

Women in the History of Philosophy and Sciences 11

Ruth Edith Hagengruber *Editor*

Époque Émilienne

Philosophy and Science in the Age
of Émilie Du Châtelet (1706–1749)

 Springer

Women in the History of Philosophy and Sciences

Volume 11

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As the historical records prove, women have long been creating original contributions to philosophy. We have valuable writings from female philosophers from Antiquity and the Middle Ages, and a continuous tradition from the Renaissance to today. The history of women philosophers thus stretches back as far as the history of philosophy itself. The presence as well as the absence of women philosophers throughout the course of history parallels the history of philosophy as a whole.

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Ruth Edith Hagenruber
Editor

Époque Émilienne

Philosophy and Science in the Age of Émilie
Du Châtelet (1706–1749)

 Springer

Editor

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Series Foreword

The history of women's contributions to philosophy and the sciences dates back to the very beginnings of these disciplines. Theano, Hypatia, Du Châtelet, Agnesi, Germain, Lovelace, Stebbing, Curie, Stein are only a small selection of prominent women philosophers and scientists throughout history.

The Springer Series *Women in the History of Philosophy and Sciences* provides a platform for publishing cutting-edge scholarship on women's contributions to the sciences, to philosophy, and to interdisciplinary academic areas. We therefore include in our scope women's contributions to biology, physics, chemistry and related sciences. The Series also encompasses the entire discipline of the history of philosophy since antiquity (including metaphysics, aesthetics, philosophy of religion). We welcome also work about women's contributions to mathematics and to interdisciplinary areas such as philosophy of biology, philosophy of medicine, sociology.

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The Springer Series *Women in the History of Philosophy and Sciences* will publish monographs, handbooks, collections, anthologies, and dissertations.

Paderborn, Germany
Cleveland, USA
Vercelli, Italy

Ruth Edith Hagenruber
Mary Ellen Waithe
Gianni Paganini

Preface

Ten years on from the volume *Émilie Du Châtelet between Leibniz and Newton* (2011), research into the philosopher Émilie Du Châtelet has gained considerable momentum. This volume on Du Châtelet is named *Époque Émilienne. Philosophy and Science in the Age of Émilie Du Châtelet (1706–1749)*. The title calls for more than an analysis of Du Châtelet's theories, it expresses the need for research to situate Du Châtelet in her epoch.

To dedicate an epoch in the history of philosophy to Du Châtelet today may still seem a challenge to many, though the editor of this volume is convinced that this is only the beginning of a wide-ranging re-reading, rethinking, and even re-naming of epochs in the history of philosophy. Du Châtelet is the right author to start with. A change in thought is needed.

I am grateful and pleased that outstanding researchers supported me in this intention to rethink and rewrite a small part of the history of philosophy. These authors have either participated in the conference that took place under the same title in 2017, or have taken up my invitation to participate in this volume.

While it is one of the typical tasks of an editor to unify style, format, reference, and so forth, it is a special challenge in the case of Du Châtelet. There are several reasons for this. It is about the international reception of Du Châtelet in the English language, which is a reception based on a translation; thus, it is about the standardization of references, but also about making the work itself accessible in such a way that a stable reference corpus is presented that supports further research.

Du Châtelet's work had to be presented in such a way that it can be integrated into a research tradition that is itself immense and diverse. Especially in the case of an author whose work is not yet part of the great tradition, but rather must seek access to it, the formal accessibility and comparability of the results was a goal that was set out in this collection of essays.

A reference system was needed for the different contributions that refer to different sources to allow for compatibility between references, comparability between research results and to facilitate access for all those who are only now beginning to familiarise themselves with the subject. In order to facilitate this reception, a standardization in style and format is vital for opening up a philosophical work.

To facilitate this cause, I have taken measures with regard to the citations of her works and translations. Standardizations have been used in the spelling of her name and of terms.

Du Châtelet published her work relatively successfully even during her lifetime, and her writings have been published ever since. A list of abbreviations has been created and the references have been unified for all contributors in the reference to the *Institutions*. Attached to the preface, you will find a *List of Abbreviations* that comprises all the abbreviations used throughout the volume.

Thanks to the English translation provided by Judith Zinsser and Isabelle Baur, Lydia Patton, and Katherine Brading together with their translation group, Du Châtelet's *Institutions de physique from 1740* is now accessible to an international community in the English language.

In 2017, Katherine Brading brought together the pieces. She presents the English translation of the *Institutions de physiques 1740*, Chaps. 1–21 on her webpage, to which all of the above-mentioned authors have contributed.

We refer to these parts in the following way:

The preface and Chaps. 1, 2, 4, 6, 7, 11, 21 (partly), are referred to as (Inst1740eZ). Lydia Patton provided the translation of chapter nine in 2014. This is quoted as: (Inst1740eP). Katherine Brading and her research group translated all remaining chapters quoted here as: (Inst1740eB).

One confusion that can often be observed is that the two main editions of the *Institutions* are mixed together, thus ignoring the differences between the two editions; Du Châtelet's *Institutions de physiques* from 1740, here presented as (Inst1740), and the second version, the 1742 edition of the *Institutions physiques* (Inst1742). The fact that the 1740 text was used as the basis for the English translation, while the most frequently used text in the original language is the 1742 edition, results in the laymen often being irritated at not finding the quote being referred to.

The two editions are not identical, though they show a heavy overlap. The first edition from 1740 is 450 pages long, the second edition from 1742 has 475 pages. The two editions are not identical. Some paragraphs have been lengthened or even subjected to crucial changes. The second edition entails Du Châtelet's dispute with the secretary of the French Academy, Mairan, published in 1741 and has 542 pages.

It is important to take care of this difference. All contributions refer to the same editions according to the same citation method. The presentation of the references has been standardized: The abbreviation Inst1740/42 is followed by the chapter(.)paragraph.

Only two papers have not been adapted in line with this standardization, as it was appropriate in these particular cases to retain the pagination.

The writing of Du Châtelet's name has been standardized according to the arguments presented by Ulla Kölving and Judith Zinsser.

Living Forces, named also as *forces vives*, *vis viva*, and others, plays a role in various contributions and was widely standardized until there were special reasons, e.g., due to Italian references. Other terms were supplemented when the technical term was essentially relevant in the article.

It is a particular challenge to present a French-writing philosopher in the English language! And yet it is necessary to reach out to an international community. Thus, we were facing the challenge of having French-speaking contributors writing on Du Châtelet in English but also having to present French quotations in the English translation: I am grateful to the French-speaking authors in this volume who were willing to kindly comply with this policy. An internal French-language presentation is appropriate and reasonable and added in the footnotes.

I would also like to thank the reviewer of the volume for the many valuable comments and critical remarks.

Paderborn, Germany
September 2021

Ruth Edith Hagenruber
Center for the History of Women
Philosophers and Scientists

Abbreviations

- (Corr2018) Du Châtelet, É. 2018. *La Correspondance*. 2 vols. Édité par U. Kölving et A. Brown. Ferney-Voltaire: Centre international d'étude du XVIIIe siècle. (This edition contains all letters that are included in LettB1958).
- (Diss1739) Du Châtelet, É. 1739. Dissertation sur la nature et la propagation du feu. In *Recueil des pièces qui ont remporté le prix de l'Académie royale des sciences en 1738*, 85–168. Paris: Imprimerie royale.
- (Diss1744) Du Châtelet, É. 1744. *Dissertation sur la nature et la propagation du feu*. Paris: Prault fils.
- (Ex2011) Du Châtelet, É. 2011. *Examens de la Bible*. Edited by Bertram Schwarzbach. Paris: Champion.
- (Inst1740) Du Châtelet, É. 1740. *Institutions de Physique*. Paris: Prault fils.
- (Inst1740eB) Du Châtelet, É. 2017. *Foundations of Physics*, translated by K. Brading, a.a., available at www.kbrading.org.
- (Inst1740eP) Du Châtelet, É. 2014. *Foundations of Physics, Chapter 9* translated by L. Patton, in: *Philosophy, Science, and History: A Reader*, London: Routledge, 332–342.
- (Inst1740eZ) Du Châtelet, É. 2009. *Selected Philosophical and Scientific Writings*, translated by I. Bour and J. Zinsser, edited by J. Zinsser, Chicago & London: The University of Chicago Press, 115–200.
- (Inst1742) Du Châtelet, É. 1742. *Institutions physiques de madame la marquise Du Chastellet adressées à M. son fils*: Nouvelle édition, corrigée et augmentée considérablement par l'auteur. Amsterdam: Aux dépens de la Compagnie.
- (Inst1743Nat) Du Châtelet, É. 1743. *Der Frau Marquisinn von Chastellet Naturlehre an ihren Sohn*. Erster Theil nach der zweyten Französischen Ausgabe übersetzt von Wolfgang Balthasar Adolf von Steinwehr. Halle & Leipzig: Rengerische Buchhandlung.
- (Inst1743Ve) Du Châtelet, É. 1743. *Istituzioni di Fisica di Madama la Marchesa du Chastelet indirite a suo figliuolo*. Traduzione dal linguaggio francese nel toscano, accresciuta con la Dissertazione sopra le forze motrizi di M. de Mairan. Venezia: Presso Giambattista Pascali.
- (LettB1958) Du Châtelet, É. 1958. *Les Lettres de la marquise Du Châtelet*. Publiées par T. Besterman. 2 vols. Genève: Institut et Musée Voltaire.
- (Lettre1738) Du Châtelet, É. 1738. Lettre sur les Éléments de la Philosophie de Newton. Paris. *Journal des sçavans*, 534-41.
- (Mai1741) Du Châtelet, É. 1741a. *Réponse de madame la marquise Du Chastellet à la Lettre que M. de Mairan, secrétaire perpétuel de l'Académie royale des sciences, lui a écrite le 18 février 1741 sur la question des forces vives*. Bruxelles: Foppens.
- (Mai1741D) Du Châtelet, É. 1741b. *Zwo Schriften, welche von der Frau Marquise von Chatelet, geborener Baronessinn von Breteuil, und dem Herrn von Mairan, beständigem Sekretär bei der französischen Akademie der Wissenschaften, das Maaß der lebendigen Kräfte betreffend*,

- gewechselt worden*. Aus dem Französischen übersetzt von Louise Adelgunde Victoria Gottsched, geb. Kulmus. Leipzig: Breitkopf.
- (MandevilleCom2020) Du Châtelet, É. 2020. *The Mandeville Commentary*. A historical and critical online edition by R. E. Hagengruber, A. Brown, U. Kölving, S. Ertz. 2020–2021. <https://historyofwomenphilosophers.org/stp/documents/view/mandeville>.
- (Mirac2001) Du Châtelet, É. 2001. Discours sur les miracles de iesus traduit de l'anglois, written by Thomas Woolston. In: Trapnell, *Six Discours sur les miracles de notre sauveur. Deux traductions manuscrites du XVIIIe siècle don't une de Mme Du Châtelet*, Paris: Honoré Champion.
- (OptMsB) Du Châtelet, É. *Essai sur l'optique*. Manuscript University Library Basel. Shelf mark: UB Basel Handschriften L Ia 755, fol. 230–265.
- (Opt2017) Du Châtelet, É. 2017. *Essai sur l'Optique: The Basel Manuscript*. Edited by Bryce Gessell, Fritz Nagel, and Andrew Janiak. Project Vox. Durham, NC: Duke University Libraries, 2017. URL: <http://projectvox.org/du-chatelet-1>.
- (PhilWrit2009) Du Châtelet É. 2009. Selected Philosophical and Scientific Writings, edited and translated by Judith Zinsser, translated by Isabelle Bour. Chicago & London. The University of Chicago Press.
- (Princ1759) Du Châtelet, É., and Newton, I., 1759. *Principes mathématiques de la philosophie naturelle de Newton: Par feu madame la marquise Du Chastellet*. 2 vols. Paris: Desaint et Saillant.
- (Princ1966) Du Châtelet, É., and Newton, I. 1966. *Principes mathématiques de la philosophie naturelle de Newton*. Par feu madame la marquise Du Chastellet. Paris: Albert Blanchard.
- (Princ1990) Du Châtelet, É., and Newton, I. 1990. *Principes mathématiques de la philosophie naturelle*. Sceaux: Jacques Gabay.
- (Princ2005) Du Châtelet, É., and Newton, I. 2005. *Principes mathématiques de la philosophie naturelle*. Traduit de l'anglais par la marquise Du Châtelet. Préface de Voltaire. Paris: Dunod.
- (Princ2015) Du Châtelet, É. and Newton, I. 2015. *Principes mathématiques de la philosophie naturelle*. La traduction française des Philosophiae naturalis principia mathematica. Vol. I-II. Édition critique du manuscrit par M. Toulmonde. Ferney-Voltaire: Centre international d'étude du XVIIIe siècle.
- (StPms 2020–2021) Du Châtelet, É. 2020–2021. The Saint Petersburg Manuscripts. A historical and critical online edition. Edited by R. E. Hagengruber, A. Brown, S. Ertz, U. Kölving. <https://historyofwomenphilosophers.org/stp/>.

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Ruth Edith Hagengruber holds a chair dedicated to the philosophy of Economics and Information Science at Paderborn University. She is also Director of the Center for the History of Women Philosophers and Scientists. She got her Ph.D. with a thesis on Tommaso Campanella at Ludwig Maximilian-University Munich. From 2011–2019 she served in the Advisory Board of Technology in Society for the Technical University Munich and became Life-member of the International Association of Philosophy of Information Science in 2011 and in 2020, elected member of the *Leibniz-Sozietät der Wissenschaften zu Berlin*. She serves as chief editor of the German Springer series *Frauen in Philosophie und Wissenschaft* and as co-editor of the International Springer series *Women in the History of Philosophy and Science*. Publications: *Von Diana zu Minerva* (2010); *Émilie Du Châtelet between Leibniz and Newton* (2011) *History of Women's Ideas*, coedited with Karen Green (2015); *Émilie Du Châtelet und die deutsche Aufklärung*, coedited with Hartmut Hecht (2019). With Sarah Hutton, she coedited the *British Journal for the History Philosophy*, dedicated to Early Modern Women Philosophers. In cooperation with Sigridur Thorgeisdottir *Methodological Reflections on Women's Contribution and Influence in the History of Philosophy* was published (2020).

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Chapter 1

An Introduction to the Volume



Ruth Edith Hagenruber

This is—to my knowledge—the first time an edition of scholarly papers dedicated to a female philosopher has been presented that demands that an epoch in the history of philosophy be named after that philosopher: it brands this epoch in the history of philosophy as the *Époque Émilienne*. Du Châtelet deserves the honor of standing among the most influential philosophers of the European Tradition. It is rather remarkable, instead, that her intellectual power, the high esteem Du Châtelet enjoyed in her lifetime did not allow her to become part of that illustrious tradition of names we associate with the Enlightenment. The broad spectrum of her scientific and philosophical contributions, and her numerous and notable publications make her appear to be one of the most outstanding figures of the epoch. With Du Châtelet, this volume takes a different perspective on the question of how to write the history of philosophy from now on, considering the writings of women philosophers.

Du Châtelet deserves the honor of standing among the most influential philosophers of the European Tradition. It is rather remarkable, instead, that her intellectual power, the high esteem Du Châtelet enjoyed in her lifetime and the many publications mentioning her in that period, did not allow her to become part of that illustrious tradition of names we associate with the Enlightenment, though she was part then. The broad spectrum of her scientific and philosophical contributions, and her numerous and notable publications (a considerable number of which were already published during her lifetime and only continued afterwards), make her appear to be one of the most outstanding figures, who, moreover, is easily accessible and who, in any case, also provides access to other, possibly not so easily accessible achievements contributed by women philosophers.

The *Époque Émilienne* thus opens the gates for other female philosophers to enter the stream of the history of philosophy and its ideas, of which they have been

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ostracized not for lack of talent, but for so evident sexist and selfish arguments, for such a long time. With Du Châtelet, this volume takes a different perspective on the question of how to write the history of philosophy from now on, considering the writings of women philosophers.

The aim of the volume is to present to the reader up-to-date contributions on an important epoch in the history of philosophy, which has so often been written without taking women philosophers, and Émilie Du Châtelet in particular, into account. So, the aim is to show how a story reads that integrates these texts; it is also intended to situate and contextualize Du Châtelet as a philosopher in the stream of the history of philosophy. It may bring to attention how intensively her ideas have been employed over centuries, without mentioning her, but at the same, the volume may visualize to what extent she was integrating herself a number of important ideas and acting like a catalyst in a scholarly network of the first rank. We will see and learn how she competed with important and well-known figures in her time to which she felt equal.

The idea to expose Du Châtelet as a key figure in her epoch came to me when I organized a conference in cooperation with the German Society for French-speaking philosophy, for which, some years ago, I served as vice president. This event should offer new studies that had come forward after the volume *Émilie Du Châtelet between Leibniz and Newton* had been published that was able to enhance Du Châtelet research on a broader scholarly level (Hagengruber, 2011a). The Du Châtelet Research has gained considerable momentum since then. Outstanding researchers in the field have been willing to contribute to this undertaking and to the intended aim. Therefore, most of the contributions were not presented at the conference at all, most of them not, as they are presented here; I would like, however, to mention one paper, which introduces us to Du Châtelet's core topic of her philosophy and that was already prepared for publication then. Gianni Paganini's contribution to *Du Châtelet's Epistemology of Hypotheses*, which is also the first paper in the volume. I am grateful to the colleagues willing to join this enterprise and to support and broaden the view on Du Châtelet's oeuvre and impact.

While this vast collection evolved, earlier projects on Du Châtelet were finalized and partly influenced the becoming of this collection.

Especially I would like to mention the monography from Brading (2019), which inspired several articles in this volume.

As a result of the impact, Du Châtelet had in Germany, before and in Kant's philosophy, an intensive re-reading of Du Châtelet's footprints in German sources started. Ursula Winter, Dieter Suisy, Andrea Reichenberger, and other outstanding colleagues supported us to discover Du Châtelet's reception in the German enlightenment, retracing her impact from Euler to Kant and others. In cooperation with Hartmut Hecht, I published the volume on *Émilie Du Châtelet und die deutsche Aufklärung* in 2019. Kant had written his first dissertation on living forces, quoting extensively from Du Châtelet's dispute with Mairan (AA I, 1–181). *Émilie Du Châtelet und die deutsche Aufklärung* (Hagengruber & Hecht, 2019) is to be regarded as a precursor of the collection presented here.

During the same period, the critical and digital online edition of the *Saint Petersburg Manuscripts*, undertaken at the Center for the History of Women Philosophers

and Scientists started and became part of some of the contributions then and here included (StPms2020-2021). Du Châtelet's *Saint Petersburg Manuscripts* hosted in the Russian National library are available in an online presentation in the original language, supplemented by an English translation and critical and historical notes.¹ The manuscripts amount to an important philosophical work mostly written in the time before the publication of the *Institutions de physique* in 1740. In 2020, with the support from the Deutsche Forschungsgemeinschaft and in cooperation with Hanns-Peter Neumann I was awarded a grant to prepare the critical and historical online edition of the *Institutions de physiques*, based on the *Paris Manuscript BNF no. 12.265*.² This manuscript contains Du Châtelet's first drafts for publication of the *Institutions de physique*, originally planned to be published in 1738 and redrafted with considerable changes, to be published first in 1740.

These efforts may be counted as preliminary stages to the collection presented here, but it cannot be expected that the findings retraced and presented there could have been integrated into this volume. These are all individual necessary steps that serve to reintegrate Du Châtelet into the history of philosophy and into the scholarly discussions she has been part of.

In 2010, considerable parts of Du Châtelet's manuscripts were sold at auction; These are now not accessible for public research. Moreover, it requires considerable sums of research to process these manuscripts, which are invaluable for a true understanding of what happened then and to the writings of Du Châtelet as well as to understand her philosophy and impact. So, there is to admit that this volume is only one of the premature steps to bring this opus into the focus, being aware of what we are still missing. Though we cannot offer the complete solution, we offer at least to start with it to overcome the deficiencies of the history of philosophy. But I dare to claim that many contributions in this volume serve to enlighten the Du Châtelet reader and to reflect her ideas within different philosophical disciplines. Du Châtelet was a busy and inspired writer who contributed to various fields in philosophy, proving once again her outstanding genius and her philosophical creativity. She evolved new ideas in epistemology and methodology, she rethought metaphysics and the philosophy of science. She reflected on the foundations of natural philosophy, physics, and mathematics, and contributed to ethics, morals, politics as well as she wrote extensively on cultural issues such as the relation of science and religion.

¹ The critical texts are supplemented by translations into the English language:

Chapitre V *De la liberté* and *Traité de métaphysique*: Linda Gardiner Janik; Chapitre IV *De la formation des couleurs*: Alan Gabbey; Du Châtelet's comment and translation of Bernard Mandeville, *La fable des abeilles*: Felicia Gottmann; *Grammaire raisonnée*: Jill Vance Buroker. This critical and historical online edition was partly published in 2020 (MandevilleCom2020). The project is completed in 2021 (StPms2020-2021).

² See: The Genesis of Émilie Du Châtelet's *Institutions de Physique*: From the Paris Manuscript 12.265 (1738–40) to the Printed Editions (1740, 1742), edited by R. E. Hagengruber, H.P. Neumann, J. Muller and A. Wells (2021–2022) see: <https://historyofwomenphilosophers.org/dcpm/>.

1.1 The *Époque Émilienne*—Renaming the History of Philosophy and Science from a New Perspective

Essential ideas connected to Humanism, Renaissance, and Early Modern philosophy stem from women’s pens (Hagengruber, 2020a). Female scholars excelled in various fields in that period. Margret Cavendish, Elisabeth of Bohemia, Anne Conway, Émilie Du Châtelet, and Mary Wollstonecraft are hardly overlooked today grace to the intensive work of the past forty years (Waithe 1987–1995; Green, 2014; Green & Hagengruber, 2015; Hagengruber & Hutton, 2021).

Because of the blindness with which this rich history has been ignored for so long, it must be pointed out once again about Du Châtelet that she was by no means an isolated or singular phenomenon of her time. In 1733, Italy boasted the university professor and physicist Laura Bassi (1711–1788); Germany celebrated the young and impudent Luise Gottsched (1713–1762). In the *Preface* to the *Mandeville Commentary* Du Châtelet, therefore, rightfully laments that she had much too long “cared for hair and teeth” while not only the above-mentioned intellectuals stood already in the European scientific spotlight (MandevilleCom2020). Compared to Laura Bassi and Luise Gottsched, she was rather a late bloomer. These women were contemporary celebrities whose names sounded in whole Europe, before Du Châtelet even entered the scene. Due to an enlightened endeavor keen to bring women in and to present them as part of a scholarly community, activities in Italy, France, England, Germany, and more countries were taken to include women intellectuals as “Minervas” of their time, boosting them as symbols of national pride (Brucker, 1745a vol. IV; Hagengruber, 2019).

In the light of a more inclusive history, Du Châtelet is by no means a singular phenomenon, though she was successful and significant given the breadth of her contributions, the success of her publications, and the impact of her writings in her network and in her time. When judging her rich scientific heritage, it must be taken into consideration that she is situated within a rich tradition, a culminating point in a long evolving stream of women’s intellectual raise. As a “latecomer” in this tradition, her excellence did not come out of the blue, neither in terms of the historical context, nor the context provided by her family. Supported by a father known as an admirer of the naturalist philosophers Antoinette du Ligier de la Garde, mme. Deshoulières (1638–1694), it is reported that her mother prided herself on being acquainted with the “male sciences” of theology and astronomy (Hagengruber, 2016).

Brucker, historiographer of the era and author of the *Pinacotheca of the Most Illustrious Men*, included Du Châtelet (Brucker 1745a, b vol IV), along with Bassi and Gottsched, to this collection. Brucker also provides some reasons to justify his inclusion, given that otherwise they were actively excluded. Brucker holds, outstanding women contributed to philosophy “in all times and all nations” (Brucker, 1741a, b vol I; Hagengruber, 2019). When he introduces Du Châtelet, he situates her into an imaginary, but intentionally inclusive history that starts with women in the Chaldeans, Persians, Indians, Egyptians, Celts, and “other non-Greek people”, who had “no qualms to grant women a place among their sages” (Brucker, 1745a, b, vol IV). It is

the “honor of the female sex that Plato learned his philosophy from Diotima and was Aspasia’s disciple”. Brucker refers to Arete, Theano, Hipparchia, Leontia, Themista, and more, proving his claim that women participated in philosophy and science in “all nations” and “all times”. He also refers to “Elisabetha Palatina, et Christina Suecorum regina”, female intellectuals still well known in the period of Du Châtelet, to signal that Du Châtelet’s outstanding achievement was special, but not singular. As Brucker holds, Du Châtelet’s scholarship added to Descartes, not only by her capacities to know and to judge Newton and Leibniz, but also in being able “to balance these philosophers against each other”. She is an “*exemplum philosophantium mulierum hodie celeberrima*”, as she is able to “choose, to select, and to define”, worthy to sit alongside Johann Bernoulli in his volume.

Today’s judgment on women philosophers’ contribution to the history of philosophy differs from what sources like the abovementioned prove. For long, Du Châtelet is no longer part of this list of the “most illustrious men”. Instead of following Brucker, today’s established view on women’s contribution to the intellectual development is branded by Fontenelle’s narrative that is still repeated in 2002, when Jonathan Israel claims that only by the grace of the generosity of Fontenelle’s instruction the doors to science and philosophy were opened to women (Israel, 2002, 83). The contributions in this volume serve to understand better the struggles then and now that are also presented exemplarily within the contradicting policies followed by Brucker and Fontenelle.

1.2 A New Way to Read the History of Philosophy. Du Châtelet’s Contributions and Impact in the Development of Philosophy and Science

This volume includes twenty-three papers that contribute in different ways to illuminate Du Châtelet’s philosophy and scientific work and its impact. All these papers are rich in information. The challenge for me as the editor lay in the fact that the order of texts also indicates and discloses contents, lines of descent and connections, affiliations and impacts, developments, and overlaps. There had been several ways to highlight what I take to be the most fruitful paths to continue to disclose this oeuvre. It involved me in problems: layers upon layers were needed, there is a trail of discussion on materialism in her writings, and there are paths that connect the works in physics to those in morals and so forth. My aim of revealing as many of these relationships as possible would again have resulted in a new essay, because of course it is my interpretation that sees and sets these relations.

There are important topics in the history of philosophy by which I organized now a way through her work, for example, her presence in the philosophical traditions in Germany, Italy, and France. This overlapped, and it was not completely separable from the assignment to different themes: The influence on the German Enlightenment, its position in Italy and in France. For Germany and Italy, the debate about

Leibniz and Newton is the most urgent topic, while few sources dealing with her moral writings are known there so far.

Besides this quite strict order, many overlaps can be detected. The cause of which is grounded in the fact that the systematicity of Du Châtelet's thought is visible in different parts of her work, at different stages of her life, and even in different disciplines.

The innovative character of her writings and the turn of perspective she is introducing to philosophy, allowed her to put at stake established ways of thinking and to overcome confinements and conventional assumptions. These now lead us to astonishing connections that we may discover in different places and that may finally support to establish piece by piece the philosophical oeuvre of Du Châtelet. This is to repeat that this vast volume can only begin to disclose the richness of this author's ideas. Du Châtelet's enlightened claims cannot be judged independently and must be explored in their systematicity, though as the editor I face the problem of how to present the richness of Du Châtelet's ideas to a readership who accesses Du Châtelet as a philosopher from very divergent angles.

The subsequent discussion serves as a *thematic guide* to the volume's contents. It is also, indirectly, a guide to some of the main ways in which historiography can justifiably regard this time period as an *Époque Émilienne*.

Is this a volume for those who are already familiar with Du Châtelet or is it for beginners? I do hope that it is for all of them. What might be the most philosophical and recommendable instruction for reading the volume is to keep to what Du Châtelet herself holds. Dear reader, approach this volume as an unprejudiced thinker, not following idolatries. The task of doing philosophy is not done by repeating the big names.

1.3 The Principles of the Organization of This Volume

Besides the endeavor to present Du Châtelet's ideas as clear and precise, and to situate it in the context of the time and to ask its importance for today, given the above-mentioned overlaps between the single contributions, it remains a challenge to the editor to place these ideas into a linear order. But this is it. I start with an article that tackles what I think is a core topic of Du Châtelet's philosophy, without which one cannot understand the innovative character of her ideas: namely, the chapter of the *Institutions* on hypotheses. This is followed by five papers that tackle Du Châtelet's fate in Germany, paying tribute to the fact that her philosophy was influential for many well-known figures. As the topic is close to the Leibniz-Newton discussion, I go on to present three papers on this topic, investigating this field and analyzing her specific contribution and relation to other scholars. I end this thematic section with two contributions on Newton, one of which is more formal and describes the effects of her work in the translation, and another which interprets her commentaries. However, it also seemed interesting and important to me to trace Du Châtelet's impact elsewhere in Europe. So I have added two further topical sections, one containing

two papers dealing with Du Châtelet in Italy, and the other treating Du Châtelet's formation and scholarly situation in France. This includes her reception in France, and locates her ideas in the context of the French Enlightenment, including the clandestine Enlightenment.

Two papers that treat the legacy of Du Châtelet in different ways complete this selection: one detailing the status of the manuscripts conserved in Saint Petersburg, and another providing valuable information on the many differences that can be found comparing exemplars of the 1740 edition of the *Institutions de physique*. In view of the publication history, this is a highly informative source.

1.4 Retracing Du Châtelet's New Epistemology

Du Châtelet's chapter four from her *Institutions, On Hypotheses*, is both in her epoch and now the work's most quoted, repeated, plagiarized chapter. It is, to my view, a catalyst chapter for her philosophy and crucial to understand the epistemic layout of the *Institutions de physique* (Inst1740) as well as other, later writings. That all we know is known as "only" hypothetical and bound to a knowledge that is never true, but only "truthlike", is the core idea of Du Châtelet's new epistemology that frames all disciplines she is occupied with. It serves also for her to overcome the divide of the rational and empiricist epistemic claims. All we know is nothing else than hypothetically disclosed, though truthlike knowledge, reliable insofar as it is structured and brought to consistency by methodical principles "evident to everyone". Against the then famously and often quoted Newton's "hypotheses non fingo", she demonstrates that Newton's system itself was a hypothesis of genius. She was right: this system fits wonderfully into new hypotheses on the universe, when new insights were discovered. Du Châtelet established hereby the epistemic concept of "truthlikeness" as an instrument of knowledge. She holds that probability is "nearly an equivalent" to the demonstration.

According to Gianni Paganini's contribution in this volume, *Émilie Du Châtelet's Epistemology of Hypotheses*, she proposed an original position, an autonomous contribution in this field, and "a major innovation". "It took more than three centuries for epistemologists and historians of the sciences to recognize Du Châtelet's primacy in what can be considered the process of the rehabilitation of the hypotheses" and the oblivion into which the methodology of the *Institutions* fell, is "somewhat paradoxical", Paganini holds. D'Alembert and Condillac, major sources for the philosophy of hypotheses, were both well versed in Du Châtelet's philosophy and the quotations make up more than half of d'Alembert's article in the *Encyclopedia*, as was acknowledged at the end of the entry itself. Condillac's *Traité des systemes*, published nine years later, was according to Paganini also very probably influenced by the *Institutions*, according to Paganini. Without being named, she became a weighty source of a new methodology in philosophy and science shaping the influential trends up to the contemporary philosophy of science. The pioneering work of Du Châtelet was not taken into consideration and fell into oblivion.

1.5 Du Châtelet in Germany

Du Châtelet's relevance within the German reception is not completely new. Her *Institutions* counted among the most recommended books still at the end of the eighteenth century and it is well known that the young student Immanuel Kant had tried to contribute to the discussion of *living forces*. He intensively referred to the debate Du Châtelet had with the secretary of the French Academy Mairan. The dispute was even translated and presented in Germany in the same year of its French publication (Mai1741D).

There is evidently a lot more in Kant from Du Châtelet than ever looked for. She plays a role in the famous Kant-Eberhard controversy and my paper: *Du Châtelet and Kant: Claiming the Renewal of Philosophy* tackles the topic from two historically different perspectives that, however, are systematically interwoven. Kant claimed to have created a new philosophy, being able to retrace our cognition considering its origin and content. Repudiating this claim, Eberhard quotes also from Du Châtelet. While the first part of my paper investigates the role Du Châtelet plays for Eberhard's intention to deny Kant's claim the second part delivers an epistemic layout of why and how Du Châtelet demands the renewal of philosophy and puts the paragraph from which Eberhard quoted in its philosophical background. Du Châtelet's analysis of how we perceive is bound to her analysis on the gap between "cause and phenomenon". It frames her epistemology and I reconstruct her argument on how to "penetrate to the origin of phenomena". The paper aims to shed more light on the inspiration Kant may have drawn from Du Châtelet.

There are some other core ideas that can be seen prefigured in Du Châtelet's *Institutions* before Kant took a hand in them. Such a case is presented by Katherine Dunlop. Her contribution to *The Significance of Du Châtelet's Proof of the Parallelogram of Forces* unveils a link between Du Châtelet and Kant's *Metaphysical Foundations of Natural Science*, published in 1786. Kant's justification of the parallelogram rule for the composition of motions has astonishing parallels in Du Châtelet's *Institutions*, and therefore Dunlop argues to include Du Châtelet's proof into the background studies of Kant's work. Du Châtelet's proof prefigures Kant's argument in stating that for two motions to be composed, one of them must be represented as taking place in "absolute" space and the other, in a "relative" space that moves with respect to the first motion's trajectory. This framework must be employed to "construct" the operation of composition. Any rectilinear trajectory may be considered as a relative space, that is moving with respect to the frame of reference, considered as "absolute". One also might argue, which as in the case before, we learn that an interpretation of Du Châtelet as a Leibnizian scholar is insufficient and her development of Newton's concepts of absolute space must be discussed independently from this. Kant, Dunlop concludes, can be seen as "continuing a project begun by Du Châtelet", and this is true even if it was proved in the very unlikely case that he did not directly make use of her work. But given the many references we find in Kant to Du Châtelet, this is a very unlikely case from today's point of view.

Clara Carus investigates the *Concept of Time in Du Châtelet between Leibniz and Kant*, dedicating her essay to the conceptual analysis of time to understand and focus on Du Châtelet's originality in demonstrating her claims differently than do Kant and Leibniz. This difference is to be seen, as Carus points out, in her philosophical approach to the succession in real beings. Du Châtelet's explication of the constitution of time, i.e., her in-depth analysis of time by "analysis of our ideas in their relation to appearances" distances Du Châtelet's concept of time from both Leibniz's and Kant's concepts of time. Consequently, Du Châtelet constitutes a *subjective* and an *objective* ground in the mind's capacity. Carus locates Du Châtelet's concept of time in a context that is philosophical in terms of an investigation into how the idea of time is formed and constituted rather than a physical debate on the nature of time as a phenomenon relating to the movement of bodies.

In *The Reception of Émilie Du Châtelet in the German Enlightenment in the Light of the Controversy over Monads*, Andrea Reichenberger introduces the reader to the vibrant discussion taking place on Leibniz' *monad*, announced as a prize question from the Berlin Academy. From a letter from Du Châtelet to Johann II Bernoulli, we know that she was intrigued to respond to the Berlin Academy's competition: the monad concept was highly and controversially debated among the most outstanding scholars of the time, including Euler, Kästner, Formey, and other who eventually referred to Du Châtelet's text either to confirm or deny its importance. This debate using Du Châtelet's text proves the presence of her ideas in Germany. Reichenberger specifically investigates Du Châtelet's interpretation of the monad by looking into the concept of matter in motion.

Another source to understand Du Châtelet's fate in Germany is provided by Hanns-Peter Neumann, who retraces *Du Châtelet's place in the Correspondence between Christian Wolff and Ernst Christoph of Manteuffel*. Her assumed dependency on Voltaire and other "female weaknesses" come to the fore, combined with a clear self-interest on Wolff's part to use her for either a remake of the philosophy of the ladies, as delivered by Fontenelle and Algarotti or at least to expect her to "preach" Wolffian philosophy in France. There was a remarkable and ongoing correspondence even between Du Châtelet and Wolff directly, though most of the letters are lost and only recalled in the correspondence with Manteuffel. Beyond the alternating evaluation the two maintained toward Du Châtelet, the historical facts presented from this correspondence are of enormous importance to further our understanding of Du Châtelet's reception in Germany and to understand to what extent Wolff accepted the outcome delivered by her. Other figures from the German enlightenment, such as Formey and Des Champs, are both as readers of Du Châtelet mentioned in this correspondence and even judged. And, interestingly, even then, Wolff complained that Du Châtelet continuously mentioned and referred to Leibniz instead of him.

1.6 Du Châtelet, Leibniz, Newton, and Beyond

Indeed, the German reception focuses widely on the compatibility of Leibniz and Newton. Hartmut Hecht's contribution widens this perspective, proving that this compatibility question had been a challenge not only for Du Châtelet but was a common undertaking discussed in the main circle from which she emerged. *Three French Newtonians and their Leibnizian Background* familiarizes us with the fact that these famous French Newtonian protagonists, Voltaire and Maupertuis, were no less Newtonian and Leibnizian than Du Châtelet. Hecht differentiates three ways to access the relevant problems connected to this fact, and their relevant ideas about how to solve the challenges of mediating between Leibniz and Newton. Voltaire, Maupertuis, and Du Châtelet follow different tracks in connecting and selecting ideas from the two. Maupertuis, Hecht holds, fixated on the Newtonian force of attraction as a possible natural force, insisting and continuing an interpretational pattern of Leibniz' "harmony" of the best possible world. Maupertuis bases his pro-Newton arguments resulting on the method of a choice. Hereby he employs criteria of metaphysical meaning, which became relevant also for his later methodical reflections that God acted according to the simplest way that Maupertuis presented with his *Principle of Least Action*.

A "mis-interpretation" of Leibniz can be seen in Voltaire's reception, starting with Voltaire's use of the *Leibniz-Clarke Correspondence*, and his reference to the principle of sufficient reason. Du Châtelet, according to Hecht, must have been unsatisfied with Voltaire's interpretation, and felt challenged to present a "self-confident and critical" reading of Leibniz. Though she assumed that the primitive forces were related to first or primary elements, it was impossible to anchor our scientific knowledge in primary elements of nature, which she describes, as Hecht puts it, as something like "a Kantian *Ding an sich*". Hecht clarifies Du Châtelet's acceptance of such assumption as "necessary to formulate an empirical judgement", although primary elements of nature are incognizable and cannot be determined. Du Châtelet's quote "It does not rest with me to decide if the monads of M. Leibniz are of the same case" illustrates, according to Hecht that Du Châtelet gave an interpretation of Leibniz's primitive forces which was no longer a metaphysical one in Leibniz's sense. Rather, it gave him an interpretation that had moved apart from Leibniz, concluding, that "Du Châtelet transformed Leibniz's idea of a holistic world consisting of primary elements called monads into a holistic material world".

While Hecht delivers an interpretation on the divergence of the three companions, Ansgar Lyssy in his paper *Leibnizian Causes in a Newtonian World—Émilie Du Châtelet on Causation*—investigates how these different ideas were realized when she decided to draft her *Dissertation on the Nature and the Propagation of Fire* independently from Voltaire. Lyssy hereby highlights the differences to Leibniz and Wolff, also taking a closer look to understand the ongoing changes to that Du Châtelet subjected this text in the course of the publication history.

Du Châtelet's historically significant account of the history of science, as a history of becoming and failing, of arguments and counterarguments, employed in many

of Du Châtelet's writings deserves greater attention. In his contribution, "*Les corps agissent sur la lumière*". *Émilie Du Châtelet's Deliberations on the Nature of Light in her Essai sur l'optique*, Fritz Nagel specializes on Du Châtelet's critical elaborations about Newton's optics. In her presentation of the topic, Du Châtelet introduces the reader to the different and even contradicting traditions in the development of the history of optics and its divergent paths to understand the nature of light. Du Châtelet understood that the attraction between light and matter postulated by Newton was not as evident as the Newtonians claimed; this, Nagel holds, can be regarded as a crucial turning point in her philosophy from a methodological point of view. The Newtonian concept of colors lacked a physical explanation on a mechanical basis. Neither Newton's query "Les corps agissent-ils sur les corps en éloignement?" nor the confirming statement from Du Châtelet "Les corps agissent sur la lumière en éloignement" were valid according to Bernoulli, to whom Du Châtelet had sent the draft of her optics for judgement and so, the essay remained unpublished. Nagel quotes Goethe; Goethe observed that it was astonishing that Du Châtelet did not give a theory of colors in her *Institutions de physique* of 1742, although she had studied optics with great accuracy.

Du Châtelet also did not succeed to get published her translation and her commentary on Newton's *Principia* during her lifetime, though she had completed her translation, as Voltaire says, yet in 1745. The first printing sheets must have been produced long before the publication was finally secured, starting in 1756 and being realized in 1759. Michel Toulmonde presents in his contribution dedicated to *Émilie Du Châtelet and Newton's Principia* his observations gathered in the course of his edition of this translation of the *Principia* (Princ2015, vol I-II). Toulmonde recapitulates the facts regarding the manuscripts, its publication history, its delay, and its different versions. The return of Halley's comet, observed in 1758, finally encouraged the completed publication in 1759. Toulmonde confirms that Du Châtelet's careful transformation of Newton's fluxions to the Leibnizian differential calculus contributed to a much easier access to Newton's *Principia*. Instead of Newton's geometric method, analytical formulas are used, based on Leibniz's differential calculus, along the lines of Johann Bernoulli, Leonard Euler, d'Alembert, and others.

In spring 1749, she wrote to Jacquier that she was going to write her *Short Exposition* of Newton's system "without figures and without algebra" to show Mr. Newton's sequence of principles. This *Short Exposition* was to situate the Newtonian ideas in the path of the development of science and also according to her principles, that is, that the history of science was itself a history of hypotheses, failings, errors, and proven insights. According to Le Ru, Du Châtelet's *short exposition* is a brief "history of science", a true "discours de la méthode", whose idea of the history of science is a history of "rectified errors" (Le Rue, 2019, 103 ff).

In this contribution, *Du Châtelet's commentary on Newton's Principia*, George Smith points out that Du Châtelet's commentary is however *not* a commentary on Newton's *Principia*, "but rather on the system of the world according to Newtonian principles". Correspondingly, the *Analytical Solutions* amounts to a text showing *how* to use the calculus, as it stood in the 1740s, and to solve problems treated only geometrically in the *Principia*. Smith concludes that the whole of her commentary

considers Newton's claims very much from the perspective of the years in which she wrote it.

While the *Short exposition* gives the history of astronomical models from the Babylonians and Pythagoras up to Newton's death, the *Analytic Solution* is an algebraic presentation of disputed topics from the *Principia* that brings Newton up to date. Given the fact that Newton had written in the seventeenth century, various assumptions had meanwhile been confirmed. Du Châtelet gives access to where Newton's theory of the system of the world stood at the time, which the reader could "not readily find anywhere else" and that certainly would not have been available in the physics literature when the *Principia* was published.

Smith stresses Du Châtelet's reference to Hooke, who had claimed priority against Newton. Du Châtelet quotes the full paragraph from *An Attempt to prove the Motion of the Earth from Observations* of 1674, that is the very passage Hooke subsequently invoked as the basis for his claim to priority over Newton.

There are other topics that gain Smith's attention, such as Du Châtelet's account of the numerator, where she expresses the relation with her phrase "se proportione". Smith insists that there is no such phrasing in Newton "and as far as I know, no one in the seventeenth or eighteenth centuries except Du Châtelet used these phrases in regard to gravitational forces": Du Châtelet shows that that gravity varies with the mass of the attracted body, and as he emphasizes, this is the reverse of what Newton did.

1.7 Du Châtelet in Italy

Du Châtelet was an outstanding phenomenon in her time and the eighteenth century did not lack outstanding women. Laura Bassi (1711–1778), at an even younger age than Du Châtelet, was famous throughout Europe (Ceranski, 1996). She had provided her first lectures on the nature of water. Bassi adhered to Locke's empiricist philosophy and served as a female example of excellence in scholarship, exemplifying the new attitude enlightened Europe was willing to show towards women (Hagengruber, 2019). It is important to remind the reader of the strong Italian tradition that extends from the time of humanism up to Enlightenment to more rightly contextualize Du Châtelet's legacy in Italy. This legacy differs from what scholars today are used to learning: the importance of European intellectual interactions, and the role of women in science therein, is often missed.

Italy at the time was a leading scene for the inclusion of intellectual women. Laura Bassi was a member of the Bologna academy and Du Châtelet became one. Du Châtelet's *Institutions* were published simultaneously in Germany and Italy in 1743 (Inst1743Nat; Inst1743Ve). And yet, little has been published on her fortune in Italy, though it must have been considerable, given that her writing was as quickly translated as it was in Germany. This volume provides two excellent introductions to the field.

Sarah Hutton retraces the Italian reception of Du Châtelet in her contribution *Émilie Du Châtelet and Italy. The Italian Translation of her Institutions physiques and the Issue of Forces Vives*, particularly shedding light on Neapolitan family connections. Paris, Naples, and Bologna form a triangle connected in various ways and by different persons close to Du Châtelet. Francesco Algarotti, who had spent a certain period of time in Cirey had also been an admirer of Laura Bassi before. Du Châtelet and Voltaire's connection to Bassi may have played a role when both were elected members to the Academy of Bologna.

Sarah Hutton starts by reflecting on the shattered political situation and consequently the fractured picture of Italy's intellectual life. Bologna and Padova stand out as possible supporters of Du Châtelet's philosophy. Bologna was the *alma mater* of Francesco Algarotti. Du Châtelet contacted Antonio Conti, whose eulogy appeared in Brucker's Latin edition of Du Châtelet (1745, vol IV). François Jacquier prepared a Latin edition of Newton's *Principia* and Du Châtelet corresponded with him. According to Hutton, Du Châtelet had strong connections with the Newtonians of Bologna, and the *living forces* debate was the key issue in her Italian reception. Faustina Pignatelli from Naples may have played an important role in this. Pignatelli was the first woman to be elected to the Bologna Academy, and Hutton notes that she corresponded with Émilie Du Châtelet and Jean-Jacques Dourteus de Mairan, Du Châtelet's counterpart in the dispute on *living forces*. Moreover, Pignatelli was connected to the Du Châtelet family, whose daughter had married into a high-ranking Neapolitan aristocracy.

In her paper *Du Châtelet in Italy: Who was Behind Du Châtelet's Italian Translation*, Romana Bassi follows Du Châtelet's impact in Padua. Leibniz' ideas were present in Padua, where Nicolaus Bernoulli, a son of Johan I Bernoulli, and Jacob Hermann, both connected to Leibniz in his lifetime, were appointed to professorial posts in the early eighteenth century. Bassi asks questions "that remain without response till today, when the decision to publish the translation was taken, when the book was published, by when the translation was completed, to whom the translation was commissioned". In tackling these problems, a lot of information and new problems emerge. Bassi focusses on Antonio Conti as the possible author of this translation, judging the Italian text "in most cases faithful to the point of literal, and very close to the original text". A pivotal figure in Italian intellectual society, Antonio Conti had the right connections to ensure the publication of the *Institutions*, and Bassi identifies him as the crucial figure in spreading Du Châtelet's legacy in Italy, while presenting an enthralling story about the translation strategy that apparently occurred between the first and second editions of the *Institutions*.

1.8 Du Chatelet in France

Du Châtelet's publication history was impressive during her lifetime (Kølving, 2008, 341–349; Rodrigues, 2011, 207–208) and it was no less so after her death. This is true for the publication and impact of her translation and comments on Newton

and it is, even more, the case as we consider the vast literature on Du Châtelet's *Discourse on Happiness*, a work that soon became a stable part in the enlightened discussion, and was both praised and attacked. Incidentally, the impact of her great biblical commentary remains virtually unexplored to this day. The following set of contributions explores these questions. At the same time, what has already been said above applies also here. There are very different levels to which these contributions can be attributed. Thus, Kawashima's investigation of the publication practice of Du Châtelet's first publication, the *Dissertation on Fire*, is a topic of social and cultural-historically relevant concern, but of course also an important element in the context of the emergence of her scientific and philosophical theory.

Soon after Du Châtelet's death, the interest arose to publish Du Châtelet's moral writing, the *Discourse on Happiness*. This *Discourse* becomes one of the innumerable essays on the happiness of that period. In the history of the reception of this opus, it has been compared to La Mettrie's *Anti-Seneque*. Drafted by Du Châtelet as *Reflections on Happiness*, this small book was published only in 1779, though earlier attempts to publish it in common with La Mettrie's text were denied in order to protect Voltaire's integrity, as Rodrigues proposes (2019). Du Châtelet's relation to La Mettrie, Maupertuis, Fontenelle, and to Voltaire and others are discussed within the here presented selection that focuses on the reception of Du Châtelet's ideas in France and situates her in the network.

The erotic and even frivolous character that has often been attributed to the literature of the eighteenth century is addressed in the contributions by Waltraud Ernst and Gabor Boros, who focus on Voltaire, La Mettrie, and Maupertuis, as key relations to Du Châtelet.

Gabor Boros, in his contribution *Scientia sexualis. Voltaire, La Mettrie, and Émilie Du Châtelet on Love* consider the conceptual differences between these three authors on that topic. Boros presents Voltaire's *naturalist stance*, defending the normative sense of "nature", and also the normative conception of love that serves the function of heterosexual, corporeal-copulatory love aimed at the propagation of the species. La Mettrie's and in comparison, from Du Châtelet's position in her commentary on Mandeville. While La Mettrie's treatise on *The Art of Pleasure* is well known for its emphatic praise of the lover of joy, paralleling, and finally replacing herewith the traditional lover of *wisdom*. Du Châtelet follows Lucretius, as Boros holds. Love serves to the benevolent effects of the development of human societies and is the most vivid and lively passion, unrivaled with respect to its capability of rendering us happy.

Waltraud Ernst analyses the presentation of the erotic in the context of Maupertuis' *Venus physique*, in her contribution *Natural Pleasure: Pierre-Louis Moreau de Maupertuis' contribution to a Materialist Conception of the Erotic*. This discussion of Maupertuis' materialist conception of the science of matter and the erotic serves to extend the debate initiated by Gabor Boros. Natural pleasure, for Maupertuis, is an indicator of the process of civilization. Gender, race, and sexuality are also at stake here, and find a place in Du Châtelet, expressing the economies of desire within the materialization of erotic attraction.