



Moving beyond the use of anatomical terms derived from the Latin word *pudere* — An opinion piece

Bernard Moxham ^{a,*}, Diogo Pais ^b, Odile Plaisant ^c, Beverley Kramer ^d

^a Cardiff School of Biosciences, Cardiff University, Museum Avenue, Cardiff, Wales CF10 3AX, UK

^b Department of Anatomy, NOVA Medical School (Faculty of Medical Sciences), New University of Lisbon, Campo dos Martires da Patria 130, Lisboa 1169-056, Portugal

^c University of Paris Cité, Paris, France

^d Department of Anatomical Sciences, School of Biomedical Sciences, Faculty of Health Sciences, University of the Witwatersrand, 7 York Road, Parktown, Johannesburg 2191, South Africa

ARTICLE INFO

Keywords:

Anatomy
Anatomical terminology
Medical terminology
Perineum
EDI
Pudere

ABSTRACT

The International Federation of Associations of Anatomists (IFAA) and its Federative International Committee for Equality and Diversity in Anatomy (FICEDA) recommended that terms related to *pudere* (to be ashamed) should be removed from *Terminologia Anatomica* (TA) for 3 reasons: 1) they are unscientific and outside the descriptive objectivity of science; 2) biologists should not regard as 'shameful' the essential functions undertaken by structures in the perineum; 3) the terms have sexist connotations that lie beyond the principles of Equity, Diversity and Inclusivity (EDI) in the anatomical sciences. The IFAA Executive subsequently required the Federative International Programme for Anatomical Terminology (FIPAT) to make ALL necessary changes to terms derived from *pudere*. However, only partial changes were enacted by FIPAT. The matter is presently unresolved and has provoked controversy. This article provides a review of the course of events and offers arguments against those criticisms levelled against changing *pudere*-related terms. In light of the IFAA's EDI principles, and as social thought and practice generally evolve, it is essential that the terminology on *pudere* is altered to reflect acceptable and unapologetic norms.

The International Federation of Associations of Anatomists (IFAA) has developed guidelines for Equity, Diversity and Inclusivity (EDI) that are based on its approved statement that the Federation "encourages open dialogue on matters of equality and diversity in order to enable a future without bigotry or prejudice for all anatomists and all others who have cause to use the anatomical sciences" (IFAA, 2023; <https://ifaa.net>). In light of its vision of EDI and the importance of demonstrating this visibly and unequivocably, both the IFAA's Executive and its Federative International Committee for Equality and Diversity in Anatomy (FICEDA) required its Federative Programme for Anatomical Terminology (FIPAT) to change all terms that are derived from the Latin *pudere* and related words. However, FIPAT refused to comply wholly with this requirement, and a series of articles appeared in journals arguing against such changes (Neumann et al., 2020; Zdilla, 2021; Kachlik, 2020) at a time when the IFAA agreed a moratorium on the issue. In the present article, we will first deal with the meaning of *pudere* and associated words, then outline the reasons why change was considered necessary (together with a resume of the course of events and the limited changes proposed by

FIPAT) and finally provide a critique of those that were against changing the terms.

1. *Pudere*-related terms and their meaning and history

According to the *Oxford Latin Dictionary* (1968) there are many words related to *pudere*:

Pudefacio – to make ashamed

Pudendus – that one ought to be ashamed

Pudens – having a sense of what is decent; showing a proper restraint

Pudenter – with a proper sense of restraint

Pudeo, pudere – to fill with shame; to feel shame, to be ashamed

Pudibundus – filled with shame, shamefaced, blushing or what causes blushing or shaming or dishonour

Pudice – with a sense of propriety; in chaste or subdued style

Pudicitia – sexual purity

Pudicus – sexually pure, chaste, subdued

* Corresponding author.

E-mail address: moxham@cardiff.ac.uk (B. Moxham).



Fig. 1. Adam and 'Eve' from the *Epitome* of Vesalius. Courtesy of University of Glasgow Archives & Special Collections, Hunterian collection, Hunterian Ce.1.18.

Pudor – a feeling of shame, shame in its outward manifestation, sense of propriety, one's honour or self-respect, a source of shame

Pudoricolor – shame-coloured

Within the *Gaffiot Dictionnaire Latin-Français* (2016) words related to *pudere* are similarly defined (e.g., *pudeo – avoir honte*; *pudenda – parties honteuses*)

Collectively, these words denote shame or the subjugation of shame by propriety. Indeed, *pudenda* is a substantive adjective of a neuter plural form, which consequently designates "things" in general of which one can, or must, blush. Historically, it appears that the behaviour recommended to the Latins is that of moderation, decency, refusal of excesses, a behaviour that corresponds to an ideal of living together within of a city that works well. Exceeding these rules of living together is considered infamous (*pudenda*) and would be translated as shameful.

Draper (2020) has provided an account of the history of anatomical terminologies and the use of *pudere*-related terms, and the New York Times published an article by Gross (2021) entitled "Taking the Shame Out of Female Anatomy". It seems that anatomical terminology was initially idiosyncratic to the anatomist. For example, Vesalius, often considered the 'founder of scientific anatomy' (e.g., Zampieri et al., 2015), merely used ordinal labels on his illustrations and classified structures in an ordered locational and functional sense. It was only as late as 1895 that the anatomical society in Germany published the *Basle Nomina Anatomica* that was the first attempt to provide a terminology for gross anatomy to be used by anatomists globally (His, 1895). Since then, there have been ten revisions: *Jenaiensis Nomina Anatomica* (1935), *Nomina Anatomica Parisiensia* (1955), multiple iterations of *Nomina Anatomica* editions (1961–1989), and *Terminologia Anatomica* first and

second editions (FCAT, 1998; FIPAT, 2019). Throughout, although many anatomical terms seem to have altered considerably, *pudere* terms have been consistently invoked within the terminologies.

Kühn and Assmann (1822) reported that the early Greco-Roman physician and anatomist, Galen, used the Greek term *αἰδοῖον* (*aidoion*) to describe the genitalia (both female and male) and, according to Liddell et al. (1940), this is derived from *αἰδώς* (*aidos*) that denotes shame or modesty (see also Draper, 2020).

It should be noted that, although the term was originally used for both female and male anatomy, it has come to be applied more often to female genital anatomy. For example, *pudendum/pudenda* in the *Oxford English Dictionary* (2025) are defined as: "The external genitals; esp. the vulva" (https://www.oed.com/dictionary/pudendum_n?tab=meaning_and_use; accessed 5th October 2025). Furthermore, the *Merriam-Webster's Dictionary* (2025) defines them as: "The external genital organs of a human being and especially of a woman - usually used in plural" (<https://www.merriam-webster.com/dictionary/pudenda>; accessed 5th October 2025). In the *Cambridge English Dictionary* (2025), they are defined as: "the sexual organs, especially of a woman." (<https://dictionary.cambridge.org/dictionary/english/pudendum>; accessed 5th October 2025), in the *Collins Dictionary* (2025) as: "the human external genital organs collectively, esp of a female" (<https://www.collinsdictionary.com/dictionary/english/pudenda>; accessed 5th October 2025). In Wiktionary *pudendum* is defined as: "from Latin *pudenda* ("that whereof one ought to feel shame"), substantive use of the neuter plural gerundive ("it shames") and "pudendum - external genital organs in a human; especially a woman's vulva." (<https://en.wiktionary.org/wiki/pudendum>; accessed 5th October 2025).

Even the esteemed anatomical textbooks restrict the term to female



Fig. 2. Aphrodite of Knidos, Praxiteles.

anatomy. For example, the indices of some editions of Gray's Anatomy state: "for pudenda see vulva" or the text for the female external genitalia uses pudendum and vulva synonymously (e.g., 35th and 42nd editions of [Gray's Anatomy, 1973, 2020](#)). Moreover, only the term *pudendum femininum*, and not *pudendum masculinum*, appeared in official anatomical terminologies.

Seneca may have been amongst the first in Roman times (the first century BCE) to apply terms related to *pudere* to the sexual organs ([Bjork, 2019](#)). While some religions worshipped the vulva, the terms

were used to denounce immorality by the Christian theologian, Augustine of Hippo, in the fifth century (see [2004 published translation](#)). There was a rejection of all that was sexual and therefore considered by him as shameful. Within his *The City of God* (401), he recounts how the nudity of Adam and Eve, after being expelled from Paradise, was perceived as being indecent so that their previously exposed genitals now needed to become hidden (see [published transl. Crowther \(2010\)](#) claims that, within Vesalius's *Epitome of 1543*, the male and female figures would have been recognised by the students of anatomy at that time as depicting "The Fall" of Adam and Eve. It is also worth noting here that, while the male is displaying his whole body without shame, the female is hiding her genitalia behind her hand (Fig. 1) (see also [Morgan et al., 2017](#)). The sexist connotations are clear! For early Christianity, Rufus of Ephesus called the genitals 'αἰδοῖον' in Greek, which became *pudenda* in Latin. The word *pudenda* was recorded in a form of English in 1398: "Also for shame *pise parties* hatte *pudenda*, *pe schameliche parties*" and incorporates the words for shame (*J. Trevisa*, translation of Bartholomaeus Anglicus, *De Proprietatibus Rerum*) ([Oxford English Dictionary, 2025: https://www.oed.com/dictionary/pudendum_n?tab=meaning_and_use#27789274](#): accessed 5th October 2025).

The thorny issue of *pudere* extends beyond religion to the visual arts. For much of Western art, at least in its earliest manifestation, there was a need to represent the female body in terms of *pudor* (i.e., modesty to avoid shame). The example of Praxiteles' sculpture of Aphrodite (Fig. 2) often comes to mind in this regard. Indeed, according to [Salomon \(1996\)](#), Lucian (author of *Erotes*) introduced the concept of *pudica* when describing this sculpture but ignored the ambiguity behind its Greek root (*aidos, aidoios*) (meaning both genitalia and shame). [Nead \(1992\)](#), however, has commented that: "The female nude is both a cultural and a sexual category; it is part of a cultural industry whose institutions and language propose specific definitions of gender and sexuality and particular forms of knowledge and pleasure." Thus, the *Venus pudica* pose still references notions of shame and not just of female beauty.

Despite the IFAA's and [Draper's \(2020\)](#) views that *pudere* terms should be changed, there remains much controversy within the anatomical community that is explained by an inherent conservatism and thus a reluctance to change. Perhaps this is unsurprising given the backlash against EDI by some governmental authorities and politicians.

2. Reasons for changing *pudere*-related terms

The IFAA's Executive Committee, following advice from its international committee for EDI (FICEDA), agreed that there were three main reasons why anatomical terms relating to *pudere* (suggesting 'shame') may be deemed unacceptable in contemporary anatomy:

1. They are unscientific, i.e. not relating to location, attachment, function etc. but to a supposed 'moral' stance that is outside the descriptive objectivity of science;
2. As biologists, anatomists should not be concerned with matters relating to 'exposure' or 'private parts' for we cannot regard as 'shameful' the essential normal functions of micturition, defaecation, conception, parturition and indeed sexual-wellbeing;
3. The terms have sexist connotations, at least in English (for better or for worse, the international language), where *pudenda* are especially used to describe female genitalia. In this context, students of anatomy are often advised by teachers to investigate the meanings of terms to make a good start to their learning. So, while it is beneficial for the student to understand that *pudens* means rock-like, what benefit is expected when discovering that *pudendum* has a meaning related to shame?

In relation to the third point, female genitalia have occasionally, and regrettably, been regarded as sexual curiosities and as being shameful rather than as 'normal' anatomical variations (see [Hayes and Temple-Smith, 2021](#)), and particularly in different population groups.

Table 1
Suggested changes to the *Terminologica Anatomica* by FICEDA.

OLD TERM	SUGGESTED ALTERNATIVE TERM
Pudenda	Genitalia
Pudendal canal (aka Alcock's canal)	Perineal canal
Pudendal nerve	Perineal nerve (note that the existing perineal nerve will be a continuation NOT A BRANCH of the pudendal (now perineal) nerve from the sacral plexus: see text below)
Internal pudendal artery	Internal perineal artery
Perineal artery	Superficial perineal branch of internal perineal artery
External pudendal artery from femoral artery	External perineal artery with superficial external and deep external perineal branches
Accessory pudendal artery	Accessory perineal artery
Internal pudendal veins	Internal perineal veins
Superficial external pudendal veins	Superficial external perineal veins
Deep external pudendal veins	Deep external perineal veins

For example, the 'tablier' of women of the San population (De Villiers, 1961; Tobias, 2002) were known as sexual curiosities (Young, 1997), despite their anatomy being normal. Indeed, Saartjie (Sarah) Baartman, who displayed these normal genital characteristics, was infamously paraded at exhibitions around the UK and France (Lyons, 2018; Saartjie Baartman Memorial, <https://www.cipdh.gob.ar/memorias-situadas/en/lugar-de-memoria/memorial-saartjie-baartman/>) and her genitalia were dissected upon her death and kept bottled in the *Muséum National d'Histoire Naturelle* in Paris for some years (Tobias, 2002). While accepting that the direct cause of this situation may have been colonialism, racism and institutional misogyny, indirectly the association of shame with female genitalia echoes these political problems. This culturally insensitive stigma would be ameliorated by removing *pudere*-related terms that suggest 'shame'. Moreover, as reported by McDougall (2013), women have been made to feel ashamed of their 'pudendal' area because of the focus in recent times on obtaining a 'clean slit' (i.e., one devoid of pubic hair and seemingly nowadays regarded as the 'ideal'). The term *pudendum* for this area feeds into a consumer view of altering, through surgery, something which is normal, and which should bear no shame. Anatomists should be more aware that persisting with a term of 'shame' has a potential bearing on societal matters and is not merely a term for the use within anatomy or medicine.

3. The timescale of events leading to the IFAA's requirement to change anatomical terms related to *pudere*

In September 2016, at a meeting of FIPAT in Göttingen, Bernard Moxham suggested that the moralistic, and possibly sexist, words related to *pudere* should be changed from the terminologies. The minutes read: 'Another denomination must be found'. Subsequently, FICEDA discussed the appropriateness of anatomical terms derived from *pudere*, it being stated that FIPAT had agreed that the terms need changing. The members of FICEDA were asked to support, reject, or abstain from supporting the initiative. There was unanimous support for the need to change the terminology. In September 2017, the Executive Committee of the IFAA, meeting in Argentina, accepted FICEDA's report for changing anatomical terms derived from *pudere*.

In July 2018, a member of the group within FIPAT responded to the issue of changing terms related to *pudere* stating that gender equality is "against the laws of Nature and the Supreme Creator". Moreover, he wrote that females "have an inherent sense/desire to cover their external genitalia". These views he claimed were related to the female limbic system, cerebral cortex and reticular formation.

Other members of FIPAT disagreed with these views and, in response, the Chair of FIPAT dealing with *Terminologica Anatomica* wrote:

"the working group will proceed on the path to replacing all the terms that use "pudendum and derivatives" (personal communication). However, as will be described further, only partial changes were enacted by FIPAT and then contrary to the requirements of the IFAA Executive.

The suggested changes in terminology required by the IFAA Executive and its International Committee (FICEDA) are shown in Table 1, although it was recognised that it was up to the subgroup concerned with gross anatomy now to consider this matter.

In order to show how these changes would appear in a text, the following has been modified from *Gray's Anatomy (2016)* where pudendal has been changed to perineal and where the previously termed perineal nerve is now thought of as a continuation of (not a branch of) the previously termed pudendal nerve. Also show below are possible changes to the pudendal vessels.

The perineal nerve was previously known as the pudendal nerve. It arises from the ventral divisions of the second, third and fourth sacral ventral rami and is formed just above the superior border of the sacro-tuberous ligament and the upper fibres of ischiococcygeus. It is initially within the pelvis but leaves it via the greater sciatic foramen to enter the gluteal region and cross the sacrospinous ligament close to its attachment to the ischial spine. The nerve lies close to the internal perineal artery on the spine. It accompanies the internal perineal artery through the lesser sciatic foramen into the perineal (Alcock's) canal on the lateral wall of the ischioanal fossa. In the posterior part of the perineal canal, it gives rise to the inferior rectal nerve and the dorsal nerve of the clitoris/penis. Note that the dorsal nerve of the clitoris/penis runs anteriorly above the internal perineal artery to reach the corpus cavernosa. Exiting the perineal canal, the perineal nerve continues forward below the internal perineal artery to accompany a superficial perineal branch. The perineal nerve then divides into posterior labial/scrotal and muscular branches.

The internal perineal artery (previous known as the internal pudendal artery) is a branch of the anterior trunk of the internal iliac artery. It arises just below the origin of the obturator artery in the pelvis, leaving this region to enter the gluteal region through the greater sciatic foramen and between piriformis and ischiococcygeus. It gains access to the perineum by passing around the posterior limit of the levator ani at its attachment to the ischial spine. Behind the ischial spine the internal perineal artery has the perineal nerve medially and the nerve to obturator internus laterally. The artery then runs on the lateral wall of the ischioanal fossa in the perineal (Alcock's) canal with the perineal nerve and internal perineal veins. In the female, the internal perineal artery now gives rise to the artery of the bulb of the clitoris and to the vagina before it divides into the cavernosal and dorsal arteries of the clitoris. In the male, the bulbal artery of the penis similarly gives rise to cavernosal and dorsal arteries for the penis. The branches of the internal perineal artery can on occasions be derived from an accessory perineal artery which itself is a branch of the internal perineal artery before it exits the pelvis. Near the anterior end of the perineal canal, the internal perineal artery terminates as the superficial perineal branch of the internal perineal artery. This superficial branch runs through the inferior fascia of the urogenital diaphragm to give rise to a transverse branch and to posterior labial arteries in the female and posterior scrotal arteries in the male.

The external perineal arteries (previously called the external pudendal arteries) arise from the femoral artery in the femoral triangle of the thigh. The superficial external perineal artery arises from the medial aspect of the femoral artery and close to the origins of the superficial epigastric and superficial circumflex iliac branches of the femoral artery. It passes close to the inguinal ligament at the anterior superior iliac spine to supply skin and superficial fascia in this region. The deep external perineal artery arises inferiorly to the superficial external perineal artery and pierces the fascia lata to supply skin covering the labium majus or the scrotum.

The perineal veins, as for the perineal arteries, are designated internal and external perineal veins (formally pudendal veins). The

internal perineal veins are *venae comitantes* of the internal perineal artery and unite as a single vessel to drain into the internal iliac vein. Its tributaries are from the inferior rectal veins and from the clitoris and labia or the penile bulb and scrotum. The superficial external perineal veins also drain the labia/scrotum and are joined by the superficial dorsal vein of the clitoris/penis. Deep external perineal veins are tributaries of the long saphenous vein.

Despite the requirement to change all *pudere*-related terms, FIPAT countered by making only partial changes. The then Chair of FIPAT instructed the IFAA Executive that, contrary of the requirements from the IFAA Executive to change all terms related to *pudere*:

"the anatomy group concluded that the 2016 meeting opposed *pudendum* and *pudendum*, but not *pudendalis* and *pudendal*."

"in TA2, *pudendum* is changed to *vulva*. Along with this change, *rima pudendi*, *labium minus pudendi*, and *frenulum labiorum pudendi*, terms applied only to female anatomy, were changed to *rima vulvae*, *labium minus vulvae*, and *frenulum labiorum vulvae* in order to remove any unilateral, female-specific use of the root *pudend-*."

"as Chair of FIPAT, my interpretation of the minutes and what was done, and after polling of FIPAT Coordinators and clinicians/surgeons using the term *pudendal*, concludes that *pudendalis* should be retained."

4. Criticisms levelled against changing *pudere*-related terms

***Pudere*-related terms relate to both male and female and are not sexist.** It is undoubtedly true that it was originally the case that *pudere*-related terms applied to both sexes. However, as demonstrated earlier, the terms have become more related to the female in textbooks and common parlance. Critics also argue that many anatomical terms have sexist and anachronistic origins; for example, 'vagina' comes from the Latin meaning sheath. Nevertheless, the derivation of 'vagina' at least has some descriptive and scientific provenance. Even if the sexism is dismissed, and the *pudere*-related terms should be applied to both females and males, they remain the only ones in the anatomical lexicon that are based moralistically and not on a scientific/descriptive basis or a biological/functional basis. In this respect, the opinion of [Kachlik \(2020\)](#) that the sole reason for changing *pudere*-related terms was sexism is erroneous.

***Pudere*-related terms are about modesty and not shame.** [Zdilla \(2021\)](#) has suggested that the association of *pudere*-terms with shame is a perversion and that it relates more to *pudor* and modesty. Already we have shown in this article that the Latin dictionaries are clear about the association of *pudere*-terms with shame. That said, modesty and shame are two sides of the same coin... there is no need for modesty if there is no shame and, as shown in [Figs. 1 and 2](#) (and by the sexist comments from a member of FIPAT mentioned earlier), modesty seems to be a matter pertaining more to the female than the male. This is reminiscent of the sexist biblical story where Eve tempted Adam.

Clinical acceptance. In his rejection of the wishes of the IFAA, the then Chair of FIPAT wrote in his communication to the IFAA Executive: "... the pudendal nerve is of utmost importance in all sorts of clinical contexts and it is unlikely that one manages to change terms associated with it (i.e., terms which use the same adjective as the nerve) by simply changing a (or even: three) terminology list(s). The suggested change would, on the contrary, backfire as it endangers the authority of the whole terminology enterprise, which in turn will make the suggested change further unlikely to be taken on." [Kachlik \(2020\)](#) is also of the opinion that clinicians hold sway over the usage of terms.

We accept that clinicians tend to be conservative by nature and are used to their own terms at the expense of strict anatomical terminologies. However, the medical profession is not immune to societal changes and to scientific reasoning. Even in the face of present-day hostile political forces, distinguished medical journals are emphasising the need to address positively equality and diversity issues and publishers of textbooks and journals often require IFAA terminologies to be employed.

From our experiences of talking to clinicians, it is true that new terminologies take time to embed, but it is equally the case that, should one fall under an ultra-conservative spell, nothing will change and the purpose of having a programme to revise terminologies is rendered pointless. We should therefore be more optimistic as new generations of clinicians will, if appropriately educated, gradually accept reasonable arguments about changes to anatomical/medical terms. It should finally be noted that, for veterinary anatomy, the term *vulva* is preferred and, for IMAIOS's anatomy of veterinary imaging (2025), terms for female external genital organs have yet to be defined (<https://www.imaios.com/en/vet-anatomy/anatomical-structures/pudendal-labia-11090535880#>; accessed 30th September 2025).

Neither students nor anatomists care or know about *pudenda*'s derivation. When medical students and anatomists were asked to respond to a question on whether they considered *pudere* terms to be sexist, [Morgan et al. \(2014, 2016\)](#) found that not much concern was expressed. This finding might suggest that the use and derivation of a word have no practical or cultural significance ([Neumann et al., 2020](#)). However, this is a deliberate misinterpretation of the views of [Morgan et al. \(2014, 2016\)](#) as they reported that female students and anatomists (particularly female), and males and females who had a better understanding of equality and diversity matters, were more concerned about the derivation of *pudere* terms. They ventured that it would be wrong to dismiss these concerns, given that equality and diversity issues are becoming increasingly important in higher education. Furthermore, the statement that most, but not all, medical students failed to see *pudere* terms as being inappropriate should not be taken out of context from the totally of the findings of [Morgan et al. \(2014, 2016\)](#), where problems with gender issues and clear misogyny were often discerned.

We would further argue that medical curricula and teaching materials in anatomy are not yet being transformed to reflect these issues. [Morgan et al. \(2014, 2016\)](#), from their overall findings, concluded that "today's medical students perceive a gender bias that is reflected in the books they read and the tuition they receive and retain implicit bias." We argue that greater awareness to matters relating to EDI in anatomy needs to be promoted. What better way to start than by getting rid of anachronistic and moralistic anatomical terms for which there are sensible descriptive and more scientific alternatives?

Semantic arguments advocating the persistence of some *pudere*-related terms. FIPAT decided, against the requirements of the IFAA Executive and of FICEDA, to only change nouns derived from *pudere* but to keep adjectives for the nerves and vessels in the pelvic and perineal regions. Thus, the Chair of FIPAT reported:

"in TA2, *pudendum* is changed to *vulva*. Along with this change, *rima pudendi*, *labium minus pudendi*, and *frenulum labiorum pudendi*, terms applied only to female anatomy, were changed to *rima vulvae*, *labium minus vulvae*, and *frenulum labiorum vulvae* in order to remove any unilateral, female-specific use of the root *pudend-*. This was an appropriate change as the adjective *pudendus* (-a, -um) can be replaced by *pudendalis* (-e), e.g., in the names of nerves and blood vessels that occur in both sexes. *Pudendalis* means "of or related to the pudendum and is used for analogous structures in both sexes (*sex-not-specified*)."

[Neumann, Gest and Tubbs \(2020\)](#) reasoned likewise, reporting that anatomical adjectives do not require the target structure to still exist by that name, and that accordingly the view that adjectives requiring base nouns is fundamentally flawed from an anatomical nomenclature perspective. Notwithstanding these views, it was the opinion of the IFAA Executive that it was not appropriate to have structures named *arteriae pudendales*, *venae pudendales*, and *nervus pudendalis* as there is no longer a *pudendum* to which these vessels and nerves go! Indeed, they required that alternative names should be found as the Chair of FIPAT's decision persists with the view that *pudenda*(um) is 'sex-not-specified' (see earlier comments about *pudenda* in the dictionaries being particularly applied to female genitalia) and ignores the argument that, even if the sexist argument is ignored, *pudere*-related terms are unique in the anatomical terminologies for having a moralistic etymology that implies

'shamefulness' to both the female and male perineum.

Clearly, a struggle persists between the linguistic viewpoint on the one hand and opinions supporting EDI principles on the other. This article serves to lay out the original opinions of the IFAA Executive and of its FICEDA committee in support of EDI principles. No doubt, the issues will be revisited by those newly appointed members of the IFAA Executive, FICEDA and FIPAT since their election and appointments in 2024. Meanwhile, *Terminologia Anatomica 2* has been ratified and published with terms using *pudendales* and *pudendalis* adjectival forms.

The need to adopt a conservative approach. Neumann et al. (2020) laid out what they perceived, without the approval of the IFAA who have ownership of the anatomical terminologies, the 'principles or guidelines for determining anatomical terms'. Essentially, there were three conservative principles: names should not be changed unless they are wrong; corrections of perceived errors should not be pedantic; and inclusion of every minor structure should not be attempted." These sentiments were followed up by the Chair of FIPAT stating: "I think terminology changes should only be made if there is the danger of ambiguity and confusion or if there is new evidence. Then the change has still to be weighed against (a) the (clinical) importance of the structure in question and (b) the current usage of the term connected to it." Additionally, Kachlik (2020) has written that "Impetuous and unsystematic changes and interventions should not be undertaken". However, changes to nomenclature which are deemed important from a diversity perspective should not be considered "An impudent debate" (Neumann, 2020).

While one would not wish to argue against these guidelines in general, there are instances where change is necessary as is the case for *pudere*-related terms where acceptable alternatives are readily available. Indeed, it is disingenuous to believe that the changes proposed by the IFAA were "impetuous or unsystematic"! Certainly, if radically made-up terms had been invented there might be some justification in the accusation. Changing *pudere*-related terms to those related to genitalia or vulva is not radical, such terms being readily understood and employed in medical and scientific circles for centuries. If we heed the critics, conservatism turns to fossilisation.

Moreover, the conservative sentiments turn all too readily to such remarks from the FIPAT Chair as "What we may think is offensive or sexist now may not have been the intention of our learned forefathers." Accordingly, should we accept the attitudes and social mores of these "learned forefathers" at a time when females were just chattels, when slavery was rife and when capital punishment was meted out to persons just for stealing a loaf of bread? Furthermore, our "learned fathers" are not immune from criticism.

The most egregious claim comes when, as in the article of Kachlik (2020), there is made a provocative political point suggesting that "changes and interventions could reduce the credit of the nomenclature and also of FIPAT and IFAA among anatomists, and the credit of anatomists among clinicians." Unfortunately, all too frequently we fail to react readily to issues concerning the esteem of anatomy by those who erroneously consider our discipline intrinsically traditional, old-fashioned, and unadventurous, and who also claim, again erroneously, that there is nothing more to be discovered in anatomy. Maybe those who do not want to come into modern times in order to make simple changes to inappropriate terms are indignant, but the IFAA does not want our esteem to be further eroded by failure to update in clearly minor, but important, ways, antediluvian terms to ensure that our terminologies reflect contemporary concerns and issues (moral, scientific and biological).

A further criticism relates to why other anatomical terms with 'problematic histories' are not considered. For example, it is acknowledged that the term *vermillion* for the lips (red zone) is only truly applicable to persons of some ancestral origins. While such terms should

be considered at some point, the term *vermillion*, and others with possible 'problematic histories', do not have a moralistic etymology associated with shame.

Overall, the critics of changing *pudere*-related terms are arguing sophistically to justify their conservatism. Anatomy should not be seen to be failing to address seemingly taboo issues such as gender bias and sexual stereotyping and falling behind on equality and diversity issues in matters as fundamental as terminology. This touches upon, and is particularly salient to, current controversies around issues relating to female genital mutilation and the huge expansion of cosmetic surgery to female genitalia, there being a 45 % increase in labiaplasty since 2015 (Nurka, 2019). In addition, attention is drawn to articles by Ashong and Batta (2013) dealing with the sensationalisation of female genitalia, Placik and Arkins (2014) relating to how pornography influences trends in plastic surgery, and Chibnall et al. (2020) relating to pathologizing diversity as seen in websites offering female genital cosmetic surgery. All this adding to a lack of appreciation of the normal variations in female genital anatomy (e.g. Howarth et al., 2016; Clerico et al., 2017; Hayes and Temple-Smith, 2021). Although clearly there is no direct association between these matters and the continuance of *pudere*-related terms, we should avoid further complicating matters by using outmoded terms that are unscientific and potentially sexist.

5. Recommendations

The authors acknowledge that much needs to be done to embed the principles of EDI into the study of anatomy, as well as in the clinical training of healthcare professionals. It is common for anatomists to tell their students that they should not try to learn the names of anatomical structures 'parrot fashion' but should investigate the meanings and origins of the terms to get pertinent information. Thus, many terms describe, or allude to, their locations, attachments, courses, relationships, shapes, functions etc. When a student is faced with the etymologies of terms related to *pudere*, what message is delivered? We know not whether a student will dismiss this as an anachronism. What we do know is that generally there is evidence that there is 'blindness' towards gender issues and sometimes overt misogyny (Morgan et al., 2014, 2016). Furthermore, it has been reported that, in terms of the Big Five personality traits (e.g. John et al., 1999), medical students may be less open and agreeable than some other students (Plaisant et al., 2014; Stephens, 2024). However, it has yet to be tested whether students with higher openness and agreeableness are more concerned about the use of *pudere* terms. Overall, we continue to strongly recommend that students discern the meaning of anatomical terms, and welcome FIPAT's removal of *pudendum(a)* from TA, albeit a partial removal of associated terms. What this article addresses is the continuing antagonism to changes to *pudere* terms that appear in the literature without riposte. Alongside the change to terms, and accepting that the problem of embedding EDI principles is broader, there is a need for improving diversity of representation of the human body (i.e. away from just a healthy and abled, young, muscular male) in textbooks, teaching presentations, computer programs and other teaching materials. Additionally, there is a case for informing students of the history of anatomy (see Hildebrandt, 2019) and instructing students about explicit and implicit bias. However, we would not advocate setting up special courses but would hope that these issues are considered, and are integrated within, the existing anatomical and medical curriculum (including if possible by discussions around the dissecting table).

6. Conclusions

Helkiah Crooke, writing in *Mikrokosmographia* (1615), enunciated the difficulties felt by clinicians (and indeed anatomists) in dealing with

female sexual anatomy, stating “the parts are least knowne as being veiled by Nature, and through our unreasonable modesty not sufficiently uncovered.” Where in medicine the male body is seen as the norm and the female as ‘other’, the gender binary is particularly relevant to female sexual anatomy. O’Connell et al. (2005) maintain that the amount of space devoted to penile anatomy as opposed to female genital anatomy inevitably has a detrimental effect on the work of gynaecologists, obstetricians, urologists, and other pelvic surgeons. Consequently, it is incumbent on anatomists to lead the way and to cast aside ‘tradition’ in its terminology.

Within the title of this article, we have used the phrase ‘moving beyond the use of *pudere* terms’. We hold that maintaining *pudere* terms is scientifically, biologically and sociologically inappropriate when alternative terms are readily available or devised. Those who value diversity and inclusivity in our discipline are required to call out prejudice and discrimination, even when exemplified in a simple anatomical term.

CRediT authorship contribution statement

Diogo Pais: Writing – review & editing, Conceptualization. **Moxham Bernard John:** Writing – review & editing, Writing – original draft, Project administration, Conceptualization. **Beverley Kramer:** Writing – review & editing, Writing – original draft, Conceptualization. **Odile Plaisant:** Writing – review & editing, Conceptualization.

Declaration of Competing Interest

The authors state that there is no conflict of interest concerning financial or commercial interests.

References

Ashong, A.C., Batta, H.E., 2013. Sensationalising the Female Pudenda: an examination of public communication of aesthetic genital surgery. *Glob. J. Health Sci.* 5, 153–165.

Augustinus of Hippo 410. The City of God. Published 2004 by Penguin Classics, Penguin Random House, London.

Bjork, R.E., 2019. *The Wife of Bath's Bele Chose*. In: *The Chaucer Review*, 53. Penn State University Press, pp. 336–349. Accessed April 24, 2019, from Project MUSE database.

Cambridge English Dictionary, 2025. Accessed 5th October 2025. (<https://dictionary.cambridge.org/dictionary/english/pudendum>).

Chibnall, K., McDonald, K., Kirkman, M., 2020. Pathologising diversity: medical websites offering female genital cosmetic surgery in Australia. *Cult. Health Sex.* 22, 64–80.

Clerico, C., Lari, A., Mojallal, A., Boucher, F., 2017. Anatomy and Aesthetics of the Labia minora: The Ideal Vulva? *Aesthetic Plast. Surg.* 41, 714–719.

Collins Dictionary, 2025. Accessed 5th October 2025. (<https://www.collinsdictionary.com/dictionary/english/pudenda>).

Crowther, K.M., 2010. Adam and Eve in the Protestant Reformation. Cambridge University Press, New York.

De Villiers, H., 1961. The tablier and steatopygia in Kalahari Bushwomen. *South Afr. J. Sci.* 57, 223–227.

Draper, A., 2020. The history of the term pudendum: Opening the discussion on anatomical sex inequality. *Clin. Anat.* 34, 315–319.

Crooke, Helkiah, 1615. *Mikrokosmographia*. Archival copy accessed 6 October 2025. (<https://archive.org/details/b30332345/page/n23/mode/2up>).

Federative Committee on Anatomical Terminology (FCAT). (1998). *Terminologia Anatomica* (p. 292). Stuttgart, Germany: Thieme.

Federative International Programme for Anatomical Terminology (FIPAT). (2019). *Terminologia anatomica* (2nd ed.) Retrieved from FIPAT.library.dal.ca.

Gaffiot Dictionnaire latin-français. 2016. (<https://gaffiot.fr>) (accessed 29th September 2025).

Gray's Anatomy 35th ed{C}.{C} (Warwick R & Williams P.L. editors). 1973. Edinburgh: Longman.

Gray's Anatomy: the anatomical basis of clinical practice, 41st ed., 2016. Elsevier Limited, New York.

Gray's Anatomy: the anatomical basis of clinical practice 42nd ed. (Standring S, editor). 2020. New York: Elsevier Limited.

Gross, R., 2021. Taking the Shame Out of Female Anatomy. N. Y. (<https://www.nytimes.com/2021/09/21/science/pudendum-women-anatomy.html>) (accessed 29th September 2025).

Hayes, J.A., Temple-Smith, M.J., 2021. What is the anatomical basis of labiaplasty? A review of normative datasets for female genital anatomy. *ANZJOG* 61, 331–338.

Hildebrandt, S., 2019. The role of history and ethics of anatomy in medical education. *Anat. Sci. Edu* 12, 425–431.

His, W., 1895. *Nomina anatomica*, 1st ed. Veit & Comp, Leipzig.

Howarth, C., Hayes, J., Simonis, M., Temple-Smith, M., 2016. Everything's neatly tucked away': young women's views on desirable vulval anatomy. *Cult. Health Sex.* 18, 1363–1378.

IFAA, 2023. The International Federation of Associations of Anatomy's guidelines for Equality, Diversity and Inclusion (EDI) for IFAA Member Associations. <https://www.ifaa.net>. Accessed 30th September 2025.

IMAOS (2025).(<https://www.imaos.com/en/vet-anatomy/anatomical-structures/pudendal-labia-11090535880#>)Accessed 30th September 2025.

John, O.P., Srivastava, S., 1999. In: Pervin, L.A., John, O.P. (Eds.), *Handbook of Personality: Theory and Research*, (Vol. 2.. Guilford Press, New York, pp. 102–138.

Kachlik, D., 2020. Changes of anatomical nomenclature must be deliberate: the female external genitalia. *Clin. Anat.* 34, 320–323.

Kiuhn, K.G., Assmann, F.W., 1822. *Claudii Galeni Opera omnia*, 4. C. Cnoblochii, Leipzig, Germany, p. 159.

Liddell, H.G., Scott, R., Ones, H.S., McKenzie, R., 1940. *A Greek-English lexicon* (New ed.). Clarendon Press, Oxford, England.

Lyons, A.P., 2018. The Two Lives of Sara Baartman: Gender, "Race," Politics and the Historiography of Mis/Representation. *Anthropologica* 60, 327–346. (<https://www.jstor.org/stable/44876756>) (accessed 4th October 2025).

McDougal, L.J., 2013. Towards a clean slit: How medicine and notions of normality are shaping female genital aesthetics. *Cult. Health Sex.* 15, 774–787.

Morgan, S., Plaisant, O., Lignier, B., Moxham, B.J., 2014. Sexism and anatomy, as discerned in textbooks and as perceived by medical students at Cardiff University and University of Paris Descartes. *J. Anat.* 224, 352–365.

Morgan, S., Plaisant, O., Lignier, B., Moxham, B.J., 2016. Sexism within anatomy as perceived by professional anatomists and in comparison with the perception of medical students. *Clin. Anat.* 29, 892–910.

Morgan, S., Plaisant, O., Lignier, B., Moxham, B.J., 2017. Medical students and professional anatomists do not perceive gender bias within imagery featuring anatomy. *Clin. Anat.* 30, 711–732.

Merriam Webster Dictionary, 2025. (<https://www.merriam-webster.com/dictionary/pudenda>). Accessed 5th October 2025.

Nead, L., 1992. *The Female Nude: Art, Obscenity and Sexuality*. Oxford: Routledge.

Neumann, P.E., 2020. Rules of nomenclature versus principles of revision: An impudent debate. *Clin. Anat.* 34, 312–314.

Neumann, P.E., Gest, T.R., Tubbs, R.S., 2020. The principles of anatomical nomenclature revision: they're more like guidelines anyway. *Clin. Anat.* 33, 27–331.

Nurka, C., 2019. *Female Genital Cosmetic Surgery: Deviance, Desire and the Pursuit of Perfection*. Switzerland: Palgrave Macmillan.

O'Connell, H.E., Sanjeevan, K.V., Hutson, J.M., 2005. Anatomy of the clitoris. *J. Urol.* 174 (4), 1189–1195. Pt 1.

Oxford English Dictionary, 2025. accessed 5th October 2025. (https://www.oed.com/dictionary/pudendum_n?tab=meaning_and_use).

Oxford Latin Dictionary. 1968. Oxford University Press 2nd Edition. (<https://archive.org/details/oxford-latin-dictionary/page/8/mode/2up>) (accessed 4th October 2025).

Placik, O.J., Arkins, J.P., 2014. Plastic surgery trends parallel playboy magazine: the pudenda preoccupation. *Aesthetic Surg. J.* 34, 1083–1090.

Plaisant, O., Stephens, S., Apaydin, N., Courtois, R., Lignier, B., Loukas, M., Moxham, B., 2014. Medical students' attitudes towards science and gross anatomy, and the relationship to personality. *J Anat* 224 (3), 261–269.

Salomon, N., 1996. The Venus Pudica: uncovering art history's "hidden agenda" and pernicious pedigrees. in *Generations and Geographies in the Visual Arts*, ed. by Griselda Pollock. Routledge, New York, p. 71.

Saartjie Baartman Memorial. CIPDH UNESCO th. accessed 4 October, 2025. (<https://www.cipdh.gob.ar/memorias-situadas/en/lugar-de-memoria/memorial-saartjie-baartman/>).

Stephens, SG, 2024. The relationship between classical languages, linguistic skills, and personality traits and their impact on medical education and student performance. PhD thesis, Cardiff University.

Tobias, P.V., 2002. Saartjie Baartman: her life, her remains and the negotiations for their repatriation from France to South Africa. *South Afr. J. Sci.* 98, 107–110.

Vesalius, A. 1543. *De humani corporis fabrica libri septem* (pp. 381–382 Basel. (<https://en.wiktionary.org/wiki/pudendum>).

Young, J., 1997. The Re-Objectification and Re-Commercialization of Saartjie Baartman in Suzan-Lori Parks's *Venus*. *Afr. Am. Rev.* 31, 699–708.

Zampieri, F., El Maghawry, M., Zanatta, A., Thiene, G., 2015. Andreas Vesalius: Celebrating 500 years of dissecting nature. *Glob. Cardiol. Sci. Pr.* 5 66. <https://doi.org/10.5339/gcsp.2015.66>. PMID: 28127546; PMCID: PMC4762440.

Zdilla, M.J., 2021. The pudendum and the perversion of anatomical terminology. *Clin. Anat.* 34, 721–725.

Bernard Moxham is Emeritus Professor of Anatomy at Cardiff University (Wales, U.K.) and was Deputy Director of the Cardiff School of Biosciences. He has been President of the International Federation of Associations of Anatomy (IFAA), of the Anatomical Society, and of the European Federation for Experimental Morphology (EFEM). He founded the Trans-European Pedagogic Anatomical Research Group (TEPARG). He was the Secretary of FICEDA, Immediate Past President of the IFAA on its Executive and a member of FIPAT when the IFAA required *pudere*-related terms to be changed.

Diogo Pais MD, MSc, PhD, Agg is Full Professor and Chairman of the Department of Anatomy at NOVA Medical School, NOVA University of Lisbon (Portugal), where he is the Donation Officer and the President of the Research Ethics Committee. He is currently the Secretary-General of the International Federation of Associations of Anatomists (IFAA), President of the International Committee of Symposia on Morphological Sciences (ICSMS),

President of the Portuguese Anatomical Society (SAP-AAP) and was President of the European Federation for Experimental Morphology (EFEM). He was a member of FICEDA, Secretary-General of the IFAA on its Executive and a member of FIPAT when the IFAA required *pudere*-related terms to be changed.

Odile Plaisant MD, PhD was a Senior Lecturer in Anatomy at the University of Paris Cité, Paris (France) and a psychiatrist at the Epilepsy Unit and Pain Centre of the University Hospital of Pitié Salpêtrière (APHP) in Paris. She was the Chair of FICEDA and a member of the IFAA's Executive when the IFAA required *pudere*-related terms to be changed.

Beverley Kramer is Emerita Professor of Anatomy in the Department of Anatomical Sciences, Faculty of Health Sciences, University of the Witwatersrand, South Africa. Beverley is a Past-President of the Anatomical Society of Southern Africa (ASSA), serves on the Board of the International Committee of Symposia on Morphological Sciences (ICSMS) and is now Immediate Past-President of the International Federation of Associations of Anatomists (IFAA). She was a member of FICEDA, President of the IFAA on its Executive and a member of FIPAT when the IFAA required *pudere*-related terms to be changed.