Leibniz, among his acquaintances and correspondents. In 1657 Cyrano de Bergerac is reported to have said of the young man, ‘Monsieur des Billettes at twenty-three knows everything that others boast of knowing at fifty’.²

An account of the local family of Roannez³ contains this appreciation of Des Billettes:

His natural cheerfulness, conversation that was as pleasant as it was informative, gained him the respect and affection of many friends, notably that of Leibniz, who often saw him during his stay in Paris from 1672 to 1676. And yet his letters show a figure who seems embarrassed by the admiration of which he felt himself unworthy. The frankness and honesty with which he expresses his incompetence led Leibniz to reproach him with neglecting much invaluable information which might have been of value to the public.⁴

In his obituary *éloge* of Des Billettes, written for the Academy of Sciences, Fontenelle has this passage:

1. ‘Le 31 janvier 1659 il est à Poitiers. Il se qualifie d’écuyer, sieur des Billettes de Ribouard, nom d’une métairie située dans la paroisse de Cissé, au nord-ouest de Poitiers, où les Filleau possédaient quelques terres, outre leurs principaux domaines de la région de Saint-Martin-la-Rivière. Par cet acte du 31 janvier, il achète, dans la paroisse même de Saint-Martin, une métairie appelée Le Censif. Les 23 et 27 mars suivants, il demeure encore à Poitiers et continue certainement à y résider jusqu’à son mariage, dont le contrat fut passé le 19 avril 1660. Il se disait alors seigneur des Billettes et de Bois-Clerbault: le fief de Bois-Clerbault,

situé dans la paroisse de Saint-Pierre-les-Églises, appartenait à l’ensemble des domaines de la famille dans la vallée de la Vienne. Des Billettes épousait Françoise Sicard, fille de Claude, écuyer, sieur de Laudraire.’ Mesnard (1965), p. 682.

2. ‘Monsieur des Billettes qui n’ignore rien à 23 ans de ce que les autres font gloire de sçavoir à cinquante.’ *Histoire comique . . . contenant les Etats et Empires de la Lune* (1657), cited by Mesnard (1965), p. 682.

3. Artus Gouffier, Duc de Roannez (1627–1696) was Governor of Poitou during the ministry of Mazarin, and a close friend of Blaise Pascal.

4. ‘Plein de gaieté naturelle, d’une conversation aussi agréable qu’instructive, Des Billettes avait gagné l’estime et l’affection de nombreux amis: notamment de Leibniz, qui le vit souvent pendant son séjour à Paris de 1672 à 1676. Pourtant ses lettres le montrent comme embarrassé d’une admiration dont il se sentait profondément indigne. C’est avec naturel et sève qu’il affirme constamment une incompétence dont il était si bien convaincu que Leibniz put lui reprocher de laisser perdre par un excès de modestie . . . une infinité de belles connaissances, qui pourroient être utiles au Public.’ Mesnard (1965), p. 686.

5. 'Surtout il possédait le détail des arts, ce prodigieux nombre d'industries singulières inconnues à tous ceux qui ne les exercent pas, nullement observées par ceux qui les exercent, négligées par les savans les plus universels, qui ne savent pas même qu'il y ait là à apprendre pour eux, et cependant merveilleuses et ravissantes, dès qu'elles sont vues avec des yeux éclairés.' Fontenelle (1720).

6. Jérôme Phélypeaux de Pontchartrain (1643–1727), Comte de Pontchartrain, Chancellor of France 1699–1714. Jean-Paul Bignon, son of a favourite sister, became responsible for the Royal Academies, and later for the Royal Library. His advancement within the church was hindered by the worldly characteristics recorded by the Duc de Saint-Simon: 'C'était ce qui, véritablement et en bonne part, se pouvait appeler un bon esprit, très savant, et qui avait prêché avec beaucoup d'applaudissements; mais sa vie avait si peu répondu à sa doctrine, qu'il n'osait plus se montrer en chaire, et que le Roi se repentait des bénéfices qu'il lui avait donnés. Que faire donc d'un prêtre à qui ses mœurs ont ôté toute espérance de l'épiscopat? Cette place de conseiller d'État d'Église parut tout propre à l'en consoler et à le réhabiliter dans le monde en lui donnant un état. . . . Son oncle le mit dans des bureaux en attendant qu'il lui en pût donner, et à la tête de toutes les Académies.' Saint-Simon (1983), vol. 1, p. 817.

7. Académie royale des Sciences, 'séance du 19 juin 1675 où Claude Perrault lit, de la part de Colbert, un ordre du Roy, enjoignant d'examiner les moyens de faire un traité de mécanique, avec une description exacte de toutes les machines utiles à tous les arts et métiers dont on se sert à présent en France et dans toute l'Europe.' Salomon-Bayet (1969), p. 234, n. 1.

8. 'Monsieur Jaugeon . . . a donné la Description d'un Mortier de bronze qu'il a imaginé, qu'un homme peut porter avec son affust et sa charge, qui peut être pointé sans aucun instrument de Mathématique, qui jette à la fois une douzaine de Grenades à quatre cens pas, et auquel on ne met le feu qu'en un temps. L'épreuve en a été faite, il y a déjà plusieurs années, par ordre du Roy, et en présence de feu M. de Louvois, et ce Mortier fut mis dans le Magazine de Brest.' *Histoire de l'Académie royale des Sciences*, 1699.

9. The pioneering study is Jammes (1961). See also Mosley (1997), (2002) and (2008).

10. A manuscript list, cited by Jammes (1961), is in the Bibliothèque nationale de France, Paris, MS nouv. acq. fr. 5148, ff. 19–86. There are printed accounts in the published volumes of the *Histoire de l'Académie royale des Sciences*, and a summary appears in Lalande's preface to his text *L'art du tanneur* (1764).

11. MS 2741. 'Description et Perfection

Above all, he was perfectly informed about the details of the innumerable trades that are unknown to those who do not practise them, are never described by those who do, and are ignored by the learned, who do not realise that they offer a field of study that is extraordinary and fascinating when it is approached with open eyes.⁵

In 1692 Des Billettes was one of the group of 'technicians' (*technologues*) who were recruited to work under the chairmanship of Jean-Paul Bignon (1662–1743), nephew of the Comte de Pontchartrain,⁶ to realise the project for an encyclopedic 'description of trades' (*Description des arts et métiers*) that had originated in 1675 during the administration of Colbert.⁷ The others were Sébastien Truchet (1657–1729), born in Lyon, a member of the Carmelite order who was a mathematician and a hydraulic engineer, and Jacques Jaugeon (c. 1655–1724), who had been responsible for the design and making of several things, including a portable launching device for mortar bombs.⁸

The 'commission Bignon' (a term suggested by André Jammes in 1961 as more appropriate than the 'commission Jaugeon' that had been more commonly used) began its work in 1693, first examining printing and the alphabet, as 'the art which preserves the arts'. In 1694 a decision was taken by Pontchartrain to initiate another project of which the idea dated from the time of Colbert, namely the making of a printed volume recording the series of medals that had been struck in order to commemorate events that had taken place during the reign of Louis XIV, including naval and terrestrial battles and conquests, but also civil events, such as the founding in Paris in 1666 of the Académie royale des Sciences. The current work of the commission was interrupted in order for it to concentrate on a practical task, namely the design of a new alphabet and the making of a new printing type based on it for use at the Imprimerie royale. The new type, which became known as the *romain du roi* (in distinction from the *grec du roi*, the Greek type that had been made by Claude Garamont for François I in 1540), was begun in 1696 and it was used for the first time in the folio volume, *Médailles sur les principaux événements du règne de Louis le Grand* (1702).⁹

Des Billettes and Jaugeon are named among those who gave addresses during the first years of the eighteenth century to members of the Academy of Sciences in Paris.¹⁰ Jaugeon compiled a volume giving an account of alphabets for many scripts, schemes for the geometrical design of letters, and an account of the cutting of punches and the casting of type, and of typographical printing and bookbinding. His manuscript, dated 1704, is in the library of the Institut de France.¹¹ Series of plates were engraved, beginning

Des Arts-et-Mestiers. Des Arts. De Construire Les Caracteres. De Grauer Les Poinçons de Lettres. D'Imprimer Les Lettres. et De Relier Les Livres. Tome Premier. Par Monsieur Jaugeon De L'Academie Royale Des Sciences. M.v.cc.liii., a small folio of 424 pages. A later handwritten text in two volumes, containing a larger number of the original plates engraved for the 'Description des Arts et Métiers', is MS fr. 9157 and 9158

of the Bibliothèque nationale de France. It appears to be copied from the earlier text, the orthography of which it partially modernizes but the text is defective in some places. It is also less legible. There is a preliminary draft manuscript of the section on typefounding at the Newberry Library, Chicago. I have transcribed the parts of this text relating to punchcutting and typefounding, with a view to preparing a text for publication.

in 1694, relating to the topics discussed by the technicians, many of them by Louis Simonneau, who was also responsible for the decorative engraved borders to the designs of Berain that are on each page of the *Médailles*.¹²

Meanwhile Des Billettes began to draft his own account of typographical printing, a text which is incomplete and of which the exact date of writing is not known. It is fuller than the account given by Jaugeon, and quite independent in its composition. He added a description of other methods of printing: etching and engraving with the burin on copper, and also mezzotint, and printing from plates, wood engraving.¹³ In 1704 he is recorded as addressing the Academy of Sciences on stencilling.¹⁴ Much of the extensive theoretical work of Des Billettes remains unpublished among the records of the Academy of Sciences, and it is chiefly known from summaries published by Claire Salomon-Bayet. It includes some measured sketches of printing presses, and some wide-ranging general overviews of different fields of technology. In the words of Des Billettes himself, cited by Salomon-Bayet, 'Un traité des arts très exacts [*sic*] serait presque une espèce d'Encyclopédie'.¹⁵ More plates were engraved, some of those for the text on typefounding being signed by Rochefort in 1719, and editorial responsibility for the project passed to Réaumur,¹⁶ but the work appears to have lost momentum as he became more concerned with natural history.

The descriptions were not printed, but kept in order to make a collection in a methodical order, and they remained as manuscripts in the store of the Academy [of Sciences] until M. de Réaumur took on the task of continuing the work, which he did for the rest of his life. . . . On 15 July 1758, the manuscripts that had been found among the papers of M. de Réaumur, having been placed in order, were handed to twenty Academicians who undertook to revise whatever was fit to publish, to make additions to trades which had been improved, and to investigate new developments in the trades that were not covered among those in the Academy's manuscripts.¹⁷

After the publication began of the *Encyclopédie* of Diderot and D'Alembert in the 1750s, some of the texts and plates that had been assembled for the Description des arts et métiers were revised and published under the direction of Henri Louis Duhamel du Monceau. They include the account of papermaking by Lalande (undated, but about 1761), and Dudin's text on bookbinding (1772), both of which made use of some of the plates engraved by Simonneau in the 1690s. The material on printing and typefounding was entrusted to the Parisian printer Philippe-Denis Pierres, who is known to have asked contemporary makers of type for information and specimens of their work in an attempt to bring the work up to date, but he did not complete a revised text.¹⁸

Duhamel du Monceau died in 1789, and the project lapsed for a second time. Thereafter it was largely forgotten until the publication of the study of A. H. Cole and G. B. Watts in 1952.¹⁹ In 1961 André Jammes published his edition of the plates of alphabets which had survived at the Imprimerie Nationale, and which are related to the making of the romain du roi, drawing for his extensive text on the archives of the Académie des Sciences and other related materials

12. For an introductory note on the plates relating to printing, see Pinault (1987).

13. Newberry Library, Chicago, Wing MS oversize Z4029 .225. These are the chief headings: Description de la Presse d'imprimerie, Imposition, encre, etc. Le graveur, Le Graveur à l'eau forte, Graveure au burin, Description de la Presse du graveur, La manière d'imprimer les estampes, Graveure en bois, Imprimerie de livres d'église, Imprimerie des cartes à jouer. I have made transcriptions of all these texts.

14. *Histoire de l'Académie des Sciences*, année 1704: 'Monsieur des Billettes continuant l'Art de l'Impression, a fait une Description de la Presse, & ensuite de l'impression particuliere des livres d'Eglise, Escriteaux, Sentences, &c. De là il a passé à l'Art de graver en Taillédouce.'

15. Salomon-Bayet (1969), p. 238, n. 1.

16. René Antoine Ferchault de Réaumur (1683–1757).

17. 'Ces différentes descriptions ne furent point imprimées, parce qu'on les réservoir pour former ensuite une collection qui devoit être rangée dans un ordre méthodique; elles restèrent manuscrites dans le dépôt de l'Académie jusqu'au temps ou M. de Réaumur se chargea seul de continuer ce travail, auquel il a véritablement donné ses soins pendant toute sa vie. [...] Le 15 Juillet 1758, les papiers trouvés chez M. de Réaumur, & qui venoient d'être remis en ordre, furent distribués à vingt Académiciens qui se chargerent de revoir & de publier ce qui seroit en état de paroître, de faire des additions aux Arts qui auroient été perfectionnés, d'employer les matériaux qui n'auroient pas une forme convenable, de faire enfin des recherches nouvelles pour les Arts qui ne se trouvoient pas traités dans les papiers que possédoit l'Académie.' Lalande, *L'Art du tanneur*, 1764.

18. P. X. Leschevin, *Notice biographique sur P.-D. Pierres*, 1808, p. 4.

19. A. H. Cole and G. B. Watts, *The handicrafts of France, as recorded in the Description des arts et métiers, 1761–1788*, Cambridge, MA: Baker Library, Harvard Graduate School of Business Administration, 1952.

at the Bibliothèque nationale de France and the Archives nationales, Paris. Dudin's account of bookbinding (1772) was published in an Italian translation, *L'Arte del legatore e doratore di libri, introduzione e note di Jean Toulet* (1964). Lalande's text on papermaking and some others which described related trades, including Dudin's French text on bookbinding, were published in facsimile in one volume under the title *Les arts du papier* (1994).²⁰

Sustained by a moderate, even an austere, style of living, wrote Fontenelle, Des Billettes maintained his health. It declined gradually with age, but without leading to serious illness, and he retained his reason. On 10 August 1720, he predicted correctly that he would die on the 15th day of the month. He was 86.

20. *L'Arte del legatore e doratore di libri, introduzione e note di Jean Toulet*, Milano: Il Polifilo, 1964; *Les arts du papier*, Geneva: Slatkine Reprints, 1994.

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