Hypatia (2024), **39**, 653–669
doi:10.1017/hyp.2024.6

CAMBRIDGE UNIVERSITY PRESS

ARTICLE

Education, Equality, and Proto-Feminism in Maria Gaetana Agnesi

Emanuele Costa

Department of Philosophy, Vanderbilt University, Nashville, TN, USA
Email: emanuele.costa@vanderbilt.edu

(Received 11 September 2021; revised 1 December 2022; accepted 5 January 2023)

Abstract

In this paper, I analyse the works of Maria Gaetana Agnesi, an Italian mathematician of the eighteenth century. I specifically focus on the themes of proto-feminism, equality, and educational rights as persistent threads of her philosophical and scientific production. I emphasize her continuous efforts to highlight the place of women in the history of philosophy, presenting three chief texts in which these efforts are expressed. In her first work, the *Academic oration, in which it is demonstrated that the studies of the liberal arts by the female sex are by no means inappropriate*, I show how she articulates a rhetoric defence of women's educational rights. In her second work, the *Philosophical propositions*, I highlight how she combines Cartesian metaphysics and philosophy of mind to justify women's belonging to the history of philosophy. In analysing her final masterpiece, the *Analytical institutions*, I interpret the dedication to the Austrian empress Maria Theresa as a proto-feminist text, vindicating the leading role of women in history and society.

Contextualizing proto-feminism

In the flourishing context of the so-called "Catholic Enlightenment," we witness a significant debate regarding women's education, and their role in liberal arts and pure sciences (Mazzotti 2007, 38–39; Lehner 2016, 74–103; Mazzotti 2001, 657–83). Maria Gaetana Agnesi (1718–99) is a lesser-known figure among the champions of the rights of women to access education, to practice science as a career, and to be recognized as intellectuals among their male counterparts. In this article, I shall focus exclusively on the issue of intellectual equality and participation. A thorough examination of key political concepts related to proto-feminism like "citizenship" and "equality" is not present in Agnesi's thought, and indeed might be inappropriate in a historically sensitive and gendered reading of early modern political thought, depending on the ideological lens one chooses to apply.

Agnesi was a dedicated scholar, with intellectual and social connections to Pope Benedict XIV and Empress Maria Theresa of Austria. She is most famous for her contribution to pure mathematics and to the "popular" diffusion of this science. However, she was also an advocate for the rights of women philosophers and scientists. While her scientific and mathematical contributions have seen a recent rise in interest, such

proto-feminist elements of her production have been put aside by contemporary scholarship. Thus, my paper seeks to broaden our understanding of her philosophy and her work, by exploring a direction that has so far gone unrecognized.

In this paper I shall address the thread of advocacy and proto-feminism that is present in Agnesi's work. I will emphasize its consistency and development throughout her philosophical and scientific production. I analyze three distinct texts by Agnesi. The first one is the oration she gave in 1727, at the astonishingly young age of 9, in defence of the thesis that "the studies of the liberal arts by the female sex are by no means inappropriate." The second one is a paragraph, inserted in the preface to her *Propositiones philosophicae* (*Philosophical propositions*), which she published in 1738 as the conclusion to her juvenile studies in liberal arts and philosophy. In this text—of which I present here the first English translation—she defends the right of women to intervene in philosophical debates, presenting historical evidence for the appropriateness of such practice. The third text is the dedication of her masterpiece, the *Instituzioni analitiche ad uso della gioventù italiana* (*Analytical institutions for the use of Italian youth*), published in 1748.[1] This text, a manual of advanced mathematics that discusses both differential and integral calculus, was dedicated to the Empress of Austria, Maria Theresa. The introductory text of this dedication does not shy away from polemical overtones against the sexist prejudices that the sovereign helped overcome through her example. The introduction establishes the theme of proto-feminism even in an apparently "neutral" context such as pure mathematical analysis, demonstrating Agnesi's core interest in intellectual equality.

These three texts constitute the entirety of Agnesi's philosophical and scientifical production. Nonetheless, with the juvenile *Oration* counting some 12 pages, the *Propositiones* amounting to at least 130 pages of philosophical discussion, and the mature *Institutiones* spanning over a thousand pages in two volumes, there is no doubt that her corpus is deserving of a comprehensive scrutiny.

In the analysis of these three texts, I shall emphasize the key threads of advocacy and gender equality, which—far from being a mere afterthought, or an embellishment—represent a central aspect of Agnesi's philosophical endeavors. Furthermore, I argue that Agnesi was involved in a vibrant environment, the Italian landscape of the first half of the eighteenth century, which primed her interests in the direction of women's educational equality. In doing so, I also show that as an independent element of her production, her feminism was subject to evolution and acquired new depth and specificity over time.

However, before moving to the textual analysis of Agnesi's works, it is appropriate to spend some time examining the meaning of the term "feminist." In fact, to consider Agnesi as a feminist might turn out to be partially or entirely anachronistic, depending on the definition of "feminism" one provides or endorses. Historically, feminism as a "self-naming" label only gained traction at the beginning of the twentieth century (Cott 1989, 821). Therefore, there is a serious possibility that any earlier reference to this concept must be considered (at best) circumstantial. Nonetheless, an abundance of contemporary commenters have attempted to construct a definition of feminism which allows us to include earlier thinkers. According to these commenters, writers from the medieval and modern periods, whose names comprise the likes of Christine de Pizan and Marie de Gournay, even though they may not be considered *tout court* "feminists" insofar as their work falls outside of what is historically constructed as "feminism," can still be included in this discourse as pioneers, "social feminists," or "proto-feminists." Maria Gaetana Agnesi rightfully belongs in this category, and for a plurality of reasons, as I aim to show in this article.

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

Specifically, I shall refer to the criteria, or "working definition," developed in recent works by Tjitske Akkerman, Siep Stuurman, Sarah Gwyneth Ross, and Eileen O'Neill (Akkerman and Stuurman 1998; Ross 2009; O'Neill 2019). According to these criteria, from the point of view of the history of philosophy, the following are core components of feminism:

1. Criticism of misogyny and male supremacy.
2. The conviction that women's condition is not an immutable fact of nature and can be changed for the better.
3. A sense of gender group identity, "the conscious will to speak 'on behalf of women', or 'to defend the female sex', usually aiming to enlarge the sphere of action open to women" (Akkerman and Stuurman 1998, 3–4).
4. Belonging to one or both of the following categories of agents or thinkers:
   4a. "Celebratory feminism," in which female writers, by emphasizing their particular status as women scholars and celebrating other learned women, strengthened and supported the acknowledgment and acceptance of a "new category: woman as intellect" (Ross 2009, 132).
   4b. "Participatory feminism," which presupposes a "direct engagement with men in literary culture," and thus a factual instantiation of "the equality of the sexes in matters of the mind" (Ross 2009, 132).

In what follows, I shall make the case that, while widely acknowledged as a "participatory feminist" thanks to her highly successful career as a mathematician, Agnesi rightfully belongs to the group of "celebratory feminists," too. What is more, I shall demonstrate how the criteria (1–3) proposed by Akkerman and Stuurman, and endorsed by O'Neill, are aptly applied to Agnesi and her philosophical production. However, I acknowledge the appropriateness of a distinction of labels between "historically accurate" feminism and the feminism that we may trace back to medieval, early modern, and late modern history of thought. Thus, I shall use the term "proto-feminist" when referring to the conceptual category resulting from the combination of the above criteria. Agnesi's work, I shall argue, falls under the category of proto-feminism both in terms of participation and celebration.

Alternatively, the reader may wish to use a less fine-grained criterion for the identification of "feminism" across cultural eras and traditions; such alternative criteria find examples in what Karen Offen has called "feminisms" in the plural, as a broad categorization that characterizes "a series of political challenges and responses to male dominance or hegemony" throughout human history (Offen 2000, 2). However, I wish to object to the distinction she offers between Anglo-American feminism, which is thought to pursue radical equality, and European feminism, which is supposed to focus more exclusively on the issue of how a woman can advance *as a woman*, and therefore tends to essentialism (Offen 1988, 123–24). While this distinction may be accurate for the late nineteenth century or the twentieth, one must consider that, in the seventeenth and eighteenth century, the spread of Cartesianism and a certain understanding of St Augustine's philosophy actually made the calls for equality *more*, rather than less, universalistic on the European continent.

Nonetheless, the usefulness of Offen's more "generous" criterion for the inclusion of a particular thesis in the mainstream of feminism "proper" is embodied in the construction of a singular history, unifying all challenges to male hegemony. Without disavowing such usefulness, I will adopt the more fine-grained set of criteria in the pages that

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

follow, as they will provide us with an increased sensitivity to the issues at stake in Agnesi's feminism.

Let us now proceed to trace and identify these components in the works of Agnesi. We shall begin with her first *opus*, the *Academic oration* devoted to defending the rights of women to access liberal arts education.

A young debater

Throughout the eighteenth century, a debate was waged in the Italian peninsula regarding the status of women in higher education and philosophical-scientific learning.[2] This debate focused on establishing women's equal rights of access to university-style (or level) learning, and to philosophical and scientific debates. The issue was all but dormant, notwithstanding the archival records reporting three university degrees being assigned to women for the first time, in 1678, 1722, and 1732.[3] In 1723, the influential Accademia de' Ricovrati hosted a public debate on this topic, which sent ripples through the Northern Italian aristocratic class. Most of these texts were gathered a few years later and published in the collection *Discorsi accademici di vari autori viventi intorno agli studi delle donne; la maggior parte recitati nell'accademia de' Ricovrati di Padova*, by the printing house of G. Manfrè in 1729; the collection also included Agnesi's *Oration* (see Findlen and Messbarger 2005, 67–101). In 1763, the philosopher Medaglia Faini pronounced a passionate oration in defence of women's rights to education (Findlen 2005, 70–71). As a consequence of these public prompts, it became more common to produce educational efforts directly oriented to young women,[4] as opposed to the former custom—which saw some girls, fortunate enough to have male siblings, benefit from hearing lessons that were not meant for them as a legitimate pupil. In 1737, the intellectual Pietro Algarotti even published a physics manual titled *Il Newtonianismo per le dame* (*Newtonianism for ladies*). This text explicitly embraced the new physics originated in England, but maintained steady the Cartesian principles that allowed the minds of man and woman to remain equal, as I will discuss in the next section (Findlen 2005, 61–64).

In particular, the debate made a strong impression on the Milanese merchant Pietro Agnesi, a socially ambitious man, who was father to two talented young women, Maria Gaetana and Maria Teresa. While the youngest displayed signs of excellent musical disposition, the oldest had been recognized as a child prodigy, oriented towards liberal arts, foreign and ancient languages, and pure sciences (Findlen and Messbarger 2005, 117–27; Mazzotti 2007, 17–21; Kennedy 1987, 1–5). To stimulate his daughters—and obtain social recognition—Pietro Agnesi regularly organized learned and vivacious *conversazioni* in his palace, inviting eminent scholars, artists, and *savants* in addition to the Milanese merchant aristocracy. On one of such occasions (in 1727) the young Maria Gaetana, at the time just 9 years old, delivered an impressive speech in defence of the educational rights of women, a momentous topic in the context of the European Enlightenment (Offen 2000, 37–41).

Before moving to the analysis of the oration, I shall put forward a *caveat*. As it has already been pointed out by previous commentators, determining exactly how much the young Agnesi could have contributed to the composition of this piece is a notably complicated task. It is indeed possible that she was a mere mouthpiece for the delivery of a pre-composed text, assembled by her tutors. Philological reasons, however, point in a different direction. As Findlen notes, "while the content of the oration seems unlikely to have been written by a nine-year-old, the language of the oration in some places

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

bears traces of an uncertain hand." This might indeed be the sign that "Agnesi … was struggling to translate into her own words adult concepts and examples," which makes it all the more likely that she at least "did participate in the writing of the Latin version" (Findlen 2005, 121). This suggests that her tutors might have composed an earlier version of the oration in Italian, with Agnesi at the very least operating as a translator and editor for the Latin version, which she later recited. After all, as Findlen reminds us, Maria Gaetana had gained "her initial reputation in Milan as a precocious linguist"; she was famous for being capable of translating vernacular texts into Ancient Greek and Latin (Findlen 2005, 121; Mazzotti 2007, 17–23 and 31–32). However, as I demonstrate in the following sections, the very same themes and arguments that she presents in this early text will be consistently repeated and restated throughout her career, showing that she had incorporated the position defended in the *Oration*. Moreover, I do think that the debate regarding her authorship of the piece in question is itself embedded in sexism. After all, we do not deny the authenticity of Mozart's early compositions, or any other male child prodigy. For this reason, I do believe that this debate should be given less attention and replaced with a discussion of the contents.

Leaving aside the issue of the amount of control she had over its composition, the oration delivered by Agnesi is an impressive rhetorical text. The fact that she was exposed to content such as this, from such a young age, testifies to the role played by the concepts of equality and women's rights in her life and works. She opens the oration with an impressive cry: "For shame! Must the womanly republic alone grow old any longer in its domestic idleness, when the schools are ablaze with literary labour? Must it alone not be allowed to speak with a learned voice, when the academies protest noisily and learnedly?" (Agnesi 2005, 129).[5] The academic expectations of the child prodigy, and her probable frustration at the hands of prejudice, are theatrically introduced in the text from the very beginning.

It is not surprising, then, that Agnesi's oration does not shy away from polemic tones, as she attacks "the opinion of those who suppose that the studies of the liberal arts are judged unsuitable for women" (Agnesi 2005, 130). In laying down the foundation of her oration, she indicates that her opposers make use of a threefold strategy to exclude women from higher education; we can compare this argumentative strategy with the one used by Anna Maria van Schurman (van Schurman 2013a).

The arguments of the oppressor are: customs, physical weakness, and the fear of a change so deep that it could "break down and overturn all civil and domestic affairs." Adopting a quasi-scholastic systematic approach, Agnesi rejects each argument separately, in order to disarm the oppressor and end the debate. It should be noted that this first document is also the most articulated proto-feminist argumentation produced by Agnesi; thus, we shall analyse it with diligent attention.

The first argument against equality is represented by the idea that customs have never allowed women to be educated and to publicly engage in culture. In the mind of the oppressor, this idea is so entrenched that they claim it to be "always maintained … since the birth of mankind and … preserved by inviolable religion" (Agnesi 2005, 130). For someone as learned as the young Agnesi, however, this argument is easy to dismiss. She proceeds to cite the historical examples of "Rome and Sparta," where "girls, too, were accustomed to being educated and formed by domestic tutelage" (Agnesi 2005, 131). A proud Catholic, Agnesi urgently adds that the customs of these pagan republics were confirmed by early Church Fathers, such as Origen and Jerome. Agnesi then points to the "many women, learned in every kind of knowledge" who "have flourished in almost every age", compiling a fairly extensive list (Agnesi

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

2005, 132). Her scholarly rebuttal demonstrates that the historic or religious customs that prevent women's access to education are little more than fiction, and do not possess the "inviolable" strength that oppressors assign them. The historical interest in the history of women in science and philosophy is a recurring presence in Agnesi's works, as we shall see.

The second argument tackled by Agnesi is the allegation that women's "soft condition" and the "slight composition of their limbs" prevent them from effectively engaging in scholarly activities (Agnesi 2005, 132). To rebut this seemingly ridiculous objection she recurs to an advanced understanding of Cartesian philosophy of mind. When Agnesi exclaims that we must denounce those "who situate the dignity of mankind in its outer appearance, as if the more charming beauty did not lie beneath the shell of the limbs," she is making implicit reference to the Cartesian arguments regarding the distinction of mind and body (Agnesi 2005, 133). The thesis according to which the mind is not the same substance as the body, of Cartesian origin, was at that time employed by proto-feminist writers to defend the equality of women in philosophy and science in the context of the "Catholic Enlightenment" (especially through the works of Nicolas Malebranche: see Mazzotti 2007, 141–42). These arguments rest on the dualistic distinction of mind and body to demonstrate that the mind could have no sex or gender (which are attributes pertaining to the body, together with sensory perceptions and adventitious ideas). Thus, any non-gendered mind is—in principle—capable of the same activities insofar as abstract or intellectual reasoning is concerned.[6] I shall expand below on Agnesi's familiarity with Cartesian arguments, which is further testified to by the text of her *Propositiones* and by the use of Cartesian mathematical methods in her masterpiece, the *Institutions*.

Finally, Agnesi moves to the third objection. Her purpose is to "defend women's studies against the worst accusations of their adversaries as not only harmless but very useful in both private and public affairs" (Agnesi 2005, 135). In characterizing her opposers' view, Agnesi denounces their prejudice that "female minds … should be busying themselves with the needle and the spindle; these things, and others of this kind, are proper to women, unlike pen and paper" (Agnesi 2005, 130). Some of the objections she proposes against this view are definitely distant from contemporary ways of understanding equality, as they rest on the claim that a learned woman would be a better companion to her husband (Agnesi 2005, 138). This was a common trope in the seventeenth and eighteenth century; however, this theme is not found in Agnesi's later work.[7] Thus, it is not outlandish to see here the intrusion into the composition of the oration of a hand that is not Agnesi's, as her life trajectory testifies to her abhorrence for this kind of domestic and tamed life.[8] Nonetheless, she puts forward another argument, spawned by a decided conviction of equality, as she claims that "anyone is only human as he is wise (*quilibet tantus homo est, quantus sapiens*)."[9] Agnesi sets out this argument within an Aristotelian context, explicitly making reference to the Stagirite as a source for her claim that "man is a stupendous beast" (Agnesi 2005, 137). In other words, Agnesi agrees with Aristotle (and most scholastics) that human beings, belonging to the *genus* "animal," must be imbued with a specific difference which gives form to their species. The specificity of humanity, in Agnesi's words, resides in the "spiritual force" and "inner worth" that human beings possess, despite their partial belonging to the "crude and churlish" world of matter. If one is not wise—*sapiens*, exercising knowledge—the animality within them would prevail, and they would cease to be human. Anna Maria van Schurman, in her 1641 *Dissertation*, claimed a similar point (although establishing her argument on Plato's authority rather than

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

Aristotle's). Schurman affirmed that "ignorance or a lack of understanding in the intellect … is nothing other than a blindness and mental darkness that proves to be the cause of all [vice and] error." Human beings, if deprived of knowledge, are more prone to becoming the "wildest of all animals that live on the earth" (van Schurman 2013a, 89). The opposition between the angelic nature of knowledge and the bestial consequences of ignorance is a stereotypical one. Nonetheless, the ethical intellectualism that it displays acquires new strength in the post-Cartesian era, as animals are famously debased and compared to mere machines.

According to Agnesi, in fact, human beings are created by Nature as "a Cosmos in miniature" (Agnesi 2005, 139), possessing an intellectual soul that distinguishes them from the rest of creation. Thus, just like the presence of a form gives shape to the entire Cosmos, the presence of intellectual capacities gives humanity its specificity. Human beings are human insofar as they can exercise their intellectuality. A similar argument was advanced by Catharine Macaulay, albeit focusing on the capacity to suffer rather than the capacity to exercise intellect (Green 2021, 417). The overlap between Cartesian dualism and Aristotelian hylomorphism, albeit admittedly underdeveloped, signals a notable degree of original philosophical elaboration.

The call to wisdom entailed by this metaphysical background applies to all humanity, regardless of gender, and it is therefore anti-human to prevent women access to sources of education. They should be allowed to have the instruments to educate themselves. Failing this, they would be condemned to "waste slowly away." Public and private utility, then, are guaranteed—rather than destroyed—by encouraging women to access higher education and "fly away from these narrow straits to the contemplation of things" (Agnesi 2005, 138). Through the rebuttal of this third objection, Agnesi considers her argument concluded and her thesis defended.

However, as I noted in the opening lines of this section, Agnesi's proto-feminism in the *Oration* is still at an embryonic stage. It maintains that at least part of the utility in educating women derives from their becoming better companions for their husbands. Moreover, it is "stained" by the recurrent criticism of not being feminist enough—due to its gestation within a privileged cultural environment and at the behest of a supportive father (Whaley 2016, 195). Nonetheless, I think it is important to note that the arguments put forth in the text rest on a fundamental belief in the equality of men and women as rational human beings. Their minds, being distinct from their bodies, possess the same capabilities and should be granted equal opportunities to pursue scientific and philosophical learning. Agnesi retained this philosophical thesis and implicitly incorporated it in her subsequent works, as I shall show in the following sections.

A learned advocate

I shall now proceed to examine a text extracted from Agnesi's second work, the *Philosophical propositions*. Since her childhood, Agnesi had been educated by private tutors who followed a curriculum closely related to the one used by contemporary Jesuit schools and that was probably based on the famed textbook by Pourchot, the *Institutio philosophica* (Mazzotti 2007, 55). The *Propositions* were composed in 1738 as the concluding document of her philosophy course, emulating once again the practice customary in Jesuit schools, where students compiled and defended a list of propositions representing the extent of their education. Thus, the function of this text is to present Agnesi's erudition and not to offer original philosophical research (Mazzotti 2007, 64). For this reason, the prologue of the piece (propositions I–VI) is perhaps

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

its most interesting and innovative section. It offers a brief and summarized history of philosophy. The text begins with the definition of philosophy as the knowledge of "divine and human things, and of their causes," a knowledge that Adam and Eve had possessed "absolutely," but that was lost in the Fall from Eden. Thus, lost in the "mist" of centuries, the task of humanity is to climb back to this knowledge, which Agnesi depicts as a communal pursuit (Agnesi 1738, 1).

In her text, she often mentions schools rather than singular figures, with the notable exceptions of Thales, Pythagoras, Plato, and Xenocrates—a testimony to her prevailing interest in mathematics and geometry (Agnesi 1738, 1–4). It is even more noteworthy, then, that she should include a section (proposition III) wholly dedicated to the defense of women in science and philosophy. The section, which I report in its entirety, presents passages reminiscent of her 1727 *Oration*.

> [In ancient times] no one was denying that the weaker sex excelled in all areas of philosophy; for we know that, in addition to the almost seventy most erudite women listed by Ménage, at any time many others flourished who obtained the highest praise for their intellectual achievements in philosophical disciplines. Thus, Nature prepared the minds of women, too, for all manners of teaching and erudition. For this reason, those who entirely deny them the study of the noble arts behave slightly more offensively towards women, especially for the reason that their studies would not only be not damaging to private and public things alike, but—on the contrary—would be very much useful to them. (Agnesi 1738, 2–3)[10]

In this passage, Agnesi refers to the influential *History of Women Philosophers*, published in 1690 by the French scholar Gilles Ménage (Latinized into "Menagius" in her text), as an expansion of Diogenes Laërtius' *Lives of eminent philosophers*, which he had translated in 1664 (Ménage 1984; Maber 2010). The list was the result of archival work that Ménage had accumulated throughout his life; however, it often includes "astronomers, astrologers, gynaecologists, or simply relatives of male philosophers" (Waithe 1987, ix–x), and it was therefore not satisfying for Agnesi's acute mind. Therefore, she does not limit herself to this quotation, which she claims to be only partially capturing reality. Instead, she demands an even higher place for women, one of equality, which they have earned through historically achieving "the highest praise" in philosophy and other intellectual disciplines. Just like in her juvenile *Oration*, then, she compares ancient times and present times, praising the equality displayed in earlier ages, in which women had access to "philosophical disciplines" and education. By contrast, she condemns the discouragement that many women had to face while pursuing higher education during her era.

While singular and atypical within the context of her (almost exclusively) expository *Propositions*, this historical diversion was not entirely unique in the Enlightenment era. Similar historical argumentations were commonly employed by other women philosophers claiming equal rights to participate in learning and scholarship. Marie de Gournay, for example, in her *Equality of men and women* bases her demands on philosophical and theological tradition, quoting authorities from biblical, ecclesial, and classical history (De Gournay 2013, 54–73). Agnesi employs a similar strategy to affirm the historical continuity of women's right to equal opportunity.

Furthermore, in the text of the *Propositions* Agnesi expands on the Cartesian arguments presented in her *Oration*, based on the distinction of mind and body and the pertinence of gender to the latter. In particular, in her section on *Pneumatologia*

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

(what we may call philosophy of mind), she briefly recalls the Cartesian *cogito* as the first content of which we hold secure knowledge. Quickly thereafter, she moves to the thesis that the mind is distinct from the body (Agnesi 1738, 12–20; Mazzotti 2007, 141–42).

In a stunningly cursory passage, she asserts that the union of mind and body is nonetheless guaranteed by the Creator's laws, as suggested by "the wisest men: Descartes, Malebranche, and Leibniz." These philosophers have defended a conception of mind and body united as "allies," notwithstanding their considerable incompatibility of functions. The alliance of mind and body is "most certainly" ensured by the exactness of God's creation (Agnesi 1738, 14). The succinctness of her formulation, here, prevents a close examination of her thesis. Nonetheless, we can certainly observe how Agnesi distanced herself from the Aristotelian metaphysics which laid the foundation of her juvenile *Oration*. Instead, by 1738 she is completely absorbed in the study of the *scientia nova*, which affirmed the mathematical perfection of God's laws (in the form of some sort of universal harmony) and the substantial distinction between *res cogitans* and *res extensa*. Mind and body are not interpreted through the canons of matter and form anymore; they are not seen as each other's respective *genus* and specific difference. In 1738, Agnesi portrayed them as separate realms, kept together by the admirable perfection of God's creation. This, of course, inserts her in a century-old discourse that includes Anna Maria van Schurman and François Poullain de la Barre.

In turn, this doctrine lays the foundation for the claim that the mind is capable of abstract reasoning, which—stemming from the activities of the "pure" intellect—does not (as in the case of adventitious ideas, which are filtered through the senses) require any interaction with the body (Agnesi 1738, 16). Agnesi's confident and explicit use of the distinction among diverse kinds of ideas testifies to her familiarity with Cartesian metaphysics and philosophy of mind.[11] So does her endorsement of the thesis proposed by Descartes (quoted by name here) that the human mind is constantly in thought. The very essence of human minds—distinct from the body under this respect—is therefore to be a *res cogitans*, a thinking thing, while the body—an extended substance—exercises its essence through motion.

In the *Propositions*, we can observe how Agnesi's commitment to the metaphysical equality of men and women—articulated through Cartesian dualism—serves as a foundation to demand equality of opportunity for both sexes. Equality of opportunity, in Agnesi's argument, is dependent upon metaphysical equality. If men and women are metaphysically equal with respect to their minds, there is no reason for their mental abilities to be treated as unequal. In a way, one could argue that intellectual discrimination would constitute a category mistake, since it would affect the mind (or the virtues of the mind) on the basis of a corporeal attribute, such as sex. A similar strategy was famously employed by Anna Maria van Schurman in her *Dissertation*. Schurman claimed that "human reason" pertained to men and women alike; "women are endowed by nature with the principles of all arts and sciences or with a capacity to acquire them." Thus, Schurman argued, "all arts and sciences are suitable for women" (van Schurman 2013a, 82). The lack of a salient metaphysical distinction between the two sexes, for Schurman as for Agnesi, determined the theoretical impossibility of any justifiable discrimination in their respective practices.

While in Agnesi's earlier *Oration* metaphysical equality was established through the Aristotelian notions of form and matter, in the *Propositions* the central node of the argument becomes the Cartesian unimpeded "life of the mind." Cartesian dualism helped proto-feminist advocates to create a distinction between intellectual virtues

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

and rights, on one side of the divide, and bodily discriminations, on the other. One famous example of this application of Cartesian metaphysics is the work of François Poullain de la Barre. In his two main texts, *On the Equality of the Two Sexes* and *On the Education of Ladies*, Poullain draws on Cartesian ontology to construct what is considered one of the most radical feminist systems of the early modern age. Starting from the presupposition that "the Mind has no Sex (*l'Esprit n'a point de Sexe*)" (Poullain de la Barre 2005, 82), Poullain argues that the non-gendered nature of the mind enables women to excel in any field of human activity, including government, military command, and religious ministry (2005, 95–99; Stuurman 1997, 625). In fact, through a radical reading of Descartes' theory of innate ideas, Poullain even suggested that women's minds, which "had not been corrupted by the formal education of 'the schools' … naturally gave assent to self-evident truths to which the learned were blinded" (La Vopa 2010, 72).

In other words, for proto-feminists of the seventeenth and eighteenth centuries, the upshot of Cartesian dualistic ontology lay in the fact that it "liberated" women's minds from the prejudice that referred—through their body—to their gender.[12] Even though it is positioned later in the text of the *Propositions*, this dualistic ontology justifies Agnesi's claims that the minds of women and men are naturally equal and that every discrimination or inequality is therefore unnatural. Consequently, she would attack "those who entirely deny [women] the study of the noble arts" (Agnesi 1738, 2). Their discriminatory behaviour and prejudice, as she had demonstrated in 1727, is unjust and unfounded. Allowing women to engage in education and philosophy, she argues again, is not detrimental to private and public affairs. Instead, it would help women in becoming more "human," in the sense presented in the *Oration*, and seize their equal place in the arts and sciences. It is important, here, to highlight how Agnesi's goal, here and in the other two pieces, is *equality*. Indeed, other texts of the Italian Enlightenment (such as, e.g., Lucrezia Marinella's *The nobility and excellence of women, and the defects and vices of men*, published in 1653) went far beyond, and in some cases claimed women's *superiority* over the opposite sex (Marinella 1999). Agnesi, as far as I can see, is not interested in this line of argument—even in the later dedication to Maria Theresa. While exalting a woman in power, Agnesi does not seem to espouse the view that women are better than men at leading countries or organizing sciences; but she does proclaim the benefit of having *a* woman in power.

Despite lacking clear elements of originality compared to her earlier *Oration*, then, the text of the *Propositions* confirms Agnesi's keen interest in advocating a more prominent role for women in science and philosophy. It also proves her ongoing philosophical development, as testified by her considerable, if superficial, engagement with the doctrines of Leibniz, Malebranche, and Descartes. Finally, it reconnects the threads of her arguments, denouncing oppression and demanding equality in the pursuit of knowledge (i.e., in today's parlance, equality of opportunity), two aspects that should not be taken for granted in a juvenile publication appearing in the middle of the eighteenth century.

A flattering (proto-)feminist

In this section, I move to the analysis of the third and last text, the dedication of Agnesi's *Analytical institutions*. Published in 1748, when the author was 30 years old, the two-volume textbook was the first of its kind in Italian and represents Agnesi's genuine masterpiece. The book had a significant impact with the public,

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

even though the preference she accorded to Cartesian mathematical methods was considered "old-fashioned" (Mazzotti 2007, 116). In fact, it had become fashionable to "de-geometrise" mathematics (after the example of Euler and Lagrange) rather than insisting on a geometrical method of exposition. The goal had become, throughout Europe, to provide applied examples, taken from mechanics or experimental physics. It is intriguing to think of this volume as a counterpart to Émilie Du Châtelet's *Institutions de physique* (published in 1740), which indeed adopts the Eulerian method, but displays a very similar goal—unifying Leibnizian and Newtonian physical theories. Unfortunately, we do not have official proof as to whether the two women read each other's works. However, since Voltaire (Du Châtelet's partner) mentioned Agnesi in a letter to Laura Bassi, another woman scientist who was operating in Bologna, we might assume that Du Châtelet was aware of the work of her Italian colleague, even if for just one year before her premature death. In the reverse direction, I think it is safe to assume that Agnesi knew of her illustrious counterpart, and it is nice to imagine her hiding a tribute to Du Châtelet in the choice of the title of her masterpiece.

Nonetheless, perhaps out of deference towards Descartes as the father of modern mathematics, or maybe just in recognition of the higher explanatory power of his *more geometrico* demonstrations, Agnesi developed her *Institutions* mainly as an exposition of algebra and calculus, applied uniquely "to the solution of geometrical problems and to the study of interesting curves" (Mazzotti 2007, 116). This clear exposition and ordered style earned her significant praise, including the favour of distinguished professors and even that of Pope Benedict XIV, who recommended her for a professorship at the university of Bologna.

As anticipated in the introduction to this paper, however, my analysis will not examine the mathematical contents of Agnesi's masterpiece. I shall instead focus on the proto-feminist vindications contained in the dedication of the work to Maria Theresa, empress of Austria. The value of this text mainly resides in its belonging to the genre of "celebratory feminism" described by Ross (2009, 132) and illustrated above. However, the piece also functions as the frontispiece for a work of "participatory feminism" as is the case for Agnesi's *Institutions*.

Maria Theresa's had acceded to the throne of Vienna in 1740 and assumed the title of Holy Roman Empress in 1745. Her position, however, was secured beyond any disputation during those very days in 1748, with the signature of the Peace of Aix-la-Chapelle which marked the conclusion of the War of Succession. Agnesi's dedication to the sovereign, therefore, cannot be motivated by the educational reforms that Maria Theresa would only fully complete in the mid-1770s. Once again, Maria Theresa's merits, in Agnesi's eyes, reside in the representation guaranteed by a woman sitting on the throne, something akin to the participatory feminism depicted in the introduction of this article; Maria Theresa herself has been described as a "practising feminist of high order" (Truesdell 1989, 125). What is more, in this text Agnesi stresses with particular emphasis the intellectual virtues of the sovereign, thus inserting this text within the tradition of celebratory feminism described in my introduction to this article.

In the dedication ("to Her Sacred Caesarean Royal Majesty, the August Empress Maria Theresa of Austria, Queen of Hungary and Bohemia etc. etc. etc."), Agnesi applies the flattering writing techniques in use at the time to address a sovereign. Nonetheless, she manages to retain her polemic and ironic signature style. Faithful to the pride we have witnessed in the two works examined so far, she opens the dedication expressing hope that Maria Theresa would accept the offer of the volumes. Sharing her

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

gender with so great a sovereign, Agnesi says, has "supported me in all my labours, and made me insensible to the dangers that threatened my enterprise" (Agnesi 1748, 2). These "dangers" are indeed connected with sexism and oppression, as they are dispelled by the fact that a woman sits on the throne of Vienna, "with universal applause and admiration." (The word "Woman" is strongly emphasized in Agnesi's text, a feature lost in Colson's translation.) Like Maria Theresa, Agnesi herself engages in a domain widely considered to be exclusive to men—mathematics. Thus, she sympathizes with the empress, who could have been (if not distracted by the business of government) a fellow scholar and could have participated in the communal pursuit of knowledge, as we shall see below.

Agnesi proceeds to congratulate the sovereign, whose successful reign "will be remembered by all posterity." Thanks to the favourable circumstance of having Maria Theresa on the throne, Agnesi says, women can aspire to personal distinction in the arts and the sciences. What is more, their distinction becomes in the words of Agnesi an actual *duty* towards other women: "every Woman *should* endeavour to promote the glory of her sex, and each, in accordance to her possibilities, contribute to increase its splendour" (Agnesi 1748, 2). Thus, Agnesi emphasizes the importance of solidarity amongst women, necessary for the demolition of prejudice. The concept of women as a social class, or as a united front against misogyny had been anticipated in other proto-feminist treatises of the early modern age, such as Astell's *Serious proposal to the ladies*, published in 1694. However, the implication of a specific duty to uphold and propagate women's reputation finds few—if any—analogues in the proto-feminist literature surrounding Agnesi's work.[13] In their private correspondence, Anna Maria von Schurman does indeed mention to Marie de Gournay a certain "duty" to laude the "benefits that your heroic virtues have procured for our sex" (van Schurman 2013b, 110). Nonetheless, it is hard to escape the impression that this duty—for Schurman—is not a widespread solidarity, unifying *all* women under the same flag. The private nature of the letter encourages this line of thought. Furthermore, the call to action which Agnesi inserts in her dedication to Maria Theresa is decidedly absent.

By contrast, the principle of female solidarity (what Ross calls "celebratory feminism") is both implicit and explicit in the rest of the dedication, where Agnesi continues to praise the sovereign.

> You force all Men to say of you, what had not been said with greater reason of the ancient Caesars; that, by justice and clemency of your government, you honour human nature, and represent the divine. I leave to the women who will—zealous towards our sex—preserve your deeds for posterity, to describe how perfectly you accompany the strength of your intellect with the gracefulness of your body, and even more, each and every virtue.[14]

Again, we can observe Agnesi's call for gender solidarity, that emphasizes the zeal required of all women in order to overcome prejudice. Notably, this zeal is eminently expressed in the "preservation for posterity" of the merits of the empress. This historical theme, which we have observed in both previously analysed texts, is recurrent in Agnesi's proto-feminist production and indicates a strong interest in building a case for female equality based on factual evidence. As we have seen, this evidence is used to rebut objections concerning the "customs" adverse to women's education. The historical thread, present throughout Agnesi's production, becomes in her 1748 text a collective task for women; pushing the terminology, one could almost say that she

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

advocates towards the formation of a "class consciousness" for the learned women of the era, attempting to establish themselves as peers in the arts and sciences. This thesis would, at the turn of the nineteenth century, divide feminism over the possibility of recognizing a fellowship, almost a "sisterhood," in subordination. In turn, this affinity would inform the perceived duty of joining forces with other subordinate social groups, originating the conceptualization of what is known today as "intersectionality" (Offen 2000, 83). Be that as it may, the indisputable fact is that, in these pages, Agnesi shows an assured self-awareness and demonstrates a sense of gender group identity, which she attempts to direct towards the amplification of women's voices.

Furthermore, like in her 1727 *Oration* and in the conclusion of Proposition III, Agnesi positions herself as an adversary for sexist and biased "Men," who need to be "forced" into admitting the greatness of a female sovereign. Once again, this situates Agnesi's text in the tradition of proto-feminism as defined by Akkerman and Stuurman, insofar as it clearly positions her as an overt opponent of male supremacy and misogyny (Akkerman and Stuurman 1998, 3–4).

In concluding her dedication, Agnesi stresses how the empress herself was once devoted to the study of the arts and humanities, before being "distracted" by the business of the empire, and how her mind "knew each science," to the point that Maria Theresa was considered "the most learned of our century" (Agnesi 1738, 4; 1801, xix).[15] Accordingly, she favours those who "strive to search for the Truth", who are sure to receive her favour. (This sentence might represent a covert reference to the *Search after truth* composed by Malebranche, one of Agnesi's preferred philosophers.) We may perhaps interpret, although I admit that this is a speculative reading, this nod towards a capitalized "Truth" as a reference to the knowledge of philosophy, which Agnesi had described in the prologue of her *Propositions* as pertaining to the whole of humankind before the fall from Eden. The communal pursuit of knowledge and science is, for Agnesi, a central task of human beings—men and women equally; it represents their chance to regain the paradise they lost through the original sin. The centrality of this task is defended by Maria Theresa "through the clamour, and turmoil of weapons: you revive studies and arts, which nourish the public good, and brighten with utility the souls of human beings" (Agnesi 1738, 2).

Agnesi goes on to relate Maria Theresa to "the other Heroines, who have reigned elsewhere", emphasizing once more the role played by women in history. Such connection, being enclosed in Agnesi's mannerist dedication, unavoidably sees Maria Theresa "even more exalted in magnanimity, prudence, and fortune" (Agnesi 1738, 2). The Austrian Empress is thus represented as the summit of the lineage of women scholars and sovereigns, that Agnesi had reconstructed in her *Propositions*, a decade earlier. However, even though Maria Theresa's political and social virtues situate her on a higher stage, it is noteworthy that Agnesi concludes this text by expressing the hope that "this volume might have the good fortune of stimulating occasionally your sharpness and sagacity" (Agnesi 1738, 4–5). Notwithstanding her military and political power, Maria Theresa's ultimate virtue will always be her intellect, in the eyes of Agnesi. There is a certain consistency in her positioning of reasoning and intellect as the supreme instruments of human elevation and salvation, and it is significant that such qualities do not rely on the gendered body, but on the non-gendered mind.

The dedication, as we have seen, is more than just the formulaic offering of an erudite piece of work to a sovereign (for the response, see Mazzotti 2007, xii). Under this traditional form, it presents all the proto-feminist elements highlighted in Agnesi's previous works: the polemic against the sexist oppressors, the emphasis on the equality of

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

men's and women's minds, and the keen interest towards historical themes. Furthermore, it adds to Agnesi's arsenal the weapon of women solidarity and gender comradery, which becomes a call of duty for her peers. In conclusion, we can affirm that this piece rightfully belongs to the category of "celebratory feminism" as defined in the introduction above, insofar as it supports the acknowledgment and acceptance of a woman sovereign, qua woman, spotlighting her virtues.

Drawing conclusions

In this paper, I have discussed three texts belonging to the three published works of Maria Gaetana Agnesi. In her 1727 *Oration*, I have highlighted the carefully constructed arguments that she builds to rebut the objections put forward by oppressors who deny to women equal access to higher education and to philosophical and scientific debates. In particular, I have emphasized the rejection of the idea that women are excluded because of religious or traditional customs, built on solid and extensive historical evidence. Furthermore, I have signalled how Agnesi's denial that a woman's body could be cause for her exclusion from scientific and philosophical research is defended through an advanced understanding of Cartesian dualism. This theory, by distinguishing the mind from the body, allows her to argue that minds are non-gendered. Thus, the application of any gender distinction to the mind is incorrect and unjustified.

Furthermore, I have traced the continuity of these arguments and theses in the text of her 1738 *Propositions*, where she makes use of historical evidence to claim—once more—the appropriateness of including women in the pursuits of the mind—be they philosophical or scientific. Finally, I have shown how in the dedication of her masterpiece—the *Institutions*—she repeats and reinforces these threads in offering the publication to the empress Maria Theresa. In addition, she makes the argument that women have not only a right, but a duty to access education and contributing to the demolition of prejudice through obtaining success in the arts and sciences, thus hinting at a sort of "class consciousness" of the oppressed. This process hints to an intra-gender solidarity that is perhaps the most significant addition of the 1738 text.

In sum, these often-neglected texts have offered us—I maintain—enough evidence to consider Agnesi's interest for women's equality a well-established, if underdeveloped, theme in her philosophical and scientific production and a constant presence in her output. Specifically, the bulk of her arguments regarding equality demonstrates her consistent commitment to the issue of women's right to access and practice higher education, which she identified as a necessary step towards emancipation. The presence of elements common to other women philosophers of the era emphasizes her participation in such communal and crucial efforts. Agnesi was not isolated in the ivory tower of her superior knowledge of mathematics; instead, she proved to be (at least theoretically) involved in all the relevant debates regarding womanhood and feminism which unfolded throughout the Enlightenment.

Acknowledgments. The author would like to thank S. James, M. Bruzzi, and M. Asuni, and three anonymous referees from *Hypatia* for their invaluable help and comments on previous versions of this article. The author also thanks Mary Ellen Waithe for her precious and warm encouragement to pursue this line of investigation, despite textual and contextual difficulties.

Notes

1 I present a new English translation of this text, as the book was translated in English for the first (and last) time in the early nineteenth century, by J. Colson in 1801. On the title page, Agnesi is remembered with the

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

appellation of "Professor of the Mathematicks and Philosophy in the University of Bologna," a position she never effectively held, albeit she appears in the records of the university after the recommendation of Pope Benedict XIV; see Mazzotti (2007, 122). See also O'Neill (1998, 18); and Hagengruber (2015, 37).

2 This debate is, of course, strongly tied with the Europe-wide debate on women's access to higher education. See as examples the texts collected, translated, and edited by D. Clarke (2013).

3 The receivers of the three degrees were, in chronological order, Elena Cornaro Piscopia, Maria Vittoria Delfini Dosi, and Laura Bassi Veratti (Messbarger 2005, 7).

4 In the Italian context, a clear example of this novel attitude is represented by the published encouragements of the intellectual Pietro Verri, addressed to his young daughter (Verri 1983). For a detailed analysis of this text, see Fido (1989, 222–24).

5 It may be useful to compare Agnesi's oration with another proto-feminist Italian text, the *Letter XVIII* on women's education redacted by Laura Cereta (Cereta 1997, 74–80).

6 See note 40 to Findlen's translation of Agnesi's *Oration*. See Schiebinger (1989, 175–78), for a discussion of the Cartesian philosopher F. Poullain de la Barre (who is more extensively discussed later in my paper). On the same subject, see also Stuurman 2004; Harth 1992; Reuter 2019, 37–58. This was not, of course, an argument limited to the Continental Cartesian landscape: see, e.g., the case of Mary Astell, studied by Bryson 1998, 40–62.

7 It is worth pointing out that, while she did not explicitly argue against marriage in print, Agnesi (despite the imaginable pressures of the era) contradicted and criticized marriage *performatively*, by refusing to even consider it as an option throughout her life, even after she "retired" from academic and scientific work. The much more celebrated Laura Bassi, for example, did not perform a similar criticism. In this sense, it may be worth comparing this specific aspect of Agnesi's text to Mary Astell's and Damaris Masham's views on conjugal life. However, this topic exceeds the scope of the present paper. For more on Astell, see e.g., the analysis provided by Detlefsen (2016); on Masham, see Frankel (1989).

8 Of course, Agnesi could in principle hold that a learned woman makes a better companion to her husband, and at the same time (through this very notion) challenge the traditional model of marriage as an unbalanced union. I am indebted to M. Bruzzi for this observation.

9 The pronoun is in the masculine both in the Latin and in Findlen's translation, although Agnesi's meaning, to my eyes, is clearly "everyone is only human (homo) as they are wise". In fact, had Agnesi wanted to stress the gendered orientation of this argument, she could have used the Latin *vir* (as she does, e.g., when referring to male philosophers such as Descartes, Malebranche, and Leibniz).

10 Original text: *Optime etiam de universa Philosophia infirmiorem sexum meruisse nullus inficiabatur; nam praeter septuaginta fere eruditissimas Mulieres, quas recenset Menagius, complures alias quovis tempore floruisse novimus, quae in philosophicis disciplinis maximam ingenii laudem sunt assecutae. Ad omnem igitur doctrinam, eruditionemque etiam muliebres animos Natura comparavit: quare paulo injuriosius cum [cum] feminis agunt qui eis bonarum artium cultu omnino interdicunt, eo vel maxime, quod haec illarum studia privatis, publicisque rebus non modo haud noxia futura sint, verum etiam perutilia*. I am grateful to Michele Asuni for his precious help in translating this complex passage.

11 Here, Agnesi explicitly refers to "adventitious ideas, excited in us by the various interactions of the body" (*ideae adventitiae, quae in nobis excitantur pro vario corporem occursu*). In her view, adventitious ideas are not "proper" ideas, insofar as they are not generated by the intellect; "true" ideas are instead the *factitiae*, created by the "inner sense" through the composition of several ideas (*Ideae vero factitiae compositione plurium idearum conflantur, ac praesertim per conjunctionem sensus intimi cum idea, quae menti observatur*).

12 I am not claiming here that adherence to Cartesianism is a *conditio sine qua non* for proto-feminists in the seventeenth and eighteenth century. Other, and arguably stronger, proponents of proto-feminism based their claims on Aristotelian or Augustinian arguments (Marinella, Fonte, Tarabotti); however, Cartesianism was definitely one of the trends that aided the expression of feminist beliefs. My argument here is that Agnesi chose this avenue (rather than others available), perhaps due to her admiration for Cartesian mathematics. I thank an anonymous reviewer for pointing out the need for this clarification.

13 Admittedly, however, it may very well be that Agnesi's suggestions in this direction retain an aura of classism, and implicitly reserve admission to the "sisterhood" to women of upper socioeconomical echelons, who have access to education. I find this highly doubtable, given her life trajectory, which included a renunciation to riches in favour of the sick and destitute. Nonetheless, perhaps there is a residual form of classism in her claims regarding Maria Theresa—I thank an anonymous reviewer for raising this question, which I consider tangential to the goal of this paper, but nonetheless illuminating to direct further research. On this topic, see also Green 2021.

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

14 Original text: "Voi, che sparso avendo d'ogn'intorno alta maraviglia di Vostre Azioni, costringete gli Uomini a dir di Voi con più ragione, che non fu detto di alcuno degli antichi Cesari, che colla Giustizia, e Clemenza dell'Imperio, onorate l'umana natura, e rappresentate la divina" (Agnesi 1738, 2; 1801, xviii). Colson's translation reads "mankind" for "gli Uomini", thus underemphasizing the attack directed against "all Men" in Agnesi's phrasing.

15 Colson's translation emphasizes, without reason in my opinion, how the Italian could be interpreted as claiming Maria Theresa as "the most learned *Woman* of the century". The Italian text does not offer sufficient grounds for this interpolation, and it certainly goes against Agnesi's motivation to limit the fame of Maria Theresa's erudition.

References

Agnesi, Maria Gaetana. 1738. *Propositiones philosophicae quas crebris disputationibus domi habitus coram clarissimis viris explicabat extempore, et ab objectis vindicabat Maria Cajetana de Agnesiis mediolanensis*. Milan: Malatesta.

Agnesi, Maria Gaetana. 1748. *Instituzioni analitiche ad uso della gioventù italiana*. Milan: Nella Regia-Ducal Corte.

Agnesi, Maria Gaetana. 1801. *Analytical institutions for the use of Italian youth*, tr. John Colson. London: Taylor & Wilks.

Agnesi, Maria Gaetana. 2005. Academic oration, in which it is demonstrated that the studies of the liberal arts by the female sex are by no means inappropriate. In *The contest for knowledge: Debates over women's learning in eighteenth-century Italy*, ed. Paula Findlen and Ruth Messbarger. Chicago: University of Chicago Press.

Akkerman, Tjitske, and Siep Stuurman. 1998. *Perspectives on feminist political thought in European history: From the Middle Ages to the present*. London: Routledge.

Bryson, Cynthia. 1998. Mary Astell: Defender of the disembodied mind. *Hypatia* 13 (4): 40–62.

Cereta, Laura. 1997. *Collected letters of a Renaissance feminist*, ed. D. Robin. Chicago: University of Chicago Press.

Clarke, Desmond, ed. 2013. *The equality of sexes: Three feminist texts of the seventeenth century*. Oxford: Oxford University Press.

Cott, Nancy. 1989. What's in a name? The limits of social feminism: Or, expanding the vocabulary of women's history. *Journal of American History* 76 (3): 809–29.

De Gournay, Marie. 2013. The equality of men and women. In *The equality of sexes: Three feminist texts of the seventeenth century*, ed. Desmond Clarke. Oxford: Oxford University Press.

Detlefsen, Karen. 2016. Custom, freedom, and equality: Mary Astell on marriage and women's education. In *Feminist interpretations of Mary Astell*, ed. Alice Sowaal and Penny Weiss. University Park, PA: Pennsylvania University Press.

Fido, Franco. 1989. Italian contributions to the eighteenth-century debate on women. *Annali d'Italianistica* 7: 216–25.

Findlen, Paula. 2005. Translator's introduction. In *The contest for knowledge: Debates over women's learning in eighteenth-century Italy*, ed. Paula Findlen and Ruth Messbarger. Chicago: University of Chicago Press.

Findlen, Paula, and Ruth Messbarger, eds. 2005. *The contest for knowledge: Debates over women's learning in eighteenth-century Italy*. Chicago: University of Chicago Press.

Frankel, Lois. 1989. Damaris Cudworth Masham: A seventeenth century feminist philosopher. *Hypatia* 4: 80–90.

Green, Karen. 2021. The rights of woman and the equal rights of men. *Political Theory* 49 (3): 403–30.

Hagengruber, Ruth. 2015. Cutting through the veil of ignorance: Rewriting the history of philosophy. *The Monist* 98 (1): 34–42.

Harth, Erica. 1992. *Cartesian women: Versions and subversions of rational discourse in the old regime*. Ithaca, NY: Cornell University Press.

Kennedy, Hubert. 1987. Maria Gaetana Agnesi (1718–1799). In *Women of Mathematics: A Bibliographical Sourcebook*, ed. Louise Grinstein and Paul Campbell. New York: Greenwood Press.

La Vopa, Anthony. 2010. Sexless minds at work and at play: Poullain de la Barre and the origins of early modern feminism. *Representations* 109: 57–94.

Lehner, Ulrich. 2016. *The Catholic Enlightenment: The forgotten history of a global movement*. Oxford: Oxford University Press.

https://doi.org/10.1017/hyp.2024.6 Published online by Cambridge University Press

Maber, Richard. 2010. Re-gendering intellectual life: Gilles Ménage and his "Histoire des femmes philosophes." *Seventeenth-Century French Studies* 32 (1): 45–60.
Marinella, Lucrezia. 1999. *The nobility and excellence of women, and the defects and vices of men*, ed. Anne Dunhill and Letizia Panizza. Chicago: University of Chicago Press.
Mazzotti, Massimo. 2001. Maria Gaetana Agnesi: Mathematics and the making of the Catholic Enlightenment. *Isis* 92 (4): 657–83.
Mazzotti, Massimo. 2007. *The world of Maria Gaetana Agnesi, mathematician of God*. Baltimore, MD: Johns Hopkins University Press.
Ménage, Gilles. 1984. *The history of women philosophers*, ed. and tr. Beatrice Zedler. Lanham, MD: University Press of America.
Messbarger, Ruth. 2005. The Italian Enlightenment reform of the querelle des femmes. In *The contest for knowledge: Debates over women's learning in eighteenth-century Italy*, ed. Paula Findlen and Ruth Messbarger. Chicago: University of Chicago Press.
Offen, Karen. 1988. Defining feminism: A comparative historical approach. *Signs* 14: 119–57.
Offen, Karen. 2000. *European feminisms, 1700–1950: A political history*. Stanford, CA: Stanford University Press.
O'Neill, Eileen. 1998. Disappearing ink: Early modern women philosophers and their fate in history. In *Philosophy in a feminist voice: Critiques and reconstructions*, ed. Janet Kourany. Princeton: Princeton University Press.
O'Neill, Eileen. 2019. Introduction. In *Feminist history of philosophy: The recovery and evaluation of women's philosophical thought*, ed. Eileen O'Neill and Marcy Lascano. Cham: Springer.
Poullain de la Barre, François. 2005. *Three Cartesian feminist treatises*, ed. Marcelle Maistre Welch, tr. Vivien Bosley. Chicago: University of Chicago Press.
Reuter, Martina. 2019. The gender of the Cartesian mind, body, and mind-body union. In *Mind, body, and morality: New perspectives on Descartes and Spinoza*, ed. Martina Reuter and Frans Svensson. London: Routledge.
Ross, Sarah Gwineth. 2009. *The birth of feminism: Woman as intellect in renaissance Italy and England*. Cambridge, MA: Harvard University Press.
Schiebinger, Londa. 1989. *The mind has no sex? Women in the origins of modern science*. Cambridge, MA: Harvard University Press.
Stuurman, Siep. 1997. Social Cartesianism: François Poulain de la Barre and the origins of the Enlightenment. *Journal of the History of Ideas* 58 (4): 617–40.
Stuurman, Siep. 2004. *François Poulain de la Barre and the invention of modern equality*. Cambridge, MA: Harvard University Press.
Truesdell, Clifford. 1989. Maria Gaetana Agnesi. *Archive for History of Exact Sciences* 40 (2): 113–42.
Van Schurman, Anna Maria. 2013a. A dissertation on the natural capacities of women for study and learning. In *The equality of sexes: Three feminist texts of the seventeenth century*, ed. Desmond Clarke. Oxford: Oxford University Press.
Van Schurman, Anna Maria. 2013b. Excerpts from the correspondence: Van Schurman to Marie de Gournay. In *The equality of sexes: Three feminist texts of the seventeenth century*, ed. Desmond Clarke. Oxford: Oxford University Press, Oxford.
Verri, Pietro. 1983. *"Manoscritto" per Teresa*, ed. Gennaro Barbatisi. Milan: Serra e Riva.
Waithe, Mary Ellen. 1987. Introduction. In *A history of women philosophers,* 4 vols, vol. 1. *Ancient women philosophers, 600 BC–500 AD*. Dordrecht and Boston: Martinus Nijhoff.
Whaley, Leigh. 2016. Networks, patronage and women of science during the Italian Enlightenment. *Early Modern Women: An Interdisciplinary Journal* 11 (1): 187–96.

Emanuele Costa is Assistant Professor of Philosophy at Vanderbilt University. His research focuses on bringing early modern philosophical doctrines to bear on contemporary problems. He applies this strategy to both metaphysics and political philosophy (especially to problems in feminist theory). He has published numerous articles on Spinoza, Leibniz, Elizabeth of Bohemia, Anne Conway and is currently working at a project on Margaret Cavendish.

Cite this article: Costa E (2024). Education, Equality, and Proto-Feminism in Maria Gaetana Agnesi. *Hypatia* **39**, 653–669. https://doi.org/10.1017/hyp.2024.6