



# From Behind the Folding Screen to the Collège de France: Victorine de Chastenay's Privacy Dynamics for Knowledge in the Making

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**Abstract** This chapter is an examination of Victorine de Chastenay's manuscripts through the lens of private practices of knowledge production. Victorine de Chastenay, mostly known for her *Mémoires* and a few translations, was raised in ancient French aristocracy and received an exceptional education for a nineteenth-century woman. Throughout her life, she explored various fields of knowledge, such as literature, poetry, languages, history, politics, botany, mathematics, and astronomy. Her manuscripts and parts of her *Mémoires* offer an insight into her private practices of knowledge in the making. This contribution focuses on the learning and writing techniques she used as a child and, later on, in her domestic space. As a noblewoman, the social norms of her time forced her to study in dedicated spaces at dedicated times, sometimes hidden behind a folding screen. Chastenay's manuscripts reveal her economy of knowledge in the making, highlighting the necessity of a room of her own. This study combines material, spatial, social, and emotional approaches to analyse her private knowledge production.

**Keywords** Science • Women • France • Nineteenth century • Knowledge practices

During the eighteenth century in France, a certain number of women, most often from socially elevated positions, practised science for their amusement and/or their passion.<sup>1</sup> Since they did not have to contribute to a family scientific practice, they were seldom focused on publication (either anonymously or as acknowledged authors) and thus could remain perpetual students. One of these women left a rich corpus of handwritten

<sup>1</sup>This enthusiasm for science is described in Anderson, Bonnie S., and Zinsser, Judith P. *A History of Their Own: Women in Europe from Prehistory to the Present*. Vol. 2. London: Penguin Books, 1990; Schiebinger, Londa. *The Mind Has No Sex?: Women in the Origins of Modern Science*. Cambridge: Harvard University Press, 1989; and Zinsser, Judith P. *Men, Women, and the Birthing of Modern Science*. DeKalb: Northern Illinois, 2005. In 2013, Adeline Gargam referenced about five hundred and thirty-one names of learned French women, one hundred and fifty of whom were particularly invested in scientific knowledges. Most of them correspond to the category considered in this chapter: privileged women who study science out of taste without it being part of a family practice.

documents stretching from just before the French Revolution until the second Empire. This corpus displays the strategies and practices put in place by some women of this period, like Émilie Du Châtelet (1706–1749) or Geneviève Thiroux d'Arconville (1720–1805), to access knowledge-strategies sometimes also used by men.<sup>2</sup> Louise Marie Victoire de Chastenay de Lenty, also known as Victorine de Chastenay (1771–1855), is a character well known by historians who study the Consulate, the Empire, and the Restoration, but not for her involvement with scientific *knowledges*.<sup>3</sup> Indeed, her posthumous *Mémoires* have been read as an important testimonial concerning the nobility and court life during the changing political regimes of her lifetime, but have not yet been used to advance the history of scientific knowledges.<sup>4</sup>

Chastenay is perhaps better known in literature for having translated Ann Radcliffe's archetypal Gothic novel *The Mysteries of Udolpho* from English in 1797.<sup>5</sup> Nonetheless, Chastenay was not only dedicated to poetry and literature. She also broadly explored sciences—including astronomy, chemistry, physics, and mathematics—that were considered

<sup>2</sup> As references, see Gargam, Adeline. *Les femmes savantes, lettrées et cultivées dans la littérature française des Lumières, ou, La conquête d'une légitimité (1690–1804)*. Paris: Honoré Champion, 2013; Zinsser, Judith P. *Emilie Du Châtelet: Daring Genius of the Enlightenment*. New York: Viking, 2006; Bret, Patrice, and Van Tiggelen, Brigitte, eds. *Madame d'Arconville. Une Femme de Lettres et de Sciences Au Siècle Des Lumières*. Paris: Hermann, 2011.

<sup>3</sup> I chose here to talk about 'scientific knowledges' instead of 'science' to embrace the great diversity of knowledges including first and foremost the *savoirs-mondes* (González Bernaldo, Pilar, and Hilaire-Pérez, Liliane. *Les Savoirs-Mondes. Mobilités et Circulation Des Savoirs Depuis Le Moyen Âge*. Rennes: PUR, 2015) that the term 'science' encompassed in the eighteenth century, as Dominique Pestre describes ("Ecrire une histoire des sciences et des savoirs de longue durée." In *Histoire des sciences et des savoirs. De la Renaissance aux Lumières*. Paris: Seuil, 1, 2015: 9–11). For hints about history of knowledges, see Burke, Peter. "Response." *Journal for the History of Knowledge* 1, no. 1 (2020): 1–7. This expression also highlights the situated nature of science and its plurivocal history in reference to Donna Haraway ("Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14 no. 3 (1988): 575–99).

<sup>4</sup> Chastenay, Victorine. *Mémoires de Madame Victorine de Chastenay: 1771–1815. L'Ancien régime. La Révolution*. Edited by Alphonse Roserot. Vol. 1. Paris: Plon, 1896 and Chastenay, Victorine. *Mémoires de madame de Chastenay, 1771–1815: L'empire. La restauration. Les cent-jours*. Edited by Alphonse Roserot. Vol. 2. Paris: Plon, 1897.

<sup>5</sup> Radcliffe, Ann. *Les mystères d'Udolpho*. Translated by Victorine de Chastenay. Paris: Maradan, 1797.

masculine endeavours.<sup>6</sup> Chastenay represents a perfect example of the encyclopedic *savante* from the French Age of Enlightenment: a woman who was equally comfortable with writing poetry or historical narratives, reading Cicero or Voltaire, translating English novels or botanical observations, and conducting experiments on plant germination or writing up a summary of a geometry course.<sup>7</sup> It is this little-known portrait of Chastenay that will be sketched here from the many scientific manuscripts she has left behind, as well as from the insights provided by her *Mémoires*.<sup>8</sup>

The wealth of ego documents she left behind from the end of the eighteenth century to the beginning of the nineteenth century reveals a wide

<sup>6</sup>This representation is discussed in Schiebinger, *The Mind Has No Sex?*. Only part of Chastenay's botanical work has been published in the form of a flora calendar (Chastenay, Victorine. *Calendrier de flore, ou Études de fleurs d'après nature*. Vol. 3. Paris: Crapelet, 1803). The rest of her scientific writings remained in manuscript form. The reasons why she did not invest in public scientific authorship is unclear but might be related to gendered prejudices that abhorred ambition in women, as described by Mary Terrall in "Frogs on the Mantelpiece: The Practice of Observation in Daily Life." In *Histories of Scientific Observations*, edited by Lorraine Daston and Elizabeth Lunbeck. Chicago: University of Chicago Press, 2011, p. 185–205 and "The Uses of Anonymity in the Age of Reason." In *Scientific Authorship: Credit and Intellectual Property*, edited by Mario Biagioli and Peter Galison. London and New York: Routledge, 2003, p. 91–112. A digital publishing project *EMAN—Les manuscrits de Victorine de Chastenay* of her (scientific and literary) manuscripts kept in the *Archives départementales de la Côte d'or* (ADCO, Dijon, France) was created in June 2020 and is in progress (<https://eman.hypotheses.org/3059>). As these manuscripts had never been precisely classified nor studied before 2020, this chapter is the first brick towards a reconstruction of her work and practices, based on some samples from the *corpus*.

<sup>7</sup>According to the *Dictionnaire de l'Académie française* (1762 and 1798), a *savant* was a man of great erudition. This erudition could be expressed in literature, art, sciences, etc. A *savante* was his female *alter ego*.

<sup>8</sup>The entirety of Chastenay's manuscripts counts more than four thousand pieces in *folio*, double pages, and notebooks, combining all disciplines. The inventory of this collection is in progress, thanks to the historian Cécile Robin in the *Archives départementales de la Côte d'or*. It includes letters, reading notes, course notes, scholarly papers, personal memoirs, autobiographical texts, and so on. The first estimate of the *corpus* of reading-notes by Cécile Robin counts around ten boxes of reading notes and 300–350 notes by box, which sum up to 3000–3500 titles of books/journals (of maths, botany, history, law, economy, geography, poetry, literature, theatre, physics, chemistry, Chinese, Hebrew, English, Italian, Ancient Greek, Latin, politics, astronomy, etc.).

range of knowledge practices most women could not access.<sup>9</sup> These practices often remained private and poorly documented because these women (much like their male counterparts) seldom became scientific authors. From a social and material point of view, these sources also reveal the use and regulation of Chastenay's private life and space related to a means of constructing knowledges that respected the social norms of her time.<sup>10</sup>

In this chapter, I will first describe details from Victorine de Chastenay's childhood that laid the foundations for her knowledge practices. Both from individual learning and from presentations of what she had learned from family and friends, Chastenay confronted the social and gender norms that she would have to cope with all her life in order to become a learned and respected woman. Here knowledge acquisition, gender, and context are interwoven. Next, the chapter will pay attention to Chastenay's intense focus on scientific activities beginning in 1800, when she developed new private practices of knowledge-making. This focus also shows how knowledge production, private life, and privacy more broadly, became intertwined in modifying the spatial arrangement of her home to comply with nineteenth-century rules of sociability, such as French *étiquette* defining ways of hosting. Chastenay's archives highlight not only the evolution of material demarcations to her privacy during the day, based on balancing her visitors and her work schedule, but also highlight the variety of knowledges she mobilized: gestures, observations, intellectual constructions, material products, or emotional analyses. Finally, I will show how Chastenay's private writing practices nourished public exchanges with *savants*. Chastenay shared her views and learning with both selected and

<sup>9</sup>As Rudolph M. Dekker summarises from the work of Jacob Presser, ego documents refer to "texts in which the author tells us something about his or her personal life and feelings" (Dekker, Rudolf M. "Ego-Documents in the Netherlands 1500–1814." *Dutch Crossing* 13, no. 39 (1989): 61–71.). In Chastenay's case, they include her lecture notes written in a very personal way, scholarly papers, personal memoirs, and autobiographical texts. I consider these notes as ego documents for I focus on her testimony about her thoughts and opinions, her comments on public and private spaces, as well as on her material and temporal ways of constructing knowledge.

<sup>10</sup>This importance of the rules of communal life internalized by individuals on the definition and regulation of the private space has been widely highlighted in Elias, Norbert. *La Civilisation Des Moeurs (Über Den Prozeß Der Zivilisation: Soziogenetische Und Psychogenetische Untersuchungen)*. Translated by Pierre Kamnitzer. Paris: Calmann-Lévy, 1973.

larger audiences in institutional places such as the laboratories of the *Muséum National d'Histoire Naturelle*, or the lecture halls of the *Collège de France* in Paris.

### NOTE-TAKING AND KNOWLEDGE ACQUISITION AS PRIVATE PRACTICES

Coming from an ancient family of the *noblesse d'épée* fallen on harder economic times, Victorine de Chastenay was educated in an enlightened intellectual milieu. Her father, Erard Louis Guy, Comte de Chastenay de Lentz (1748–1830), oversaw a *salon* graced by a succession of important *savants*. He profited from this patronage by learning English, Italian, and Latin; and he benefited from science courses. His wife, Catherine Louise d'Herbouville (ca. 1750–1830), was educated at the Port Royal Abbey in Paris, where she mastered the arts of writing and of distinguishing herself with modesty in the *salons*.<sup>11</sup> Within this literary and learned family, Victorine and her younger brother, Henri Louis (1772–1834), would receive in Paris “an education far superior to that of the young ladies of [her] time.”<sup>12</sup> Almost immediately, “the superiority of [her] intelligence, [her] appetite for a wide variety of studies [...] rare powers of observation, straight thinking” revealed themselves to her professors as Roserot (1849–1932) posthumously presented her.<sup>13</sup> As early as five or six years of age, an instructor began teaching Chastenay the catechism, grammar, history, and geography. She also started learning music and drawing. Before nine years of age, she began to cite passages of books she had read in letters to her father, who would respond to her.<sup>14</sup> A certain Monsieur Gilbert (?-?) became Victorine's and Henri Louis's professor of mathematics.

<sup>11</sup> Modesty was seen as a cardinal virtue of women during the modern period (Schiebinger, *The Mind Has No Sex?*, p. 39).

<sup>12</sup> Fyke's translation of “une instruction très supérieure à celle des jeunes filles de son temps” (Chastenay, *Mémoires* 1896, 1: p. II). All translations by Robert Fyke, unless otherwise noted. For a complete and precise study of girls' education in eighteenth-century France, see Sonnet, M. *L'éducation Des Filles Au Temps Des Lumières*. Paris:Éditions du Cerf, 1987.

<sup>13</sup> “La supériorité de son intelligence, son goût pour les études les plus variées, [...] un rare esprit d'observation, un jugement droit” (Chastenay, *Mémoires* 1896, 1: p. II–III).

<sup>14</sup> None of these notes from her childhood remain. They were destroyed during the Revolution.

Gilbert's lessons included arithmetic, then "geometry, algebra, spherical geometry, all of elementary mathematics."<sup>15</sup>

Around 1780, she learned Italian in secret with her brother so they could surprise their parents during a party for friends.<sup>16</sup> The secret learning practices of these siblings were also witnessed by a wide variety of house guests, who delighted in these children's "prodigies."<sup>17</sup> At ten, Victorine de Chastenay read Horace, wrote passionately about Racine's play *Britannicus*, and started learning Latin a year later. The construction of her knowledges married regular lessons with a tutor, private knowledge practices, and the social obligations tied to her rank. As she testified later: "I read a lot, I made excerpts from books, book plans, translations, even poems. I had little free time; I spent it with my brother, I chatted with my parents, I went for a walk [...] in the evenings I saw a few visitors [...]"<sup>18</sup> When she turned 14, she was granted the title of *chanoinesse*, an ecclesiastic title neither involving vows nor preventing marriage, but which allowed her to keep her belongings and gave her the honorific title *Madame de Chastenay*.<sup>19</sup>

De Chastenay's parents provided equal education to their children, regardless of their gender, which was quite unusual for the time and context they lived in. They furnished the siblings with the best tutors, who provided common lessons for both children in all fields of study.<sup>20</sup> Victorine also spent a short period in the 1780s under the tutelage of Madame de Genlis (1746–1830), who was in charge of the education of the *Duc*

<sup>15</sup> "la géométrie, l'algèbre, la sphère, toutes les mathématiques élémentaires" (Chastenay, *Mémoires* 1896, 1: p. 38).

<sup>16</sup> Chastenay, *Mémoires* 1896, 1: p. 31.

<sup>17</sup> Chastenay, *Mémoires* 1896, 1: p. 35.

<sup>18</sup> "Je lisais beaucoup, je faisais des extraits des ouvrages, des plans des ouvrages, des traductions, des poèmes même. J'avais peu de moments disponibles, je les passais avec mon frère, je causais avec mes parents, j'allais me prénommer [...] je voyais le soir quelques visites [...]" (Chastenay, *Mémoires* 1896, 1: p. 49).

<sup>19</sup> This title ensured social and financial independence for young noblewomen. Both parents needed to belong to the ancient French nobility. There were around twenty five such congregations in France, which were ended by the Revolution. Victorine de Chastenay kept the honorific title *Madame* and the attached respectability, but she lost her ecclesiastic *benefice* (annuity) after 1790.

<sup>20</sup> At the time, it was exceptional for a girl to be educated the same as a boy for such a long period. Girls from privileged backgrounds studied poetry, drawing, music, literature, history and arithmetic, but very rarely algebra, geometry, science, or Latin; subjects reserved for boys.

d'Orléans family, including the future king, Louis Philippe (1773–1850). Chastenay judged Genlis's taste as "rather mediocre" and the Orleans family's educators as "second level [...] masters in every field."<sup>21</sup> This criticism of the education provided by the "unofficial governess" of a *prince de sang* suggests the very high level to which Chastenay had been meticulously taught.<sup>22</sup> These experiences helped her to master courtly manners, and familiarized her with the most politically powerful players of the coming decades. As she was growing and taking on more and more social responsibilities (such as visits or household activities), she devoted part of her nights to reading and writing. Chastenay encountered in books and scholarly journals these endeavours in literature, poetry, history, science, politics, philosophy, and foreign languages. She wrote: "I was reading instead of sleeping. Sometimes I would get up restless and write in a journal of facts and thoughts..."<sup>23</sup> Here Chastenay mobilizes rhetoric to fashion herself as a fully-fledged scholarly author whose commitment to knowledges was beyond questioning.

Chastenay's habit of taking notes started when she was an infant and would last until she passed away. She wrote about her most striking thoughts concerning books and journals she had read or about important events of the day. The practice of note-taking, which was common among *savants* of the period, helped to construct and to transmit knowledges.<sup>24</sup> As Anne Blair has noted:

The transmission served by personal notes most often operates within one individual's experience—from a moment of reading and note taking to a later moment when the notes are read and sometimes rearranged and used

<sup>21</sup> "assez médiocre"; "les maîtres en tout genre [...] de second ordre" (Chastenay, *Mémoires* 1896, 1: p. 54).

<sup>22</sup> "gouverneure officieuse". Princes of the blood were entrusted to male tutors around age seven. Madame de Genlis could not officially occupy this post because of her gender, but she still exercised official prerogatives because of her relationship with the future king.

<sup>23</sup> "[...] je lisais au lieu de dormir. Quelquefois, je me levais agitée, j'écrivais un journal de faits et de réflexions" (Chastenay, *Mémoires* 1896, 1: p. 115).

<sup>24</sup> For more information concerning the popularity of note-taking, and the increasing use of reading notes since at least the sixteenth century, see for example Nicoli, Miriam. *Les savants et les livres: autour d'Albrecht von Haller (1708–1777) et Samuel-Auguste Tissot (1728–1797)*. Geneva: Slatkine, 2013; Blair, Ann. "Note Taking as an Art of Transmission." *Critical Inquiry* 31, no. 1 (2004): 85–107; and Daston, Lorraine. "Taking Note(s)." *Isis* 95, no. 3 (2004): 443–448.



in articulating a thought. But personal notes can also be shared with others, on a limited scale with family and friends and on a wider scale through publication, notably in genres that compile useful reading notes for others.<sup>25</sup>

In Chastenay's case, both private and public examples were present. As a young woman, she reserved certain subjects (such as botany) to private practice, while others (such as history) enjoyed wider circulation as published works. Within this context, note-taking played an essential part in some *savants'* practices, since it offered speedier access to information, aided in memorization, and participated in constructing the *savants'* credibility by referencing the knowledges of other established *savants*. The importance of note-taking for Chastenay is readily noticed: she used them systematically and gave them a standardized structure which can be divided into two parts. First, the facts: the title of the work she read, the date when she wrote, and the key notions appeared after being systematically introduced by "I have just read..."<sup>26</sup> Second, she expressed her thoughts about the style, her interest in the topic, and the feelings the work elicited. All were written down by Chastenay as a part of her reading notes.<sup>27</sup> She regularly used these notes as a reminder of what she had learned and to determine her level of progress upon rereading a text. The way Victorine de Chastenay worked was shared by many eighteenth-century scholars, both male and female, in more or less structured and recurring forms. Émilie Du Châtelet's or Jérôme Lalande's archives also present notes for further studies, with corrections and comments.<sup>28</sup> This form of note-taking had become common since at least the sixteenth century, as illustrated by the following pages from Ortelius's notebooks (Fig. 1).<sup>29</sup>

<sup>25</sup> Blair, *Note Taking*, p. 85.

<sup>26</sup> "Je viens de lire" ADCO E SUP 378/*bis*, /*ter*, /5, /6, /7, /8, /9, /10.

<sup>27</sup> It would also be interesting to know if Victorine de Chastenay annotated her books. Unfortunately, until now it has not been possible to reconstruct her library.

<sup>28</sup> Jérôme Lalande (1732–1807) was a famous French astronomer. Such notes can be found in his archive case at the Bibliothèque Interuniversitaire—Sorbonne, Fonds Victor Cousin, MSVC 99.

<sup>29</sup> Refer for example to Blair, Ann. "Student Manuscripts and the Textbook." In *Scholarly Knowledge: Textbooks in Early Modern Europe*, edited by Emidio Campi, Simone De Angelis, Anja-Silvia Goeing, and Anthony Grafton. Genève: Librairie Droz, 2008, p. 39–74 or Bustarret, Claire. "Usages Des Supports d'écriture Au XVIIIe Siècle: Une Esquisse Codicologique". *Genesis* 34 (2012): 37–65 to see some other samples.

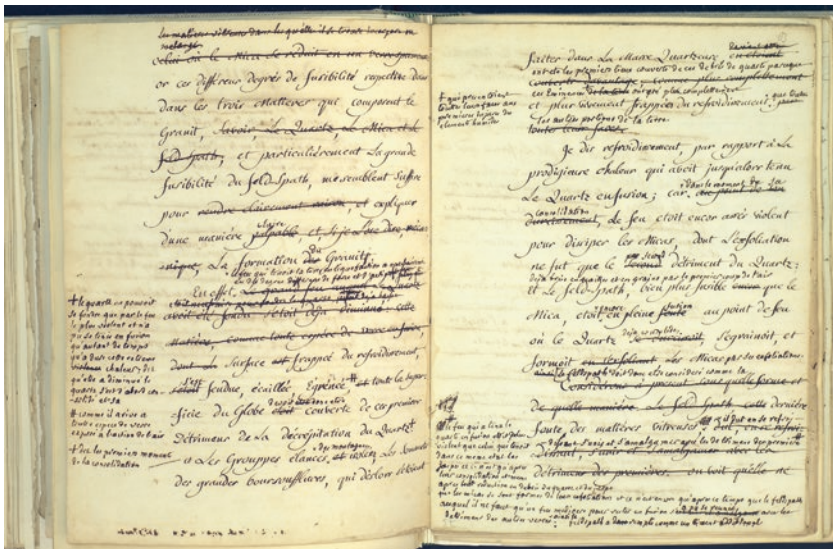


Fig. 1 Reproduction of a collection of notes by Abraham Ortelius (1527–98), already published in (Blair 2004). (Courtesy of the Museum Plantin-Moretus, Antwerp – UNESCO, World Heritage, MS 285)

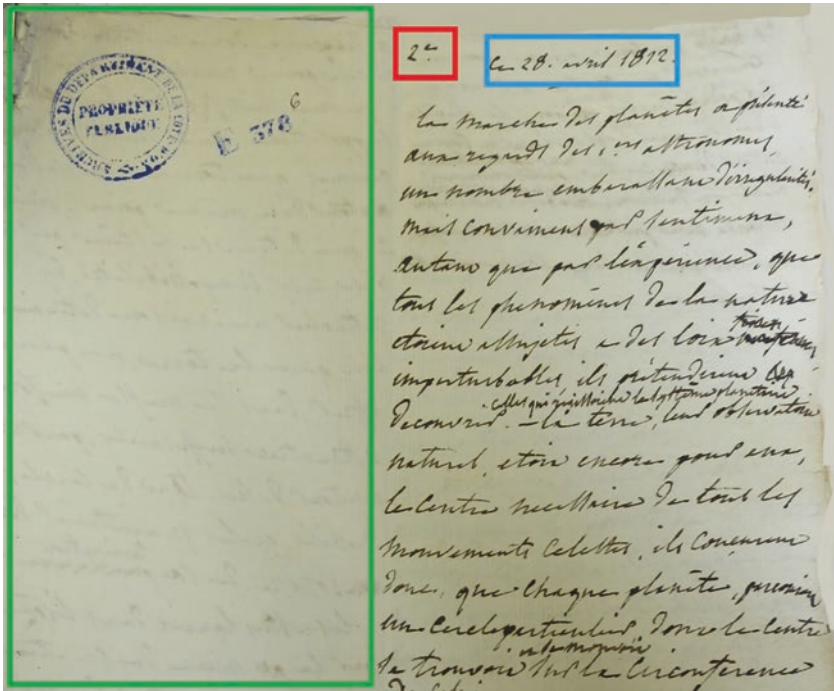
Let us now analyse more deeply and materially Chastenay’s practices of knowledge in the making.<sup>30</sup> Between 1811 and 1812, the *chanoinesse* received private courses in astronomy given by François Arago (1786–1853) from the Paris Observatory in her household. The first lesson, on 10 November 1811, followed her reading of the first lesson of the pupil reading a particular work and asking questions of the *savant* about those items they had failed to understand. Similar methods were used by other *savants*. Thus the outlines of the lesson were sketched from a single point

<sup>30</sup>This analysis is inspired by Catherine Richardson’s, Tara Hambling’s and David Gaimster’s work on the early modern period, where one remains “curious about the things with which people interacted, the spaces in which they did so, the social relationships which cluster around their associations [...] and the way knowledge travels around their associations” (Richardson, Catherine, Tara Hamling, and David Gaimster. *The Routledge Handbook of Material Culture in Early Modern Europe*. London: Routledge, 2016, Introduction).

<sup>31</sup>Bailly, Jean-Sylvain. *Histoire de l’astronomie Ancienne, Depuis Son Origine Jusqu’à l’établissement de l’école d’Alexandrie*. Paris: Chez les Frères Debure, 1775.

of departure: the simple presentation of a world system. After an interruption of several months, the ten lessons were finished on 4 July 1812, despite Chastenay's request for just a couple more. Each lesson was painstakingly noted in one of her many notebooks or on note paper. It generally was written on four pages, and composed into forty folios covering the entirety of Chastenay's lessons.<sup>32</sup> She would take notes during the lesson, and later clean them up through recopying.

The structure of her courses' manuscripts, as seen in Fig. 2, is often the same. In general, she noted on the first page the date, the number of the



**Fig. 2** Notes from Chastenay's second astronomy lesson with Arago, 28 April 1812. The blue rectangle indicates the date, and the red rectangle, the number of the lesson. The green rectangle highlights the space left free for future corrections or additions. (*Archives départementales de la Côte-d'Or*, E SUP. 378/6. Reproduction Isabelle Lémonon-Waxin, 2016)

<sup>32</sup> ADCO E SUP 378/6.

lesson and eventually its general title. Half of the page on the right was meant to receive her notes, while the other half was left blank, eventually to be used for corrections when necessary. In such a case, Chastenay would cross out the initial text on the right hand of the page and indicate by a cross the place where to insert the new paragraph on the left hand, as shown in Fig. 3. More study would be necessary to understand if this notebook consisted of notes taken during lessons or those she reworked and cleaned up afterwards, one or several times.<sup>33</sup> There are many cases of the blank half of the page having been used for corrections: added materials, references to another lesson, or improvement to the text, including multiple corrections with paragraphs being crossed out and re-written and then crossed out and rewritten again.

Most of Chastenay's notes were in the form of text. She believed in the efficiency and superiority of the "philosophical style"—using only phrases and not drawings or formulas—to explain something. As she wrote about geometry:

I have always believed that one could discuss geometry using philosophical logic and, thus, mathematical truths would all be eligible for presentation to the mind through a series of abstract propositions of rigorous accuracy [...]. I know that any image would grasp this truth at a glance, but for my purposes it is enough to show howsoever one's intelligence might have grasped it.<sup>34</sup>

Chastenay felt that textual expressions were a sign of deeper understanding. She sometimes used drawings to show the results of her botanical observations, but Chastenay never used them in astronomy, geometry, physics, or chemistry, even when she felt a drawing might have made the explanation easier. Thus, her approach to knowledges matches better the encyclopedic vision of earlier eighteenth-century philosophers rather than

<sup>33</sup>A detailed analysis is proceeding as part of the digital editing of Chastenay's manuscripts, <https://eman.hypotheses.org/3059>. It might show the process of knowledge acquisition.

<sup>34</sup>“J'ai toujours cru, que l'on pourrait traiter de la géométrie dans un ordre philosophique et que les vérités mathématiques seraient toutes susceptibles de s'offrir à l'esprit, par une suite de propositions abstraites, et d'une justesse rigoureuse. [...] Je sais que la moindre figure ferait saisir à l'œil cette vérité, mais il suffit au but que je me propose, que l'intelligence l'ait saisi” (ADCO E SUP 378/25).

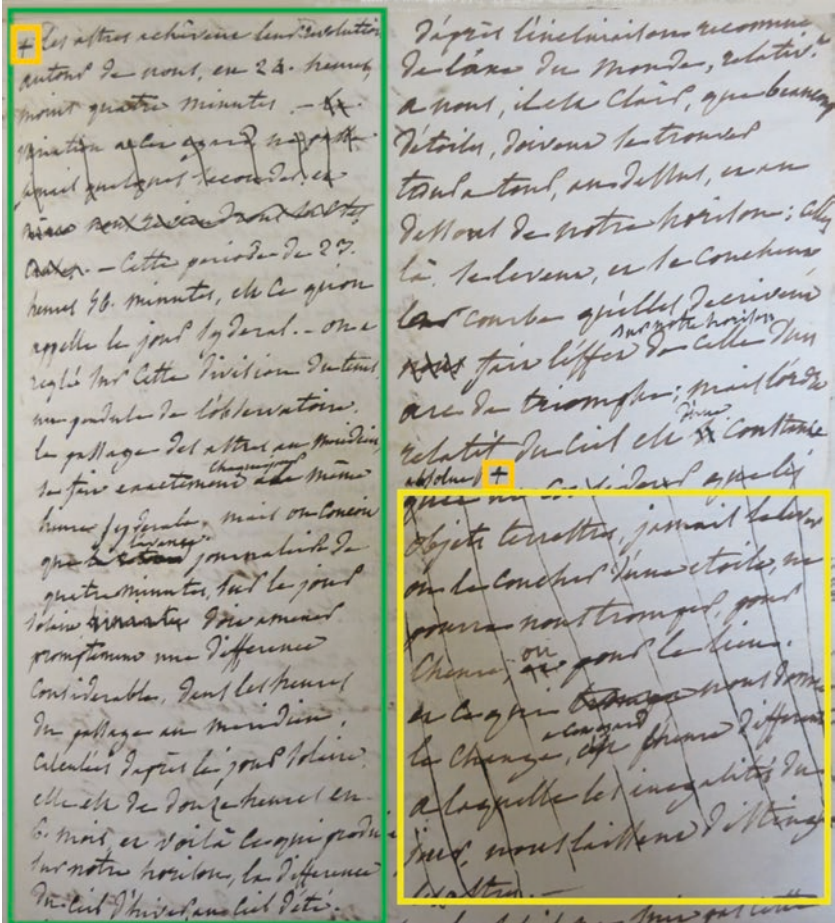


Fig. 3 Notes from Chastenay's second astronomy lesson with Arago, 28 April 1812. The yellow rectangle indicates the crossed-out text. The orange ones mark the crosses showing where the new paragraph added on the left should go on the right hand of the page. (Archives départementales de la Côte-d'Or, E SUP. 378/6. Reproduction Isabelle Lémonon-Waxin, 2016)

the more specialized approach of later nineteenth-century scientists. Her knowledge in the making in science derives from this vision as she testified herself:

When I was studying them, I did not have much taste for the exact sciences [...] but since I understood that these determined bases [demonstrations and elementary arithmetic] were those of a scale without term; since the earth considered in this respect, was for me no more than an observatory from which one guesses the heavens; since the natural sciences have taught me that the universal author first amuses our pride in all things with very exact consequences, in order to then suddenly rob his works of what these consequences were of more subtlety, I have considered with admiration this chain of simple truths whose ideality makes them right and which govern all matter.<sup>35</sup>

Chastenay used these philosophical approaches and styles, as well as a strong structuring of note-taking for many years and in many spaces. She developed this habit in the privacy of her household, and then she exported it later into institutional spaces.

### ADAPTING THE HOUSEHOLD'S PRIVACY TO RECONCILE WRITING AND SOCIAL OBLIGATIONS

The numerous ego documents left by Chastenay act as direct witnesses to the historical period that they traverse, but they also speak to her state of mind, her emotions, and her motivations.<sup>36</sup> This rich documentary resource, most often written up in the privacy of her bedroom, conveys the importance of research at home for this perpetual student. Chastenay

<sup>35</sup> “Je n’avais pas, quand je les étudiais, beaucoup de gout pour les sciences exactes [...] mais depuis que j’ai compris que ces bases déterminées étaient celles d’une échelle sans terme; depuis que la terre considérée sous ce rapport, n’a plus été pour moi qu’un observatoire d’où l’on devine les cieux; depuis que les sciences naturelles m’ont appris que l’auteur universel amuse d’abord en toutes choses notre orgueil, de conséquences bien exactes, pour dérober ensuite ses œuvres tout à coup à ce que ces conséquences avaient de plus subtil, j’ai considéré avec admiration cet enchaînement de vérités simples dont l’idéauté fait la justesse et qui régissent toute la matière” (Chastenay, *Mémoires* 1896, 1: p. 38–39).

<sup>36</sup> Considered mainly through reading notes, personal and scientific diaries, and autobiographical writings where Chastenay often precisely described her emotions and judgements.

wrote of her youth that she “passionately loved studying.”<sup>37</sup> She even wondered where this passion came from: “A passionate fondness for studying must support a similar [fondness] for liberty.”<sup>38</sup> At the time of the Revolution, Chastenay rebelled against a social order that neglected women’s education:

As a member of the aristocracy, I already had to suffer ancient dowagers, and the burdens inflicted on me by mediocrity, which called itself common sense, hating knowledge for the overall nation and talent in young women [...] The idea of being nothing when merit meant everything would never let me close my eyes: I would rather read than sleep [...] so that I not be misunderstood, I was passionate for glory, I only wanted glory.<sup>39</sup>

This overheated statement represents an image seldom seen of a young noblewoman, quite distant from the timid, discrete girl who was first presented to society during the *Ancien Régime*. Merit and glory, the prerogatives of men, suddenly seemed accessible to Chastenay at the beginning of the Revolution, thanks to the unconventional level of education she had received and the pledge of independence incorporated into her ecclesiastic title. It was under the protection of private life that Chastenay felt she could indulge in such confessions, which would not be published until well after her death.<sup>40</sup> These words, even coming from a noblewoman, could not be accepted by the gender norms of her time, which made women the guardians of family values subject to masculine authority.<sup>41</sup>

<sup>37</sup> “J’aimais l’étude avec passion” (Chastenay, *Mémoires* 1896, 1: p. 35–36).

<sup>38</sup> “Le goût passionné de l’étude doit tenir quelque chose de celui de la liberté” (Chastenay, *Mémoires* 1896, 1: p. 29).

<sup>39</sup> “J’avais déjà eu à souffrir de l’aristocratie des vieilles douairières et du fardeau dont m’avait accablée la médiocrité, qui s’appelait bon sens et détestait le savoir dans la nation et les talents dans une jeune fille. [...] L’idée de n’être rien quand le mérite allait être tout, ne me laissait pas fermer les yeux: je lisais au lieu de dormir. [...] qu’on ne s’y trompe pas, c’était la gloire qui me passionnait, c’était la gloire elle seule” (Chastenay, *Mémoires* 1896, 1: p. 115).

<sup>40</sup> In her will, Chastenay organized the legacy of her manuscripts. She charged her executor to have her *Mémoires* published after her death, but this did not occur until 1896, by her executor’s grand-daughter’s husband.

<sup>41</sup> Fayolle, Caroline. *La Femme Nouvelle. Genre, Éducation, Révolution (1789–1830)*. Paris: CTHS, 2017, p. 23.

After the final upheavals of the Revolution had sent the Chastenay family to prison and temporarily separated the *chanoinesse* from her studies, she immersed herself once again in the delights of scientific learning. She also published her first translations of English novels, and became a close friend of Empress Josephine (1763–1814), Napoléon’s first wife. Chastenay’s nobility, ecclesiastic title, and education placed her within a very broad political and scientific network at the beginning of the nineteenth century. She benefited from a great level of respectability, had been raised to ‘shine’ at court, and knew exactly how to behave. Using her network of relationships rather than money, Chastenay became a sponsor for many scholars and friends. Her status protected her from the harsh criticisms often levelled against *femmes savantes* she faced as a teenager.<sup>42</sup> Thus Chastenay was able to study as much as she wanted as long as she respected social and gendered rules. One of these social gender rules was the understanding that only certain revelations from private life could be made public. For this reason, domestic spaces became key concerns in the construction of knowledges.<sup>43</sup> As the place where knowledges were produced, the home has become, since the 1990s, a vested interest of historians of the sciences.<sup>44</sup> For Alix Cooper, the home should be considered as a scientific institution, a concept to which one need not subscribe in order to grasp the importance of domestic spaces to historians of the sciences.<sup>45</sup> As envisioned by Deborah Harkness, the home becomes a transition space between, on the one hand, the monasteries and universities of medieval times and, on the other hand, the laboratories and academies of modern science. Within this concept, the household became, since at least the

<sup>42</sup>The *persona* of a *femme savante* was strongly marked by negative prejudice in France through the fictional character *Philaminte* in *Les femmes savantes* by Molière (1672); who was a symbol of superficiality and ridicule (Chastenay, *Mémoires* 1896, 1: p. 116).

<sup>43</sup>Ariès, Philippe. *Histoire de la vie privée*. Paris: Seuil, 1986; Chartier, Roger. *Pratiques de la lecture*. Paris: Rivages, 1985.

<sup>44</sup>Terrall, Mary. “Masculine Knowledge, the Public Good, and the Scientific Household of Réaumur.” *Osiris* 30, no. 1 (2015): 182–201; McKeon, Michael. *The Secret History of Domesticity: Public, Private, and the Division of Knowledge*. Baltimore: JHU Press, 2006; and Algazi, Gadi. “Scholars in Households: Refiguring the Learned Habitus, 1480–1550.” *Science in Context* 16, no. 1–2 (2003): 9–42.

<sup>45</sup>Cooper, Alix. “Homes and Households.” In *The Cambridge History of Science*, edited by Katharine Park and Lorraine Daston, Cambridge University Press, 2006, p. 224–237.



sixteenth century, a space considered deeply feminine.<sup>46</sup> Exploring this space enables an archaeology of scientific practices of knowledge in the making: located in, for example, the kitchen, the nursery, and the garden. These practices were organized and carried out by the women and men of the household, which had become an increasingly private and intimate concept by the end of the seventeenth century.<sup>47</sup> The evolution of the concept of privacy between the sixteenth and eighteenth centuries led to a reconfiguration of spaces and social relations.<sup>48</sup> In effect, as François Simonet-Tenant notes:

the proven need for a room of one's own, where one can protect their individual privacy, their need to fully belong, their proof of membership, and their need to construct in the material world the density of relationships maintained by a sense of self...<sup>49</sup>

constrained physical spaces in seventeenth-century bourgeois and noble households. At that time, the bedroom, previously considered a space both for sleeping and for socializing, slowly lost its social functions to become a space for inward-looking withdrawal. This “room of one's own”, which could also become the space where a scholar or researcher would produce knowledges, was transformed by the practices performed

<sup>46</sup>Harkness, Deborah E. “Managing an Experimental Household: The Dees of Mortlake and the Practice of Natural Philosophy.” *Isis* 88, no. 2 (1997): 247–62. I share the criticisms of this conception by Rebecca Rogers who underlines that “the house [...] brings together public male and female spaces,” even though it is often presented as a private female space (Rogers, Rebecca. “Le Sexe de l'espace: Réflexions Sur l'histoire Des Femmes Aux XVIIIe-XXe Siècles dans Quelques Travaux Américains, Anglais et Français.” In *Les Espaces de l'historien*, edited by Jean-Claude Waquet, Odile Goerg, and Rebecca Rogers. Strasbourg: Presses universitaires de Strasbourg, 2000, p. 181–202).

<sup>47</sup>Oertzen, Christine von, Maria Rentetzi, and Elizabeth S. Watkins. “Finding Science in Surprising Places: Gender and the Geography of Scientific Knowledge Introduction to ‘Beyond the Academy: Histories of Gender and Knowledge’.” *Centaurus* 55, no.2 (2013): 73–80.

<sup>48</sup>Simonet-Tenant, Françoise. “À La Recherche Des Prémices d'une Culture de l'intime.” *Itinéraires* 4 (2009): 39–62; Pardaillé-Galabrun, Annik. *La naissance de l'intime: 3000 foyers parisiens XVIIe-XVIIIe siècles*. Paris: Presses universitaires de France, 1988.

<sup>49</sup>“le besoin éprouvé d'un espace à soi, d'un espace où abriter une vie privée individuelle, une volonté de s'appartenir pleinement, d'éprouver cette appartenance et de donner une existence matérielle à la densité de la relation que l'on entretient avec soi-même” (Simonet-Tenant, *À La Recherche*, p. 42).

inside of it.<sup>50</sup> Thus, an exploration of the home establishes interactions within and between spaces, including their overlaps and transformations. For example, a space could be used intimately among the family in the morning and become a scene for public receptions in the afternoon. The household where private and public scientific practices succeeded one another was ruled by numerous social customs, many of them gender-specific. At the beginning of the nineteenth century, these gender norms were often imposed on domestic spaces that could ensure the decency of women. Customs fixed the hours when knowledge-making practices would be appropriate; who could participate in such practices (in line with their level of recognition); the types of acceptable practices, and so forth.

Chastenay left an important testimony of this kind of regulation. Her valuable account helps to locate a great part of her learning practices in her room, a private space where she engaged alone in the individual construction of her knowledges from her childhood to her old age. She emphasized that she was “accustomed [...] to finding my[her]self a main object [of thinking] in the room.”<sup>51</sup> When she was an infant and a teenager, the *chanoinesse* would sometimes share a bedroom with her brother so that they could study together as much as possible. She “saw few people, but so many masters and of so many species that they were already a society. [...]she] had dinner and supper in a room with [her] brother, in order to save time.”<sup>52</sup> From 1790 to 1800, she described the spatio-temporal organization of her days in her family’s private mansion, probably located at *18 rue Royale* in Paris:

Mom’s old bedroom became a small drawing room, which, under the circumstances was quite adequate: I would dress there in the morning, study there part of the day, at my desk hidden behind a folding screen: as soon as Mom started receiving visitors [in the afternoon] I would move into her private bedroom my books and manuscripts.<sup>53</sup>

<sup>50</sup> Woolf, Virginia. *Une chambre à soi. (A Room of One’s Own)*. Translated by Clara Malraux. Paris: Robert Marin, 1951.

<sup>51</sup> “je me trouvais si accoutumée [...] à me trouver dans la chambre un objet principal” (Chastenay, *Mémoires* 1896, 1: p. 50).

<sup>52</sup> “je voyais peu de monde, mais tant de maîtres et de tant d’espèces étaient déjà une société. Je dinais et soupais dans une chambre avec mon frère, afin d’économiser le temps” (Chastenay, *Mémoires* 1896, 1: p. 41).

<sup>53</sup> “L’ancienne chambre de maman était devenue un petit salon, qui dans les circonstances était plus convenable; je m’y habillais le matin, j’y étudiais dans une partie du jour; un parent y cachait mon bureau: dès que maman recevait du monde, je transportais dans sa chambre à coucher mes livres et mes cahiers” (Chastenay, *Mémoires* 1897, 2: p. 150).

Implicit rules clearly constrained the ways in which Chastenay could practice knowledge-making. It had to remain hidden from all but her most intimate relations (her immediate family and their servants). Was this a gendered prohibition? We need not think it was more than a custom that probably derived from the sociability norms associated with the daily visitors received by Chastenay's mother, which limited the spatio-temporal organization of knowledge production and circulation. A legacy of eighteenth-century sociability influenced the organization of space through rococo architectural styling. Based on beauty, comfort, intimacy, and elegance, it favoured exchanges between beautiful minds (*beaux-esprits*) through the development of new room types: living rooms, studies, drawing rooms, etc.<sup>54</sup> The pomp of courtly life gave way to the intimacy of smaller rooms in private mansions. These rooms were furnished with a number of aesthetically necessary objects.

The folding screen, of Chinese inspiration, was a frequent part of room furnishings, not least because it could be used to make adjustments to the room as required by intimacy and *decorum*. In the Chastenay mansion, a folding screen announced the multi-functional aspects of the small drawing room where the *chanoinesse* and her mother dressed, read, and received friends. Because of the folding screen, Victorine could maintain some privacy from servants and her parents (while dressing or writing, for example), or hide the mess of her books from close friends. This screen represented order that conformed to social conventions and gender norms which imposed humility and discretion on women. Chastenay was taught to respect the customs of nobility. Thus, she mobilized concealment as a social strategy that enabled her to pursue her studies. Behind the privacy afforded by a folding screen in the small drawing room, Chastenay would write in her journal that she wished for glory, freely expressing her emotions and motivations. Once in society, on the other side of that screen, she would shoulder a more public role, following conventional guidelines that she also used to her advantage.

<sup>54</sup>Scott, Katie. *The Rococo Interior: Decoration and Social Spaces in Early Eighteenth-Century Paris*. London: Yale University Press, 1995.

## PRIVACY IN INSTITUTIONAL SPACES

Parisian institutions such as the Royal College (after the Revolution, the *Collège de France*), Botanical Gardens, or the Observatory were rarely publicly open to women who acted on the construction of scientific knowledges during the eighteenth and nineteenth centuries. In private, women were permitted access based on a male *savant's* introduction; and they could circulate more or less freely based on their level of recognition. Women's knowledge-making practices could be the same as men's as long as they remained informal. Women were publicly and more easily welcomed into institutions as auditors, through public courses, or during important social events such as the public Assembly of the Royal College, for example.<sup>55</sup>

In Chastenay's case, the doors of these institutions were also informally opened to her private practices in natural history alongside some of the most influential savants of her time. She took private chemistry lessons with Chevreul (1786–1889) in his lab and in the *Jardin des plantes* (*Muséum*) in Paris in 1814.<sup>56</sup> Thanks to René Desfontaines (1750–1833), director of the *Muséum*, whom Chastenay had known since infancy, the doors of the botany laboratory at the *Muséum* were opened wide. There she devoted her time to numerous observational studies in close proximity to her fellow *savants*. Around 1811 or 1812 she presented her botanical observations to her instructor, providing a precise account:

I went to see M. Desfontaines to have him read my descriptions of the cherry or the apricot; I communicated my comments on M. de Jussieu's system of classification, and on its mixture of an artificial system [of classification] with the natural method; which most people bother with now only to pretend that they have found it [...] My remarks amused M. Desfontaines more than once, and he was helpful in having me communicate them to M. de Candolle, his favourite student; and I can remember with much fondness those mornings of instruction with two very distinguished gentlemen who greatly honoured me with their attentions, enlightening me with their intellect; and almost availing themselves of my advice. It was often in the

<sup>55</sup> Women's easier access to public courses since the eighteenth century is mentioned in Belhoste, Bruno. "Un espace public d'enseignement aux marges de l'université. Les cours publics à Paris à la fin du XVIIIe siècle et au début du XIXe siècle." In *Les universités dans la ville, XVIe-XVIIIe siècles*, edited by Thierry Amalou and Boris Noguès, Rennes: PUR, 2013, p. 217–236, among others.

<sup>56</sup> She took 34 lessons with Chevreul from 24 April to 3 December 1814. ADCO E SUP 378/25.

laboratories of the Botanical Gardens that I would find M. Desfontaines. [...] I would meet M. Mirbel there, and he would teach me to find tracheae [xylem] of new growth and in leaves.<sup>57</sup>

Under the tutelage of some of the most renowned botanists of her time, many of whom she could count among her closest friends, Chastenay was encouraged to continue her serious and hard-working studies in natural history. On May 1813, during a visit to the botanical laboratories when Desfontaines, Deleuze (1753–1835), and Mirbel were present, she questioned them on a number of complicated issues in botany, i.e. the acclimatization of trees and double flowers. On this occasion, she also observed for the first time the parenchyma (soft tissue) of a plant:

The parenchyma is a marrow. M. Desfontaines, strangely enough, is the one who taught M. D'Aubenton to distinguish it, when his [D'Aubenton] attempt was unsuccessful. I, for my part, had a lot of fun seeing them. When I recognized them for the first time, I was like M. Jourdain speaking in prose.<sup>58</sup>

<sup>57</sup> “J’allais voir M. Desfontaines, je lui faisais lire mes descriptions de la cerise ou de l’abricot; je lui communiquais mes observations sur la classification de M. de Jussieu, et sur le mélange qui s’y trouvait d’un système artificiel avec la méthode naturelle, qu’on ne cherche peut-être encore que pour avoir prétendu la trouver. [...] Mes remarques plus d’une fois amusèrent M. Desfontaines; il eut l’obligeance de me les faire communiquer devant lui à M. de Candolle, son élève le plus chéri, et je puis me rappeler avec un sentiment bien doux, les matinées instructives et agréables où ces hommes si distingués voulaient bien m’honorer de leurs attentions, m’éclairer de leurs lumières, et se prévaloir presque de mon suffrage. C’était parfois au laboratoire du Jardin des Plantes que je trouvais M. Desfontaines. [...] J’y vis M. de Mirbel, et ce fut lui, je crois bien, qui m’apprirent à distinguer les trachées dans les jeunes pousses, et jusque dans les feuilles” (Chastenay, *Mémoires* 1897, 2: p. 188). “M de Jussieu” is likely Antoine Laurent de Jussieu (1748–1836), who published in 1789 his botanical classifications *Genera plantarum* based on the “natural method” of his uncle Bernard de Jussieu (1699–1777) and the “artificial system” of Carl von Linné (1707–1778). Augustin Pyrame de Candolle (1778–1841) and Charles François Brisseau de Mirbel (1776–1854) studied botany with Desfontaines and other famous botanists. I am deeply grateful to Gilles André and Marc Philippe for their invaluable insights about eighteenth century botany and graphological expertise.

<sup>58</sup> “Le parenchyme est une moelle. M. Desfontaines, chose assez étrange, est celui qui a appris à M. D’Aubenton [Daubenton] à les distinguer, sous ses yeux qu’elles frappaient vainement. Je me suis, pour mon compte, beaucoup amusée à en voir. Je les reconnaissais aussi pour la première fois. J’étais comme M. Jourdain faisant de la prose” (ADCO, E SUP 378/6). Louis Daubenton (1716–1799) was director of the *Muséum*. He was already dead at the time of Victorine de Chastenay’s observation. M Jourdain is a fictional character from the play *Le bourgeois gentilhomme* by Molière (1670). In the course of the play, M Jourdain discovers from his philosophy teacher that he is speaking prose without knowing it.

The botanical laboratories of the *Muséum*, the pinnacle of institutional naturalist learning, were thus also a workbench for the apprenticeship of Chastenay. There she learned to implement experimental practices in botany, within a socially-limited setting initiated through her personal and privileged relationship with Desfontaines. Of course, her social position and her long friendship with Desfontaines facilitated Chastenay's integration into a clearly masculine institution, where women were excluded from all official functions.<sup>59</sup> However, at the beginning of the nineteenth century, her presence reveals the unofficial circulation of some women within the *Muséum's* laboratories. Chastenay's scientific practices were spatially dynamic and can be divided into three main parts. First, she would carry out preliminary investigations on a particular subject, reading books and journals and writing reports on her readings in a quiet and withdrawn space at home. Then she would implement a more learned study, an apprenticeship with a *savant*, which was sometimes organized at her home, but quite often took place at the *savant's* home or institution. Next, she would correct her notes at home, which would lead to further questions discussed with the *savant*.

Several examples of such practices remain in Chastenay's archives. Her notes on collaborations in the *Muséum* or in the Paris Observatory with institutional *savants* consist of narration about her visits combined with observations she made during them.<sup>60</sup> The structure of these manuscripts (in the sense of handwritten pages, as seen in Fig. 4) is quite different from the one exposed in Figs. 2 and 3. Only the date when she wrote appears as a title, and the text fills the entire page, without any additions or crossings-out. She indicated the visit had occurred a short time before (less than one or two days). This suggests a cleaned-up version of notes she might have taken during her observations, presented later in the form of a diary of facts and thoughts. The pressure on the quill also gives the text a temporal rhythm.<sup>61</sup> This comparison provides temporal evidence about her note-taking practices. This documentary and temporal evidence can be explained by the nature of the documents: between ones that are reports of visits probably written afterwards and notes taken during a lesson at home.

<sup>59</sup> Actually, Madeleine Françoise Basseporte (1701–1780) was officially the only woman to be part of the *Muséum's* staff as a painter for the King's garden from 1743.

<sup>60</sup> References can be found in ADCO E SUP 378/25, ADCO E SUP 378/7 and Chastenay, *Mémoires* 1897, 2: p. 158.

<sup>61</sup> This variation in the pressure is seen between the first and the second half of the text in Fig. 4.

le 7. Mai 1813.

J'ai visité hier M. Desfontaines. je me suis trouvé avec ce lieu  
 avec le bon M. Dehance, avec M. De Mirbel, dans le laboratoire  
 de botanique. Cela m'a posé les yeux, comme de si qu'on s'imagine.  
 Je vous noterai quelques choses, de ma conversation <sup>intéressante</sup>  
 on ne trouve point dans les deux mondes, des plantes végétales  
 semblables, quoiqu'il y en ait de genres qui le sont. — Le miracle de création  
 est bien remarquable, ce bien beau — seulement la limite  
 boréale, a été rapportée du nord de la Sibirie, la même, quelle  
 végète sur les alpes. — Juste à l'entre les tropiques s'en trouvent de  
 mêmes, en Afrique, et dans l'Inde. — on ne connaît que les deux  
 exemples bien constatés. — la M. Heppelund — a offert une végétation  
 encore plus différente, dans les gradients tantôt, à plusieurs fois  
 les monts, dans les lychens. — et toujours des genres qui se  
 rapportent! —

M. Desfontaines m'a bien posé à un certain point à la naturalisation des  
 arbres. — il observe que les oranges ne rapportent pas au-delà de B. on m'a même  
 écrit de C. Dig. de l'Inde, depuis qu'on les cultive dans nos climats. — il suppose  
 en un mot, que la germination des arbres, ne les amène pas, à rapporter avec  
 le temps, plus de l'Inde, qu'ils ne l'ont, de leur naissance, sur les  
 incrustations d'un trop simple passage. — M. D. — m'a dit, que  
 plus de petits arbres de genre concrets de l'Inde, par des bouillottes de l'arbre  
 de l'Inde, de l'Inde, de l'Inde, qu'il lui a vu l'Inde en pleine terre. — la moyenne  
 à l'Inde. — je crois que genre prononcé, en l'Inde, sur la naturalisation, et  
 l'Inde, soit d'Inde une longue suite d'années par l'Inde. —

J'ai également lu avec le bon M. Desfontaines, et M. Thomsen.  
 il croit qu'on a vu de M. Galois, que l'Inde de M. Desfontaines, et de l'Inde  
 de l'Inde. — je ne sais pas si cette expérience sera suffisante, car l'Inde de  
 l'Inde par les racines, et les germes, que l'Inde de l'Inde, qui l'Inde de l'Inde  
 l'Inde de l'Inde, et de l'Inde de l'Inde, ne l'Inde de l'Inde, qui l'Inde de l'Inde  
 avec l'Inde de l'Inde, et de l'Inde de l'Inde, l'Inde de l'Inde, qui l'Inde de l'Inde  
 l'Inde de l'Inde, et de l'Inde de l'Inde, l'Inde de l'Inde, qui l'Inde de l'Inde

Fig. 4 Notes from Chastenay's visit to Desfontaine's botanical lab at the Muséum, March 7th 1813. The blue rectangle indicates the date. (Archives départementales de la Côte-d'Or, E SUP. 378/6. Reproduction Isabelle Lémonon-Waxin, 2016)

Chastenay's knowledge in the making seems very structured with different categories of class notes (lessons' drafts, cleaned-up lessons, and one-off lessons as diaries). Within these categories, it also appears materially and temporally organized. Further investigations would be needed to fully understand her material practices of knowledge in the making.

The structure of the *chanoinesse's* handwritten pages is further visible in her notes from 1812–13 about Cuvier's public courses on natural history at the *Collège de France*. As she testified in her *Memoirs*, Chastenay would go to the *Collège* in the afternoon, where she would take initial notes that display signs of her note-taking strategies and methodology. She would return home at 5:00 PM, and after the evening's social visits, she would write a clean version of her lesson notes during the night from 1:00 AM onwards.<sup>62</sup> Thus, the intimacy of her bedroom allowed her to prepare her text and to be ready for the following public lessons. A clean version of these notes is still available in the archives.<sup>63</sup> It takes the form displayed in Fig. 4 (a full handwritten page without having divided, added, or crossed anything out). But at the top of the lesson, the date, the number of the lesson and the name of the professor are marked. Her note-taking activity was completed by analyses in the form of appendixes, as presented, for example, in Fig. 5 about Cuvier's classes. Here, Chastenay wrote for herself an index of the scholars quoted during the course, and the objects, century, and location of their studies. The objects are classified both by date and by disciplines, such as chemistry, medicine, botany, and mining.

Chastenay left traces in her *Mémoires* about some of the difficulties she encountered in attending public lectures. To take part in Cuvier's course on natural history at the *Collège de France*, she first contacted her long-time friend and nobleman, the botanist Louis Aubert du Petit-Thouars (1758–1831) to act as a go-between. As a woman, social norms would

<sup>62</sup>She wrote in 1812: "I followed M Cuvier's thirty-five lessons without missing one. M. du Petit-Thouars brought me back home, as it was nearly five [pm], and the day was already absolutely over. [...] I had dinner, then came the toilet, and evenings more or less extended. Often a little tired, I confess, it was at one o'clock in the morning, when I got home, that I had to write my lesson; I wrote them all". Original text: "j'ai suivi sans en manquer une les trente-cinq leçons de M. Cuvier. M. du Petit-Thouars me ramenait, car il était près de cinq heures, et le jour était déjà absolument fini. [...] je dinais, puis venait la toilette, et des soirées plus ou moins étendues. Souvent, un peu fatiguée, je l'avoue, c'était à une heure du matin quand j'étais rentrée chez moi, qu'il fallait écrire ma leçon; je les ai toutes rédigées" (Chastenay, *Mémoires* 1897, 2:189).

<sup>63</sup>ADCO E SUP 378/25.



Dates	noms	objets	autres lieux
16 <sup>e</sup> s.	lobel Polemonium Franklin Lycop Quercus tabernemontanus Jabard Colonne Catalpin Jean Franklin gaspard Franklin	bot. min. nat. id id Insectes obs. id ent. Insectes	France id id France Rome Hologes id id
17 <sup>e</sup> s. Mouton J. J. J.			
16 <sup>e</sup> s. Noms	agricole Libanus gellon Lame Catalpin Folage al. rovide Bernard Volubilis Galea Valentin Paracelso Vatelon Lylwin Villon	musée miner. Livre Linné général L. Potier savants Linné Potier Linné morce alchimie nobles min.	Mines Alchimie général Hologes Hologes Mines art Hologes Lyon
16 <sup>e</sup> s. Noms			

Fig. 5 Index from Chastenay's notes about Cuvier's public lessons on natural history at the Collège de France, written on March 26, 1813. This index is entitled *Appendices des leçons de M. Cuvier*. The light blue rectangle indicates the column of the period (here sixteenth and seventeenth centuries), and the purple rectangles the columns of names, objects, and places. From the sixteenth century onwards, the names of scientific disciplines (anatomy, chemistry, etc.) appear inside the column of the period (pink rectangles). (*Archives départementales de la Côte-d'Or, E SUP. 378/25. Reproduction Isabelle Lémonon-Waxin, 2016*)

condemn her for remaining alone with a large group of men. Cuvier, well aware of this issue, let her know that “as to propriety, [...] Mme Cuvier and her daughter would also be attending the lectures,” so the obstacle would be overcome.<sup>64</sup> Then, du Petit-Thouars escorted her to and from her home to the lectures for her reputation and safety, thus, she would not travel alone across Paris. Chastenay also mentioned the obstacles faced by a woman in her forties in 1811 making astronomical observations at the Paris Observatory at night:

Unfortunately, you can only go in the evening or at night to visit these stars, which I always adore. I could not go alone to the Temple of Urania [the Paris Observatory], I could not even go on foot with a guide: the area is too isolated. Mother even forbade me to go there by carriage; she thought she was pleasing me several times by taking me there in her carriage, but this very complacency on her part could not be pleasing to me: I could not be sure of either the time or the day. Moreover, the talks I came to seek could not, in the presence of my mother, have the character and the kind of scope that, without saying that I was very learned [*savante*], they would undoubtedly have had for me, if I had spoken alone.<sup>65</sup>

Chastenay’s critique of gender norms imposed on women for centuries regarding their appearance in a public space is obvious in her words. Going out alone, talking with a man in a public space at night were considered unchaste, which could ruin the good female reputation (then some references to France and female honour). These implicit gendered rules, which regulated both public and private spaces, were a major obstacle to women’s investment in astronomical observational practices.

<sup>64</sup> “quant a la convenance, [...] Mme Cuvier et sa fille suivraient exactement son cours» (Chastenay, *Mémoires* 1897, 2:189).

<sup>65</sup> “Malheureusement, on peut aller que le soir ou pendant la nuit rendre visite à ces astres, que j’adore toujours. Je ne pouvais aller seule au temple d’Uranie, je ne pouvais même y aller à pied avec un guide: le quartier est trop isolé. Maman m’interdisait même de m’y rendre en fiacre; elle crut plusieurs fois me faire plaisir en m’y menant dans sa voiture, mais cette complaisance très grande de sa part, ne pouvait pas m’être agréable: je ne pouvais être certaine ni de l’heure, ni du jour. De plus, les entretiens que je venais chercher ne pouvaient pas, en présence de maman, avoir le caractère et le genre de portée que, sans me dire bien savante, ils auraient sans doute eus pour moi, si j’avais parlé seule” (Chastenay Chastenay, *Mémoires* 1897, 2: p. 181).

The *chanoinesse*'s example demonstrates that, once again, the location of knowledge production through a gender analysis cannot be simply reduced to the opposition of private-feminine/public-masculine space.<sup>66</sup> As Pauline Schmitt-Pantell states: "The use of the concepts of 'domestic' and 'public' in the study of sex roles calls for the same criticism as that made of the use of the concepts of 'nature' and 'culture'. This opposition seems to be a new variant of the 'reduction of sex categories to their biological definition'"<sup>67</sup>

## CONCLUSION

The case of Victorine de Chastenay clearly shows the extent to which "a room of one's own" was necessary to the practicing *savante*, who required some privacy equally applicable to women and men during their study period. Whatever its configuration, this space necessarily constrained the knowledges produced or acquired inside of it. Conversely, the need to evolve knowledge-making practices could also engender modifications to the original uses for which the space was designed. In this sense, cases involving female *savantes* were not inherently different from their male counterparts. On the other hand, the way these spaces were used was often gender-specific, since those uses were associated with rules of discretion and secrecy rarely applied in men's cases. Even when some women circulated within institutions of learning (such as the *Muséum*'s botany laboratories in the case of Chastenay) in order to participate in the production of knowledges, their presence often remained unofficial: a social visit rather than a scientific one. Nonetheless, the knowledges circulated easily from some women's private spaces of withdrawal into the publications of

<sup>66</sup>See for example, Opitz, Donald L., Bergwik, Staffan and Van Tiggelen, Brigitte. *Domesticity in the Making of Modern Science*. Basingstoke and New York: Palgrave Macmillan, 2015. This opposition is also discussed through the political lens during the early modern period in Becker, Anna. "Gender in the History of Early Modern Political Thought." *The Historical Journal* 60, no.4 (2017): 843–86.

<sup>67</sup>"L'utilisation des concepts de 'domestique' et de 'public' dans l'étude des rôles sexuels appelle la même critique que celle faite de l'emploi des concepts de 'nature' et de 'culture'. Cette opposition paraît être une nouvelle variante de la 'réduction' des catégories de sexe à leur définition biologique". Quoted by Rebecca Rogers in (Rogers, *Le Sexe de l'espace*, note 28).

learned institutions, thanks to the relationships developed by the *savants* alongside of whom these women studied.

This familiarity with *savants*, unusual level of education for a young woman in the early nineteenth century, and high social status, all contributed to the establishment of a favourable environment for the production of Chastenay's knowledges. Respecting the social norms established by her nobility and her gender, Chastenay organized her time and private space to be able to study. She dynamically established a form of knowledge production in between the intimacy of her bedroom, where she prepared her preliminary studies; in the privacy of her home or a lab, where she received private lessons from one or a couple of tutors; and in public exchanges in scholarly institutions and salons. These dynamics were going back and forth between these experiences and locations associated with practical tools such as notebooks and reading notes. This way, Chastenay set up a very structured method to develop her knowledges through note-taking since her childhood, as had some other eighteenth-century learned and privileged women and men. The study initiated in 2020 of her manuscripts, considered for the most part as ego documents, will undoubtedly make it possible in the future to understand better the articulation of her various tools, thanks in particular to digital humanities. The identification of these tools and their uses in relation to various types of knowledges, places, and actors will certainly provide a more detailed understanding of Chastenay's knowledge in the making.

Here, it is through a woman's private practices that knowledge in the making reveals itself, despite the exclusion of her gender from scholarly institutions. However, this exclusion resulted in many learned and privileged women relying on self-censorship and forced reclusion in knowledge production. Privacy was a form of protection of status and credibility for eighteenth- and early nineteenth-century French women who were often considered ridiculous or monstrous in the exercise of knowledge. Thanks to this protection, Victorine de Chastenay left us a precious testimony of the feelings that knowledge in the making awakened in her and that she could hide in the secrecy of her manuscripts written behind a folding screen.

## REFERENCES

## PRIMARY SOURCES

## ARCHIVAL

- Archives départementales de la côte d'or, Fonds Chastenay de Lentz, Papiers de famille. Suite du journal de Mme Victorine de Chastenay*, ADCO E SUP 378/6.
- Archives départementales de la côte d'or, Fonds Chastenay de Lentz, Papiers de famille. Suite du journal de Mme Victorine de Chastenay*, ADCO E SUP 378/7.
- Archives départementales de la côte d'or, Fonds Chastenay de Lentz, Papiers de famille. Notes prises par Mme Victorine de Chastenay sur les cours d'histoire naturelle de Cuvier, d'astronomie d'Arago, à l'Observatoire de Paris, de la philosophie de la nature, par M. de Humboldt, de chimie, de botanique, de physique, etc.*, ADCO E SUP 378/25.

## PRINTED SOURCES

- Bailly, Jean-Sylvain. 1775. *Histoire de l'astronomie Ancienne, Depuis Son Origine Jusqu'à l'établissement de l'école d'Alexandrie*. Paris: Chez les Frères Debure.
- Chastenay, Victorine. 1803. *Calendrier de flore, ou Études de fleurs d'après nature*. Vol. 3. Paris: Crapelet.
- . 1896. *Mémoires de Madame Victorine de Chastenay: 1771–1815. L'Ancien régime. La Révolution*, ed. Alphonse Roserot. Vol. 1. Paris: Plon.
- . 1897. *Mémoires de madame de Chastenay, 1771–1815: L'empire. La restauration. Les cent-jours*, ed. Alphonse Roserot. Vol. 2. Paris: Plon.
- Radcliffe, Ann. 1797. *Les mystères d'Udolphé*. Trans. Victorine de Chastenay. Paris: Maradan.

## BIBLIOGRAPHY

- Algazi, Gadi. 2003. Scholars in Households: Refiguring the Learned Habitus, 1480–1550. *Science in Context* 16 (1–2): 9–42.
- Anderson, Bonnie S., and Judith P. Zinsser. 1990. *A History of Their Own: Women in Europe from Prehistory to the Present*. London: Penguin Books.
- Ariès, Philippe. 1986. *Histoire de la vie privée*. Paris: Seuil.
- Becker, Anna. 2017. Gender in the History of Early Modern Political Thought. *The Historical Journal* 60 (4): 843–886.
- Belhoste, Bruno. 2013. Un espace public d'enseignement aux marges de l'université. Les cours publics à Paris à la fin du XVIIIe siècle et au début du

- XIXe siècle. In *Les universités dans la ville, XVIe-XVIIIe siècles*, ed. Thierry Amalou and Boris Noguès, 217–236. Rennes: PUR.
- Blair, Ann. 2004. Note Taking as an Art of Transmission. *Critical Inquiry* 31 (1): 85–107.
- . 2008. Student Manuscripts and the Textbook. In *Scholarly Knowledge: Textbooks in Early Modern Europe*, ed. Emidio Campi, Simone De Angelis, Anja-Silvia Goeing, and Anthony Grafton, 39–74. Genève: Librairie Droz.
- Bret, Patrice, and Brigitte Van Tiggelen, eds. 2011. *Madame d'Arconville. Une Femme de Lettres et de Sciences Au Siècle Des Lumières*. Paris: Hermann.
- Burke, Peter. 2020. Response. *Journal for the History of Knowledge* 1 (1): 1–7.
- Bustarret, Claire. 2012. Usages Des Supports d'écriture Au XVIIIe Siècle : Une Esquisse Codicologique. *Genesis* 34: 37–65.
- Chartier, Roger. 1985. *Pratiques de la lecture*. Paris: Rivages.
- Cooper, Alix. 2006. Homes and Households. In *The Cambridge History of Science*, ed. Katharine Park and Lorraine Daston, 224–237. Cambridge University Press.
- Daston, Lorraine. 2004. Taking Note(s). *Isis* 95 (3): 443–448.
- Dekker, Rudolf M. 1989. Ego-Documents in the Netherlands 1500–1814. *Dutch Crossing* 13 (39): 61–71.
- Elias, Norbert. 1973. *La Civilisation Des Moeurs (Über Den Prozeß Der Zivilisation: Soziogenetische Und Psychogenetische Untersuchungen)*. Trans. Pierre Kamnitzer. Paris: Calmann-Lévy.
- Fayolle, Caroline. 2017. *La Femme Nouvelle. Genre, Éducation, Révolution (1789-1830)*. Paris: CTHS.
- Gargam, Adeline. 2013. *Les femmes savantes, lettrées et cultivées dans la littérature française des Lumières, ou, La conquête d'une légitimité (1690-1804)*. Paris: Honoré Champion.
- González Bernaldo, Pilar, and Liliane Hilaire-Pérez. 2015. *Les Savoirs-Mondes. Mobilités et Circulation Des Savoirs Depuis Le Moyen Âge*. Rennes: PUR.
- Haraway, Donna. 1988. Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies* 14 (3): 575–599.
- Harkness, Deborah E. 1997. Managing an Experimental Household: The Dees of Mortlake and the Practice of Natural Philosophy. *Isis* 88 (2): 247–262.
- McKeon, Michael. 2006. *The Secret History of Domesticity: Public, Private, and the Division of Knowledge*. Baltimore: JHU Press.
- Nicoli, Miriam. 2013. *Les savants et les livres: autour d'Albrecht von Haller (1708-1777) et Samuel-Auguste Tissot (1728-1797)*. Genève: Slatkine.
- Opitz, Donald L., Staffan Bergwik, and Brigitte Van Tiggelen. 2015. *Domesticity in the Making of Modern Science*. Basingstoke and New York: Palgrave Macmillan.
- Pardailhé-Galabrun, Annik. 1988. *La naissance de l'intime: 3000 foyers parisiens XVIIe-XVIIIe siècles*. Paris: Presses universitaires de France.

- Pestre, Dominique. 2015. Ecrire une histoire des sciences et des savoirs de longue durée. In *Histoire des sciences et des savoirs. De la Renaissance aux Lumières*, vol. 1, 9–15. Paris: Seuil.
- Richardson, Catherine, Tara Hamling, and David Gaimster. 2016. *The Routledge Handbook of Material Culture in Early Modern Europe*. London: Routledge.
- Rogers, Rebecca. 2000. Le Sexe de l'espace: Réflexions Sur l'histoire Des Femmes Aux XVIIIe-XXe Siècles dans Quelques Travaux Américains, Anglais et Français. In *Les Espaces de l'historien*, ed. Jean-Claude Waquet, Odile Goerg, and Rebecca Rogers. Strasbourg: Presses universitaires de Strasbourg, 181–202.
- Schiebinger, Londa. 1989. *The Mind Has No Sex?: Women in the Origins of Modern Science*. Cambridge: Harvard University Press.
- Scott, Katie. 1995. *The Rococo Interior: Decoration and Social Spaces in Early Eighteenth-Century Paris*. London: Yale University Press.
- Simonet-Tenant, Françoise. 2009. À La Recherche Des Prémices d'une Culture de l'intime. *Itinéraires* 4: 39–62.
- Sonnet, M. 1987. *L'éducation Des Filles Au Temps Des Lumières*. Paris: Éditions du Cerf.
- Terrall, Mary. 2003. The Uses of Anonymity in the Age of Reason. In *Scientific Authorship: Credit and Intellectual Property*, ed. Mario Biagioli and Peter Galison, 91–112. London and New York: Routledge.
- . 2011. Frogs on the Mantelpiece: The Practice of Observation in Daily Life. In *Histories of Scientific Observations*, ed. Lorraine Daston and Elizabeth Lunbeck, 185–205. Chicago: University of Chicago Press.
- . 2015. Masculine Knowledge, the Public Good, and the Scientific Household of Réaumur. *Osiris* 30 (1): 182–201.
- von Oertzen, Christine, Maria Rentetzi, and Elizabeth S. Watkins. 2013. Finding Science in Surprising Places: Gender and the Geography of Scientific Knowledge Introduction to 'Beyond the Academy: Histories of Gender and Knowledge'. *Centaurus* 55 (2): 73–80.
- Wolf, Virginia. 1951. *Une chambre à soi. (A Room of One's Own)*. Trans. Clara Malraux. Paris: Robert Marin.
- Zinsser, Judith P. 2005. *Men, Women, and the Birthing of Modern Science*. DeKalb: Northern Illinois.
- . 2006. *Emilie Du Châtelet: Daring Genius of the Enlightenment*. New York: Viking.

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