

# Earliest English Definitions of *Anaesthesia* and *Anaesthesia*

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## ABSTRACT

The earliest identified English definition of the word *anaesthesia* was discovered in the first edition (1684) of *A Physical Dictionary*, an English translation of Steven Blankaart's medical dictionary, *Lexicon Medicum Graeco-Latinum*. This definition was almost certainly the source of the definition of *anaesthesia* which appeared in *Dictionarium Anglo-Britannicum* (1708), a general-purpose English dictionary compiled by the lexicographer John Kersey. The words *anaesthesia* and *anaesthesia* have not been identified in English medical or surgical publications that antedate the earliest English dictionaries in which they are known to have been defined. (ANESTHESIOLOGY 2017; 127:747-53)

THE earliest documented uses of the word *anaesthesia* are in the literature of the Classical Greek period, approximately 2,500 yr ago.<sup>1-3</sup> Thereafter, the word *anaesthesia* appeared in medical manuscripts, such as the Hippocratic Collection.<sup>4</sup> During the eighteenth century and in the first half of the nineteenth century, before the first public demonstration of surgical etherization in Boston, Massachusetts, in October 1846, the words *anaesthesia* and *anaesthesia* appeared in numerous medical publications. These include publications on nosology (a classification of diseases), medical dictionaries, case reports of cutaneous anesthesia, and two publications on mesmerism by the English physician, John Elliotson, M.D. (1791 to 1868).<sup>5</sup>

This article presents the earliest known English definitions of the words *anaesthesia* and *anaesthesia*, which date from the late seventeenth century, and the Latin definition from which they were almost certainly derived. The terms *earliest known* and *earliest identified* indicate that newly identified definitions are to date the earliest definitions identified by anesthesia historians. The author is not aware of any similar research by lexicographers. The section titled *English Dictionaries* is intended as an introduction to the subject. It contains a selection of the significant developments in English lexicography. Similarly, the section on transliteration from Greek to Latin is a summary of linguistic changes for the benefit of nonspecialists in that field. The adoption of the word *anaesthesia* for the state of insensibility produced by ether is reviewed before the discussion of the English definitions of *anaesthesia* and *anaesthesia*.

## From Etherization to Anesthesia

On November 21, 1846, Oliver Wendell Holmes, M.D. (1809 to 1894, physician, poet, and author, Boston, Massachusetts), penned a letter to William T. G. Morton (1819 to 1868, dentist, Boston, Massachusetts) in which Holmes

recommended the word *anaesthesia* for the state of insensibility produced by the inhalation of the vapor of sulphuric ether.<sup>5</sup> Holmes' suggestion appears to have been disregarded by Morton, who did not use the word *anaesthesia* in any of his publications in 1846 and 1847.

Henry J. Bigelow, M.D. (1818 to 1890), recently appointed as a surgeon at Massachusetts General Hospital (Boston, Massachusetts), used the word *insensibility* in his now widely cited article in the November 18, 1847, issue of the *Boston Medical and Surgical Journal*<sup>6</sup>; the word *insensibility* was self-explanatory to physicians and the lay public. Furthermore, Morton had already settled on a trade name, *Letheon*, for his preparation of sulphuric ether. There is no evidence that Holmes communicated his suggestion to other physicians and dentists of Boston. The word *anaesthesia* does not appear in any publication authored by Boston physicians in 1847.

In late May or early June 1847, Holmes' letter was published in the second edition of Edward Warren's pamphlet on *Letheon*.<sup>5</sup> Edward Warren, an agent and spokesman for Morton, had a pecuniary interest in the sale of licenses for etherization. Warren's pamphlets on *Letheon* are the earliest known records of Holmes' letter to Morton.<sup>5</sup> The pamphlets ensured that Holmes' letter was widely disseminated to medical professionals in the United States and overseas.

Almost a year after Holmes penned his letter to Morton, James "Young" Simpson, M.D., (1811 to 1870), Professor of Midwifery, University of Edinburgh, Scotland, United Kingdom, commenced using the word *anaesthesia* in his various publications on ether and chloroform. Thus, it appears that Simpson's *imprimatur* ensured the adoption of the word *anaesthesia*.<sup>5</sup>

The change in the American spelling, from *anaesthesia* to *anesthesia*, occurred gradually from the 1860s through the 1870s. Mathias J. Seifert, M.D. (1866 to 1947; physician, surgeon, Professor of Physical Diagnosis and

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Anesthesiology, College of Dentistry, University of Illinois, Chicago, Illinois), claimed to have coined the word *anesthesiology* in 1902. Seifert's claim was made in a letter, dated February 7, 1938, to Paul M. Wood, M.D. (1894 to 1963), then Secretary of the American Society of Anesthetists. Seifert's letter is preserved in the Wood Library-Museum of Anesthesiology (Schaumburg, Illinois). The journal *ANESTHESIOLOGY* was first published in July 1940. Five years later, in April 1945, the American Society of Anesthetists changed its name to the American Society of Anesthesiologists.

### English Definitions of *Anaesthesia*

The reported English definitions of *anaesthesia* can be considered in three distinct phases with progressively older definitions (table 1). In the twentieth century, Bailey's 1721 dictionary was cited as having the earliest definition of the word *anaesthesia*.<sup>7-12</sup> In 2006, Defalque and Wright<sup>13</sup> reported earlier definitions that were found in the sixth edition of Edward Phillips' dictionary (1706), and in John Kersey's dictionary (1708). The newly identified definition of *anaesthesia*<sup>14,15</sup> presented in this article antedates the previously reported definitions by 2 decades. The discussion commences with the most frequently cited definition of *anaesthesia*, from Bailey's 1721 dictionary.

### Nathan Bailey's Dictionary, 1721

Anesthesia historians Albert H. Miller, M.D.,<sup>7,8</sup> Thomas E. Keys, M.A.,<sup>9</sup> and Barbara M. Duncum, D.Phil. (Oxon.),<sup>10</sup> reported that the earliest English record of the word *anaesthesia* was in the 1721 (first) edition<sup>16</sup> of Nathan Bailey's (baptized 1691 to death in 1742)<sup>17</sup> dictionary, *An Universal Etymological English Dictionary*. This conviction appears to have been based on the entry on *anaesthesia* in *A New English Dictionary*,<sup>11</sup> now known as the *Oxford English Dictionary*,<sup>12</sup> in which the earliest citation of the word *anaesthesia* was Bailey's 1721 dictionary. Bailey's definition reads: "ANÆSTHESIA, a Defect of Sensation, as in paralytick and blasted Persons. *Gr.*"<sup>16</sup>

### Nathan Bailey's Dictionary, 1730

In articles published in 1927<sup>7</sup> and 1928,<sup>8</sup> Miller reported that the word *anaesthesia* first appeared in English in Bailey's 1721 dictionary, *An Universal Etymological English Dictionary*.<sup>16</sup> Miller may have intended to follow that statement with the definition of *anaesthesia* from Bailey's 1721 dictionary. Instead, he misquoted a definition of the word *anaesthesia* from Bailey's 1730 dictionary, *Dictionarium Britannicum*.<sup>18</sup> Nearly 2 decades later, Keys<sup>9</sup> made the same error, in all likelihood because he quoted from one of Miller's two articles<sup>7,8</sup> on the origin of the word *anaesthesia*. The correct definition from Bailey's *Dictionarium Britannicum* is as follows: "Anaesthesia [Gr.] a Loss of, or Defect of Sense, as in such as have the Palsey or are blasted."<sup>18</sup>

### Edward Phillips' Dictionary, 1706

In 2006, Defalque and Wright<sup>13</sup> reported that the earliest appearance of the word *anaesthesia* was in the 1706 edition<sup>19</sup> of Edward Phillips' (1630 to death in or after 1696)<sup>17</sup> English dictionary, *The New World of Words: or, Universal English Dictionary*. However, Defalque and Wright<sup>13</sup> did not distinguish between the words *anaesthesia* and *anaesthesia*. The 1706 edition of Phillips' dictionary contains the headword *anaesthesia*.<sup>19</sup> Earlier editions of Phillips' dictionaries, published between 1658 and 1696, do not have a definition of *anaesthesia*.

The 1706 (sixth) edition<sup>19</sup> of Phillips' dictionary was revised by John Kersey the younger (birth circa 1660 to death in or after 1721),<sup>17</sup> an English philologist and lexicographer who is regarded as the first professional lexicographer.<sup>20</sup> Since earlier editions of Phillips' dictionaries do not contain the headword *anaesthesia*, Kersey should be credited for the published definition of *anaesthesia*: "a Defect or Loss of Sense, which happens to Persons troubled with the Palsie, or that are Blasted."<sup>19</sup>

### John Kersey's Dictionary, 1708

*A New English Dictionary*,<sup>21</sup> published anonymously in 1702 (the initials "J. K." appear on the title page), is generally attributed to Kersey. The headword *anaesthesia* does not

**Table 1.** Earliest Known English and Latin Definitions of the Words *Anaesthesia* and *Anaesthesia*

Year	Author	Headword and Definition
1679	Blankaart <sup>23</sup>	ANÆSTHESIA est defectus sensationis, ut paralyticis & sphacelo laborantibus contingit.
1682	Castelli (ed. Bruno) <sup>36</sup>	ANÆSTHESIA, i.e. <i>Sensûs privatio</i> . Vide <i>Stupor</i> .
1684	Blancard (Blankaart) <sup>14,15</sup>	<i>Anaesthesia</i> in defect of sensation, as in paralytick and blasted persons.
1706	Phillips (ed. Kersey) <sup>19</sup>	Anaesthesia, (Gr.) a Defect or Loss of Sense, which happens to Persons troubled with the Palsie, or that are Blasted.
1708	Kersey <sup>22</sup>	Anæsthesia, (G.) a defect or loss of Sense; as in the Palsey, etc.
1721	Bailey <sup>16</sup>	ANÆSTHESIA, a Defect of Sensation, as in paralytick and blasted Persons. <i>Gr.</i>
1730	Bailey <sup>18</sup>	Anaesthesia [Gr.] a Loss of, or Defect of Sense, as in such as have the Palsey or are blasted.

Anæsthesia, (G.) a defect or loss of Sense; as in the Palsey, &c.

**Fig. 1.** Definition of the word *anaesthesia*. From John Kersey's *Dictionarium Anglo-Britannicum* (1708).<sup>22</sup> Photographed by the author.

appear in this dictionary. In 1708, Kersey published another dictionary under his name, *Dictionarium Anglo-Britannicum*.<sup>22</sup> This dictionary contains the earliest known English definition of *anaesthesia*: "Anæsthesia, (G.) a defect or loss of Sense; as in the Palsey, etc." (fig. 1).<sup>22</sup>

Kersey's sources of the words *anaesthesia* and *anaesthesia*, and their English definitions, have not been identified by lexicographers or anesthesia historians. The words were not found in a selection of seventeenth-century English medical texts examined by the author (R.P.H.). Another consideration was that Kersey's definitions could have been derived from Latin, Greek, or French medical dictionaries. Latin and Greek words generally came to English through French. One intriguing aspect was Kersey's use of the word *blasted*.

### Steven Blankaart's Dictionaries, 1679 and 1684

During additional research, the author discovered an earlier English definition of *anaesthesia* (fig. 2) in the first edition of *A Physical Dictionary* (1684), published under the name Stephen Blankaart.<sup>14,15</sup> This medical dictionary was an English translation of Steven Blankaart's *Lexicon Medicum Graeco-Latinum* (first edition, 1679;<sup>23</sup> second edition, 1683<sup>24</sup>). Steven Blankaart (Blancaert), M.D., (1650 to 1704)<sup>25</sup> (fig. 3<sup>26</sup>), was a Dutch physician, chemist, and entomologist. Blankaart's year of death is often recorded as 1702. According to the *Biografisch Portaal van Nederland*, Steven Blankaart died in Amsterdam on February 23, 1704.<sup>25</sup>

Although Latin editions of Blankaart's dictionary were published in 1679<sup>23</sup> and 1683,<sup>24</sup> it appears that the first English translation of the dictionary (1684)<sup>14,15</sup> was based on the first Latin edition (1679).<sup>23</sup> (The short titles of Blankaart's Latin medical dictionary, and its English translation, are identical to the titles of older medical dictionaries published by other authors.)

The first English translation (1684) of Blankaart's dictionary exists in two print versions differentiated by the names of booksellers listed on their title pages.<sup>14,15</sup> The two print versions have the same title, and initials of the printer, "J. D."<sup>14,15</sup> Additional English editions of *A Physical Dictionary*

Anaesthesia in defect of sensation, as in paralytick and blasted persons.

**Fig. 2.** Definition of the word *anaesthesia*. From *A Physical Dictionary* (1684),<sup>14,15</sup> an English translation of Steven Blankaart's *Lexicon Medicum Graeco-Latinum*.<sup>23</sup> Image courtesy of the Wellcome Library (London, United Kingdom).



**Fig. 3.** Steven Blankaart, M.D. (1650 to 1704). Engraving from Steven Blankaart's *Anatomia Reformata* (1687).<sup>26</sup>

were published in 1693, 1697, 1702, 1708, 1715, and 1726. Thus, Kersey could have obtained his definition of *anaesthesia* from one of the four English editions published before 1706. The definitions of *anaesthesia* are identical in all seven English editions of Blankaart's dictionary.

The newly discovered definition of *anaesthesia* is the earliest known English definition of the word: "Anaesthesia in defect of sensation, as in paralytick and blasted persons."<sup>14,15</sup> The appearance of the word *blasted* in this definition suggests that Kersey may have revised this particular definition for inclusion in the 1706 edition of Phillips' dictionary.<sup>19</sup>

### The Word Blasted

*Blast* (Blæst, in Old English or Anglo-Saxon, circa 725) usually meant a strong gust of wind. Other seventeenth-century meanings of *blast* were to wither or shrivel (plants), the call of a trumpet, and to strike with divine anger or a curse.

Halliwell, in his *Dictionary of Archaic and Provincial Words*, recorded one medically related definition of *blast*: "An inflammation or wound, an ailment often attributed to the action of witchcraft. *Somerset*."<sup>27</sup> (Somerset is a county in the United Kingdom.)

Juhani Norri, author of *Dictionary of Medical Vocabulary in English, 1375 to 1550*, provided another medical definition of *blast*: Malady attributed to an, "evil wind," said to



affect the eye (without any swelling or rheuminess) or the face.<sup>28</sup> Norri referred to three manuscripts from the late medieval (Middle Ages) and Early Modern periods. The earliest citation was a manuscript (circa 1450) with the word *blastyng*.<sup>28</sup> The words *blast* or *blaste* appeared in two manuscripts (1531 and 1547).<sup>28</sup>

In Andrew Boorde's *The Breuiary [Breuiary] of Helthe* (1547),<sup>29</sup> the word "blast" was synonymous with xerophthalmia:

Xrophthalmia is the greke worde. In englysh it is named a blast or an impediment in the eye, the which may come certeyne wayes...This impediment doth come of an euyl wynde or els of some contagiouse heat or of an euyl humor or suche lyke, for the eye wyll neither swell, nor water nor droppe.<sup>29</sup>

For several years, after extensive examination of definitions and uses of the word *blasted*, the author's tentative conclusion was that the word *blasted* referred to a diseased or wasted condition, often attributed to severe cold, divine anger, or witchcraft. Occasionally there may have been an associated loss of sensation, which could explain why the word *blasted* appeared in the definition of *anaesthesia*.

The eventual discovery of the English translation of Blankaart's dictionary provided a more plausible explanation for the definitions of *anaesthesia* and *anaesthesia* in Kersey's and Bailey's dictionaries. The newly discovered English definition of *anaesthesia* contained the word *blasted*. Therefore, Kersey's definitions were most likely derived from an English translation of Blankaart's dictionary. Subsequent examination of Blankaart's Latin dictionary revealed that the word *blasted* may have referred to a gangrenous condition.

Blankaart's Latin definition of *anaesthesia* was "est defectus sensationis, ut paralyticis & sphacelo laborantibus contingit" (fig. 4).<sup>23</sup> The corresponding English definition was "*Anaesthesia* in defect of sensation, as in paralytick and blasted persons." (fig. 2).<sup>14,15</sup> Therefore, the word *blasted* was a translation of, or a substitution for, "sphacelo laborantibus contingit," Latin for troubled by, or suffering from, a gangrenous condition. The word *sphacelus* refers to necrotic or gangrenous tissue.

## English Dictionaries

The word *dictionary* is derived from the Latin word *dictionarium* (a book of sayings), whereas its synonym *lexicon* (book of words) is derived from Greek. The word *glossary* (a list of words with definitions) is derived from *glosses*, a word for the notes that were made in manuscripts to explain the meaning of certain words. In England, the printing of books using a movable type and a printing press commenced in the late fifteenth century.

The earliest dictionaries produced in England were pedagogical manuscripts composed of lists of Latin words. The term *Dictionarius* was used in 1225 by John Garland as the title of a manuscript containing Latin words to be learned

**ANAESTHESIA** est defectus sensationis, ut paralyticis & sphacelo laborantibus contingit. ex a priv. & ἀναίσθησις, fentio. *B. ongewoelicheit*.

**Fig. 4.** Latin definition of the word *anaesthesia*. From Steven Blankaart's *Lexicon Medicum Graeco-Latinum* (1679, p. 16).<sup>23</sup>

by memory. Examples of early Latin or Latin-English dictionaries are *Promptorium Parvulorum* (1440, "storehouse [of words] for children"), *Catholicon Anglicum* (1483), *Ortus (Hortus) Vocabulorum* (1500, a "garden of words"), and *The Dictionary of syr Thomas Eliot knight* (1538). *Promptorium Parvulorum* (1440), considered to have been written by a Dominican friar, Galfridus Grammaticus or "Geoffrey the Grammarian," of Norfolk, England, was the first dictionary printed in England (in 1499).

Richard Huloet (floruit 1552) compiled the first English-language dictionary, *Abcedarium, or Abcedarium Anglico-Latinum pro Tyrunculis* (1552). The *Abcedarium* (also known as *Abecedarium*) is regarded as an English dictionary because English words were defined before a Latin translation was provided.

In 1604, Robert Cawdrey (1537/8 to circa 1604), published *A Table Alphabeticall*, the first monolingual English dictionary. This dictionary included only difficult words. Notably, in the evolution of dictionaries, Cawdrey listed words in alphabetical order. The 120-page first edition of the dictionary contained 2,543 headwords. The only known copy is held by the Bodleian Library (Oxford, United Kingdom).

In Europe, Latin was the language of academia, science, and medicine from the time of the Roman Empire until 2 to 3 centuries ago. The need for an English vernacular dictionary can be attributed to the increasing use of the English language and the adoption of new words and spellings, which expanded the vocabulary. During the transition, bilingual and multilingual (polyglot) dictionaries were produced.

John Baret (died 1580) published the first edition of *An Alvearie* ("a beehive"), a triple dictionary in English, Latin, and French in 1573. Baret compiled the dictionary with the assistance of his students, who were generously acknowledged in Baret's unusual choice of the title, *An Alvearie*, and in his note "To the Reader," where he declared his students had worked like "Diligent Bees in gathering their wax and hony into their Hive." The second edition of *An Alvearie*, published in 1580, shortly after Baret's death, was called a quadruple dictionary because of the inclusion of Greek.

In the eighteenth century, the leading English lexicographers were John Kersey, Nathan Bailey, and Samuel Johnson (1709 to 1784). John Kersey revised the sixth edition of Edward Phillips' dictionary, *The New World of Words* (1706).<sup>19</sup> In the process, he more than doubled the number of words in Phillips' dictionary. In 1708, Kersey published *Dictionarium Anglo-Britannicum*.<sup>22</sup> Nathan Bailey's *An Universal Etymological English Dictionary*, first published in 1721,<sup>16</sup> would become the most popular English dictionary of the

eighteenth century. Thirty editions of this dictionary were published between 1721 and 1802. Samuel Johnson labored for 8 yr to compile *A Dictionary of the English Language*. First published in 1755, Johnson's dictionary only attained its greatest recognition and reputation in the nineteenth century.

In 1879, James A. H. Murray (1837 to 1915) commenced work on *A New English Dictionary on Historical Principles; Founded Mainly on the Materials Collected by The Philological Society*, now known as the *Oxford English Dictionary*. Between 1884 and 1928, the *New English Dictionary* was published in 125 unbound fascicles, which were bound into 10 volumes. In 1933, the dictionary was reissued as the *Oxford English Dictionary* in 12 volumes together with a supplementary volume. The twenty-volume second edition of the *Oxford English Dictionary* was published in 1989. The latest version of the *Oxford English Dictionary* is only available online ([www.oed.com](http://www.oed.com)). A third edition of the *Oxford English Dictionary* is not expected to be printed.

### English Corpora

There are a number of national and international corpora of the English language. Most describe modern or contemporary use of English. The largest corpus is the *Oxford English Corpus*, based mainly on material collected from the World Wide Web. The corpus contains nearly 2.5 billion words.<sup>30</sup>

The corpora of historical English are much smaller. There is less academic and financial support for corpora of historical English, and they involve significantly more work (transcription, proofreading, and correction) than corpora derived from digital sources. Two corpora of historical English were searched for the words *anaesthesia* and *anaesthesia*.

The *Corpus of Early English Medical Writing*, compiled by researchers at the University of Helsinki (Helsinki, Finland), covers medical literature from the fourteenth to eighteenth centuries (1375 to 1800). In 2011, the corpus contained approximately 2.5 million words from more than 500 texts or samples up to the year 1700. In a personal communication, Irma Taavitsainen, Ph.D. (Department of Modern Languages, Faculty of Arts, University of Helsinki, Helsinki, Finland) confirmed that the word *anaesthesia* was not in the corpus (email, June 2011). The word count of the *Corpus of Early English Medical Writing* is currently 3.75 million, derived from approximately 750 texts or samples.<sup>31</sup> The corpus includes many of the known English medical texts from that period. Although it is a valuable resource for researchers, the corpus is not representative of all English medical writing because it does not necessarily contain the full text of a medical manuscript.

The author achieved greater success with another corpus, although the search results provided an instructive example of the limitations of searches of the corpus. *Lexicons of Early Modern English* is an online database of English dictionaries (including multilingual dictionaries), encyclopedias, glossaries, spelling lists, and lexically valuable treatises. At present, the corpus has 213 searchable dictionaries from circa 1400 to 1755.<sup>32</sup>

A search of the publically available *Lexicons of Early Modern English* database using the key word *anaesthesia* produced two results: Steven Blankaart's *A Physical Dictionary* (1684)<sup>14,15</sup> and Nathan Bailey's *Universal Etymological English Dictionary* (1737; search conducted on October 24, 2016). This search missed two dictionaries known to have the headword *anaesthesia*: the 1706 edition of Phillips' dictionary<sup>19</sup> and the 1730 edition of Bailey's dictionary.<sup>18</sup> These omissions were due to the fact that the searchable database does not include multiple editions of dictionaries. Similarly, a search with the key word *anaesthesia* did not identify any entries. John Kersey's 1708 dictionary<sup>22</sup> and Nathan Bailey's 1721 dictionary,<sup>16</sup> both of which have the headword *anaesthesia*, were not among the searchable dictionaries in the corpus.

### Greek to Latin Transliteration (Romanization)

In linguistics, the term *transcription* refers to the representation of spoken language or sounds in a written form. Transliteration is the conversion of the text or characters of one script to another.

The Latin word *anaesthesia* originated as a transliteration of the Greek word *ανααισθησία*. However, the Greek diphthong *αι* (alpha iota) should have been transliterated into its Latin equivalent as *æ*. The grapheme *æ*, named *æsc* or *ash*, is formed by the ligature of the letters *a* and *e*. Its English sound was *ai* (/ai/) or long *i* (/i:/), like the English word *eye*; *æ* is now pronounced as a short *e* (/ɛ/).

Thus, it is not surprising that the Greek diphthong *αι*, with its English pronunciation /ai/, was occasionally transliterated as *ai*. Kersey used the headword *anaesthesia* in his 1706 revision of Phillips' dictionary.<sup>18</sup> A few years later he revised the spelling to *anaesthesia* when he compiled his own dictionary, *Dictionarium Anglo-Britannicum* (1708).<sup>22</sup>

In British English the *æ* diphthong has been replaced in most instances by the *ae* diagraph. In a few instances the British spelling has been simplified, for example, *anapest* (*anapest*), *frenulum* (*fraenulum*), and *perineum* (*perinaeum*).

The American spelling of words with the *æ* diphthong was eventually changed to reflect the pronunciation. The *æ* diphthong in words derived from Latin was generally simplified to *e* (there are some exceptions, e.g., *Archaeological Institute of America* and the journals *Archaeology* and *American Journal of Archaeology*). Other foreign loanwords with the *æ* diagraph, for example, *maestro*, *paella*, and *Gaelic*, have retained their original English spelling.

### A Physical Dictionary, 1657, and Castelli's Lexicon Medicum Graeco-Latinum

Before concluding this article, it would be worthwhile to consider two other dictionaries that share the same titles as Blankaart's dictionaries. *A Physical Dictionary*, published anonymously in 1657,<sup>33</sup> is considered to be the first English medical dictionary.<sup>34</sup> This dictionary does not have the

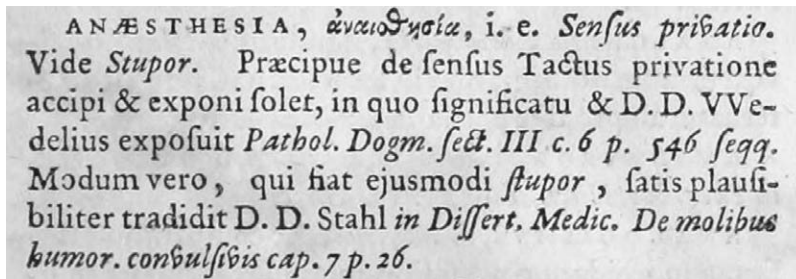


Fig. 5. Latin definition of the word *anaesthesia*. From *Lexicon Medicum Graeco-Latinum* (1713, p. 43).<sup>35</sup>

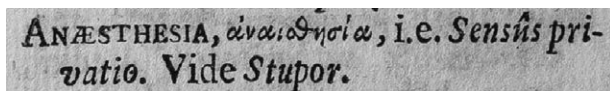


Fig. 6. Latin definition of the word *anaesthesia*. From *Castellus Renovatus: Hoc est, Lexicon Medicum* (1682, p. 72).<sup>36</sup> Image courtesy of the Wellcome Library (London, United Kingdom).

headword *anaesthesia*. It has the same short title as the English translation of Blankaart's Latin medical dictionary. The word *physical* derives from *physic* (*physicke*), a term for the art of healing or practice of medicine (*physic* also refers to a substance prescribed for medical treatment; a medicine or drug). Only four general monolingual English dictionaries had been published before *A Physical Dictionary* (1657).<sup>34</sup>

The leading medical dictionary of the seventeenth century was Bartolomeo Castelli's *Lexicon Medicum Graeco-Latinum*. First published in 1598, Castelli's medical dictionary was updated and published in numerous editions during the seventeenth and eighteenth centuries. The author (R.P.H.) has identified 30 editions of Castelli's dictionary, although the actual number of editions could be considerably larger. Castelli (died circa 1607) was a professor of medicine at the University of Messina (Messina, Italy). With regard to the Latin definition of *anaesthesia*, the earliest dictionary cited by Defalque and Wright<sup>13</sup> was the 1713 edition of Castelli's dictionary (fig. 5).<sup>35</sup> The Latin definition of *anaesthesia* in Castelli's dictionary does not resemble Blankaart's definition of *anaesthesia*, which suggests that the two definitions were derived independently. Of note is the reference to stupor.

The 1713 edition of Castelli's dictionary had been revised by the German physician Jakob Pancraz Bruno, M.D. (1629 to 1709). Bruno's first revision of Castelli's dictionary was published 3 decades earlier under the title *Castellus Renovatus: Hoc est, Lexicon Medicum* (1682).<sup>36</sup> The earlier edition contains a more concise definition of *anaesthesia* (fig. 6): "*Sensus privatio. Vide Stupor.*"<sup>36</sup> Subsequent editions, published in 1688, 1699, and 1706, were titled *Amaltheum Castello-Brunonianum; Sive, Lexicon Medicum*. The 1713 edition was titled *Lexicon Medicum Graeco-Latinum*.<sup>35</sup>

Eponymous dictionaries, especially if they are highly regarded or popular, may be revised and published by other authors. In their article on the etymology of *anaesthesia*, Defalque and Wright stated: "The earliest appearances of

the word "*anaesthesia*" in modern western literature prior to Quistorp and known to us are in Phillips, *The New World of Words: or, Universal English Dictionary* (6th edition, 1706), and Castelli's *Lexicon Medicum Graeco Latinum* (1713)..."<sup>13</sup> A reader may assume that Phillips and Castelli were the authors of these editions of their respective eponymous dictionaries. As discussed earlier in this article, the 1706 (sixth) edition of Phillips' dictionary was compiled by John Kersey. The 1713 edition of Castelli's dictionary was compiled by Jakob Pancraz Bruno. Earlier editions of Phillips' dictionaries (editions one to five) and the first edition of Castelli's dictionary (1598) do not have a definition of *anaesthesia* or *anaesthesia*. Therefore, the inclusion of definitions of *anaesthesia* and *anaesthesia* in later editions of these dictionaries should be attributed to Kersey and Bruno, respectively.

## Conclusion

The earliest known English definition of *anaesthesia* appeared in the first edition of *A Physical Dictionary*, a medical dictionary published in 1684.<sup>14,15</sup> This dictionary was an English translation of *Lexicon Medicum Graeco-Latinum* (1679), a Latin medical dictionary compiled by the Dutch physician, Steven Blankaart, M.D.<sup>23</sup> A review of Latin definitions of *anaesthesia* is beyond the scope of this article. Nevertheless, it should be noted that Blankaart's Latin definition of *anaesthesia* is to date the earliest definition of the word to have been documented in the anesthesia literature.

The headword *anaesthesia* first appeared in a general-purpose English dictionary in 1706. This was in Kersey's revision of Phillips' dictionary, *The New World of Words*.<sup>19</sup> The earliest recognized English definition of *anaesthesia* is in John Kersey's *Dictionarium Anglo-Britannicum*, a general-purpose English dictionary published in 1708.<sup>22</sup>

The definition of *anaesthesia* in Blankaart's *A Physical Dictionary* (1684)<sup>14,15</sup> antedates Kersey's definitions of *anaesthesia*<sup>19</sup> and *anaesthesia*<sup>22</sup> by 2 decades. The remarkable similarity of the definitions (table 1) suggests that Kersey's definitions were derived from Blankaart's *A Physical Dictionary*, four editions of which were published before Kersey's dictionaries. The words *anaesthesia* and *anaesthesia* have not been identified in English medical or surgical publications that antedate the earliest English dictionaries in which they are known to have been defined.



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The author declares no competing interests.

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