

The synthetic genitive in medical eponyms: Is it doomed to extinction?

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Eponyms, which can be broadly defined as words that are based on or derived from the names of persons, are perhaps more prevalent in the terminology of medicine than in that of any other discipline. The English language has several ways of forming eponyms. Some of these are exemplified by *Bell's palsy*, *the organ of Corti*, *the Krebs cycle*, and *addisonian anemia*. Until recently, eponyms containing synthetic genitives (formed on the pattern **proper noun** + **apostrophe** + *s*) were the most numerous in medical English. The language is presently undergoing a change, not entirely spontaneous, in which eponyms of this “possessive” type are being replaced by variants containing proper nouns in uninflected form (*Bell palsy*). As I will show, this construction consists of **adjective (substantival adjunct)** + **principal noun** rather than **unmarked genitive** + **principal noun**.

The reader, editor, or translator of medical material who is a non-native speaker of English may find it interesting to trace the history of the 's genitive, to survey its use in eponyms, to note some common difficulties arising from that use, and to review recent changes.

The synthetic genitive in English

“Tell me, o Muse...” Homer, *Odyssey*, I, 1

Although *d'el* and *Sant'Iago* appear in old books and manuscripts, the apostrophe (') is vir-

tually unknown in modern Spanish. It is, however, as indispensable in writing English as the dot on the *i*. In fact, it is more so: we dispense with the dot in writing a capital *I*, but omitting the apostrophe, either in lower case or in capitals, changes *he'll* (él va a [hacer algo]) to *hell* (infierno) and *who're* (quienes están) to *whore* (puta).

Speakers of Spanish call this mark of punctuation *apóstrofo* (from Greek *apostrophos*), clearly distinguishing it from *apóstrofe*, (Greek *apostrophe*), the figure of speech by which one addresses someone who is absent—as when Homer invokes the Muse before telling of the wanderings of Ulysses, or when Don Quijote addresses a prayer to the absent Dulcinea before venturing into the cave of Montesinos. In English, however, both the mark of punctuation and the figure of speech are called “apostrophe” (pronounced with four syllables).

One function of the apostrophe in English, as in French, Italian, and Catalan, is to show that one or more letters have been omitted, usually because one or more phonemes have been elided at the junction of two words (*I have* > *I've*, *they will* > *they'll*). Whereas, in the Romance languages, such contractions are appropriate in formal writing (*Mais où sont les neiges d'antan?* *Lasciate ogni speranza voi ch'entrate*), most of the elisions shown by apostrophes in English represent colloquial or at least informal usage. *Can't*, *we've*, *you'll*; *she's diabetic*; *she's lost seven pounds* would be expressed in formal language as *cannot*, *we have*, *you will*; *she is diabetic*; *she has lost seven pounds*.

The uniquely English use of the apostrophe to form the genitive of nouns is, however, appropriate in strictly formal usage, even though, as will be explained later, the analytic genitive formed with *of* may sometimes be preferred to it on stylistic grounds.

Other uses of the apostrophe in English are

to form the plurals of numerals (*the 1920's*), letters (*spell it with two d's*), and proper nouns (*the McPherson's*, *the Reilly's*), but these practices are popular rather than standard, and all of them are going out of fashion.

The use of the apostrophe + *s* in English to form the genitive or possessive case of nouns has an interesting history, which deserves a brief review. In Anglo-Saxon (Old English) at its earliest known period, nouns in some but not all declensions formed their genitive singulars by adding *-s* or *-es*. About one-third of all Anglo-Saxon nouns, all of them masculine, were declined like *stān* 'stone', from the paradigm of which the following forms are selected.¹

nominative singular	<i>stān</i>
genitive singular	<i>stānes</i>
nominative plural	<i>stānas</i>

But by the end of the Anglo-Saxon period, in the eleventh century of our era, both the genitive ending *-es* and the nominative plural ending *-as* had been extended to the inflection of all nouns.

After the Norman Conquest (A.D. 1066), as Anglo-Saxon evolved into Middle English under the influence of Norman French, a further process of leveling altered the nominative plural to *-es*, making it identical to the genitive singular.² This ambiguous inflectional pattern was well established by the time of Chaucer (died 1400).

During the Middle English period, the vowel of the termination *-es* gradually ceased to be pronounced in some words, and the *e* was therefore deleted from the spelling of those words (*dayes* > *days*, *lordes* > *lords*). The *e* was retained in spelling when the corresponding sound was needed for proper articulation (*fishes*, *foxes*).²

In the seventeenth century some writers and printers began to distinguish the genitive singular from the nominative plural by placing an apos-

trophe before the final *-s* of the genitive, and by the eighteenth century this practice had become standard. Somewhat later came the further distinction of placing an apostrophe after the *-s* of the genitive plural, so that, for example, the genitive singular *boy's* (del muchacho) and the genitive plural *boys'* (de los muchachos), though pronounced alike, are distinguished in writing.²

Samuel Johnson, the compiler of the first authoritative dictionary of English on historical principles (1755), mentions in his preface a widely held theory to the effect that "the 's of the English genitive is a contraction of *his*, as the *soldier's valour* for *the soldier his valour*." Johnson tried to reduce this false notion to an absurdity by citing the use of the 's genitive with feminine nouns: "*Woman's beauty*, the *Virgin's delicacy*, *Haughty Juno's unrelenting hate*..."³

The use of the apostrophe to show possession in English is thus of comparatively recent date—far more recent than the invention of printing. The older genitive *s* termination, without the apostrophe, is preserved in modern English in possessive adjectives formed from some pronouns (*his*, *its*) and in the possessive pronouns *his*, *hers*, *its*, *ours*, *yours*, and *theirs*.

It also survives in adverbs such as those in "*Evenings* we like to stroll along the river" and "*Thursdays* he only works five hours." Although speakers of English may now perceive these as plurals, historically they are genitives, according to *The Oxford English Dictionary (OED)*.⁴ (Compare the corresponding German expressions, "*Abends* spazieren wir gern am Fluß entlang" and "*Donnerstags* arbeitet er nur fünf Stunden.")

Further examples of the genitive *s* without apostrophe appear in *beeswax*, *St. Albans* (= *Sancti Albani*), and *statesman*. One might also mention many surnames derived from patronymics (*Robert's son* > *Robertson* > *Roberts*; *William's son* > *Williamson* > *Williams*).

As with the inflectional *s* of the English plural, the pronunciation of the genitive *s* depends on the sound that immediately precedes it. After an unvoiced stop, the *s* represents an unvoiced sibilant (*Pick's*, *Pott's*). After a nasal, a liquid, a voiced stop, or a vowel, the *s* is voiced like the *s* in French *chose* and German *lesen*: *Addison's*, *Alzheimer's*, *Broca's*, *Fallot's*, *Freiberg's*. After a sibilant or an affricate, the speaker inserts schwa before the (voiced) *s* for euphony, thus adding a syllable: *Aldrich's*, *Cruz's*, *DiGeorge's*, *Mikulicz's*, *Ross's*, *Spitz's*.

Even among well-educated native speakers of English, there are many who cannot or will not correctly pronounce the awkward final consonant group of a plural noun such as *cysts*, *desks*, and *tests*. Besides the correct pronunciation of *tests*, one may also hear “test,” “tess,” “tessiz,” and “testiz.” Hence it is not surprising that, when a word ends in a sibilant, some speakers fuse the genitive *s* to it instead of inserting schwa, pronouncing the genitives of *James* and *Thomas* exactly like the nominatives.

English language authorities disagree as to the correct spelling of these phonetically undistinguished genitives. The more conservative recommend writing *s* after the apostrophe in every case (*James's*, *Thomas's*), while the more radical advise omitting the inflectional *s* after a sibilant even when virtually all speakers pronounce it (*Fitz'*, *Fox'*, *princess'*).

Errors in the use of the apostrophe are extremely common among native speakers of English. An apostrophe is often wrongly inserted to form the plural of a noun (*Parking for Customer's Only*, *Thank's*) or the third person singular of the present tense of a verb (*He want's to go home*). The apostrophe is often misplaced in the genitive of a personal name ending in *s* (*Dicken's works*) or in a genitive plural (*familie's*); inserted where it is not needed (*'til*, written instead of *till* on the mistaken assumption that this word is an abridgment of *until*); and omitted when it is needed to

show deletion of a letter (*rock 'n roll*, where *'n* is all that remains of *and*).

The synthetic genitive in modern English grammar

“Possession is nine-tenths of the law.”

Old maxim

As in other Indo-European languages, the English genitive denotes possession. But the term *possessive case*, favored particularly by English grammarians and educators who wish to distance themselves from the intricacies and rigors of Latin grammar, is unfortunately much too narrow. Just as, in Greek, the genitive took over the functions of the proto-Indo-European ablative, while the Latin genitive assumed many adverbial and attributive roles, the English “possessive” case performs a broad range of functions—most of them closely paralleled by those of the analytic genitive (with *de* or *di*) in the Romance languages—that have nothing to do with possession in the social or legal sense.

It is true that denoting possession, no matter how strictly defined, is a major function of the *'s* genitive in English: *Elizabeth's new car*, *Dr. Smith's country house*. But, in addition, the genitive is regularly used as an attributive modifier to show a broad range of collateral relations. The sense of proprietorship is gradually lost as we progress through the series *Harrison's Textbook of Medicine*, *Bach's partitas*, *Halley's comet*, *Joseph's brothers*, *St. Paul's second journey*, *Penelope's suitors*, *Henry Ford's rivals*, *St. John's wort*, *St. Mary's Hospital*, *Louise's absence from the meeting*, *Dr. Fischer's difficulties with the authorities*, *Friday's menu*. In a separate class is the use of the genitive to denote quantity: *a month's hard work*, *a dollar's worth of gasoline*, *three weeks' delay*.

Certain idiomatic uses of the synthetic genitive in English seem to defy logic. The apostrophe + *s* termination is often appended to the last word of a phrase, rather than to the word in

that phrase whose meaning or relations it principally affects: *Charles I's reign, someone else's office, the chairman of the Committee on Academic Tenure's wife*. The expression *a friend of my father's* seems redundant, since it includes both synthetic and analytic genitives. Although one can also correctly say *a friend of my father* or *one of my father's friends*, the tautologic form is widespread and is accepted by virtually all authorities as "correct" English.

Although the analytic and synthetic genitives of English may be interchangeable in a grammatical sense, they are often not so from the viewpoint of stylistics. The genitive formed with apostrophe + *s* is usually preferred with nouns, both proper and common, that refer to persons and other living things; the analytic genitive formed with *of* is more usual, at least in formal speech and writing, with inanimate objects.

But this distinction is far from absolute. The synthetic genitive seems perfectly proper in such phrases as *the ship's cargo, our country's future, and yesterday's newspaper*, and the resistance to expressions such as *the liver's oxygen consumption* and *Paraguay's climate* is gradually lessening. However, the synthetic genitive is quite impossible in certain circumstances. A single example must suffice. One can say *at the back of the room* (al fondo del cuarto) but never *at the room's back*, which, to a speaker of English, would seem to mean something like "a espaldas del cuarto".

Eponyms in medical English

"I have Bright's disease and he has mine..."

S. J. Perelman, *Judge*, 16 November 1929

An eponym, according to the *OED*, is "one who gives, or is supposed to give, his name to a people, place, or institution".⁴ As I noted earlier, speakers of English use the wrong word, *apostrophe*, to name a mark of punctuation that is indispensable to them in writing. English-speaking physicians, whose technical language includes

hundreds of terms based on proper names, also have twisted the sense of *eponym* to make it mean "A name of a drug, structure, or disease based on or derived from the name of a person."⁵ This definition, which appears after the more traditional one in *The American Heritage Dictionary of the English Language*, is preceded by the label "Medicine." The *OED* recognizes no such alternative sense.

The following is an attempt to classify the various ways in which the English language forms medical eponyms.

1. **The synthetic genitive with 's:** *Hodgkin's disease, Poupert's ligament, Hutchinson's teeth, Schatzki's ring, Gay-Lussac's law* (for Joseph Louis Gay-Lussac). This form is the grammatical equivalent of formerly familiar Latin terms such as *morbus Addisoni, pons Varolii, torcular Herophili, and tuba Fallopii*. Besides forming terms of this type, which honor persons who first described or reported the things named, the synthetic genitive also appears in eponyms based on the names of persons who suffered from, or even died of, the conditions or diseases named (*Carrión's disease, Lou Gehrig's disease, Musset's sign, Pott's fracture*) and in terms referring to occupations or classes of person (*gamekeeper's thumb, housemaid's knee, pigeon-breeder's lung*). We may place in a subclass such oddities as *hangman's fracture* (sustained not by the hangman but by his subject) and *obstetrician's hand* (not really an occupational hazard for obstetricians).

2. **The analytic genitive with of:** *the circle of Willis, the foramen of Monro, a crypt of Lieberkühn, the sinuses of Aschoff and Rokitansky*.

3. **Substantival adjunct (proper noun used as an adjective without change of form):** *a Colles fracture, the Jones criteria, the Hering-Breuer reflex* (for Heinrich Ewald Hering and

Josef Robert Breuer). This is the form regularly used with compound (hyphenated) proper names referring to more than one person (*Pellegrini-Stieda disease* but *Pellegrini's disease*). It is also nearly standard for eponyms referring to surgical instruments or devices (*Kocher clamp*, *Levin tube*, *Velpeau bandage*), methods or techniques (*Gram stain*, *Papanicolaou smear*, *Pfannenstiel incision*), and genetic factors or familial disorders (*Christmas factor*, *Duffy blood group*, *Hartnup disease*), as well as terms based on the names of literary characters (*Achilles tendon*, *Munchausen syndrome*, *Oedipus complex*) and toponyms (*Lyme disease*, *Madura foot*, *Murray Valley encephalitis*).

In addition, this form is often chosen for proper names ending in *s* (*Colles fracture*, *Graves disease*) because, as mentioned earlier, many speakers pronounce *Colles's* and *Graves's* exactly like the uninflected (nominative) forms of the nouns. To a lesser degree, the form may be preferred before words beginning with an *s* or *z* sound, since the inflectional *s* of *Marfan's syndrome* and *Looser's zones* tends to be lost in speech.

It is, however, a crass blunder to mistake this substantival adjunct (I have borrowed the term from Jespersen⁶) for an unmarked or null genitive. The difference between *Goodpasture's syndrome* and *Goodpasture syndrome* is not that the inflectional ending of the genitive has been omitted in the latter term, but rather that a noun in the genitive case has been altogether replaced by an adjective that is identical in form to the nominative case of the corresponding noun.

Old French had a kind of null genitive, in which the preposition *de* was suppressed before a substantive complement (*le fiz sainte Marie* = *le fils de sainte Marie*; *les noces le roi* = *les noces du roi*).⁷ Some examples of this form, in which the missing preposition is replaced by

a hyphen, survive in the modern language (*bain-marie*, *Château-Thierry*, *Hôtel-Dieu*). The continued creation of eponymous phrases on this pattern in modern French (*l'affaire Dreyfus*, *la tour Eiffel*, *les rayons Röntgen*) has perhaps misled careless observers into believing that English phrases such as *the Krebs cycle* and *a Papanicolaou smear* contain null genitives. It can be confidently asserted, however, that the null genitive does not exist as a grammatical species in English.

The capacity to form a phrase by placing before a noun another noun that assumes an adjectival function without change of form is one of the most distinctive characteristics of English syntax. When we say *eye irritation*, *heart attack*, *liver function*, and *surgery clinic*, the first words of these phrases are exactly equivalent to *ocular*, *cardiac*, *hepatic*, and *surgical* respectively, and are therefore adjectives. It follows logically that *Meibom gland* is grammatically analogous to *meibomian gland*, not to *Meibom's gland*.

The adjectival nature of the substantival adjunct becomes obvious if one considers the difference between *Cannizzaro's reaction* and *Cannizzaro reaction*, or between *Pascal's principle* and *Pascal principle*, or between *Rovsing's sign* and *Rovsing sign*.

Reaction, *principle*, and *sign*, like many others nouns (*cycle*, *fracture*, *law*, *reflex*, *test*), must be preceded by an article (*a* or *the*) or some equivalent word when they are not preceded by the synthetic genitive. *An example of Cannizzaro's reaction*, *Rovsing's sign is absent*, and *according to Pascal's principle* are perfectly good English, but no native speaker of the language would ever say *an example of Cannizzaro reaction*, *according to Pascal principle*, or *Rovsing sign is absent*, because in each case the omission of the article would violate English idiom.

The fact that English does not require an article with such a construction before more abstract terms (*Nissl substance*, *Sézary syndrome*, *Sudeck atrophy*) or with plural nouns (*Negri bodies*, *Purkinje cells*) has probably helped to conceal the true nature of the substantival adjunct from the linguistically naïve. The reason for this lengthy digression on the substantival adjunct will become evident when we reach the final section.

The four remaining types of English medical eponym are included here only for completeness; they will not concern us further.

4. **Truncated form of the preceding (isolated proper noun, used in place of substantival adjunct + principal noun):** *a positive Babinski [sign], to insert a Foley [catheter], the one-minute Apgar* (the Apgar score one minute after delivery). Although certainly less formal than the full expressions, these abridged terms are widely used, at least in speech.
5. **Formal adjective:** *cushingoid facies, eustachian tube, graafian follicle, rolandic fissure*. It may be mentioned in passing that, although the current practice in English is to spell adjectives, nouns, and verbs with a small initial letter even when they are derived from personal names, some writers cling to the older custom of using a capital letter: *a Freudian slip, the left Eustachian tube*. Adjectives referring to geographic sites, nations, races, and languages are always capitalized: *Aragonese, Catalan, Lithuanian*.
6. **Derived noun:** *bartholinitis, chagoma, desemetocele, parkinsonism*
7. **Derived verb:** *to bovie, to credé, to kocherize, to pasteurize*

The war on the synthetic genitive

“A foolish consistency is the bugbear of little minds.”
Ralph Waldo Emerson, *Essays* (1841)

I have already mentioned the phonetic awkwardness that results when 's is added to a name ending in a sibilant sound, such as *Chagas*, *Meigs*, and *Wilms*. Errors in the placement of the apostrophe are common with such names. Sometimes the final *s* of the name is mistaken for the genitive ending (*Grave's disease*, *Homan's sign*, *Homan sign*) and sometimes the *s* of the genitive ending is thought to be part of the name (*Downs' syndrome*, *Potts' fracture*).

A common noun, usually a foreign or unusual word, is sometimes wrongly taken as the name of a person: *Caisson's disease*, *Coudé's catheter*, *Grenz's rays*. A frequent error, even among health professionals, is to change the term *plantar wart* into *planter's wart* (*verruca de plantador*)! (Conversely, the omission of 's from a personal name that happens also to be a common noun can lead to ambiguity, at least in speech: *Battle sign*, *Beer law*, *Head zones*, *Moon molars*, *Parrot nodes*.)

The same disease or condition can have more than one eponymous designation if there is a difference of opinion as to who first described it. Thus *Graves' disease*, *Basedow's disease*, and *Flaiani's disease* are all “synonymous” terms for the same disorder. A medical writer may be associated eponymously with more than one disease: *Paget's disease of bone* (osteitis deformans), *Paget's disease of the breast* (intraductal carcinoma); *von Recklinghausen's disease of bone* (osteitis fibrosa cystica), *von Recklinghausen's disease of skin* (neurofibromatosis). Several persons honored by medical eponyms may have the same surname. Thus the *Pick cell* (foam cell), *Pick's disease* (cerebral atrophy), and *Pick's constrictive pericarditis* are named after three different persons named Pick.

Yet another kind of difficulty arises from the fact that eponyms incorporate proper nouns of international provenance. Errors in the spelling of unusual or foreign names such as *Chvostek*, *Hirschsprung*, and *Kupffer* are almost inevitable. Accent marks and umlauts are frequently misplaced or omitted by persons whose languages do not include them. Differences occur between various ways of transliterating names from Cyrillic, Japanese, and other writing systems into Roman letters. Names including particles (*de*, *di*, *von*) raise questions about alphabetization, as do double names (*Bence Jones*, *Ramón y Cajal*, *Ramsay Hunt*) and terms including given names (*Austin Flint*, *Graham Steell*, *Marcus Gunn*).

In spite of these and other inconveniences, medical eponyms continue to flourish and proliferate. They are cherished by most physicians who have a sense of history. In addition, they are often embraced as a pleasant relief from polysyllabic terms derived from classical languages. Some of them even have value as euphemisms. *Jansky-Bielschowsky disease* is surely preferable to *amaurotic familial idiocy* when the physician discusses the condition with the parents of an affected child. *Down's syndrome* has been a welcome replacement for the ill-advised term *mongolism*, *Hansen's disease* for *leprosy* with its biblical connotations of defilement and ritual uncleanness.

But difficulties with eponyms have exhausted the patience and aroused the anger of some medical writers, editors, and language authorities, who have sought to purge all of them from medical language. *Nomina Anatomica*⁸, last revised in 1989, contained virtually no eponyms, and *Terminologia Anatomica*⁹ contains only *cornu Ammonis* and *stratum purkinjense corticis cerebelli*. One wonders why the compilers of this system, having rejected *Bartholin's gland*, *the islets of Langerhans*, *fallopian tube*, and *Stensen's duct*, retained any eponyms at all.

An influential minority of editors and lexico-

graphers, while recognizing the futility of trying to expunge all eponyms from medical English, have declared war on the synthetic genitive. The fourth edition of *Current Medical Information and Terminology*,¹⁰ published in 1971 by the American Medical Association (AMA), lists no apostrophe + *s* genitives whatsoever. In consequence of this sweeping exclusion, the volume contains many freakish mutilations of English idiom, such as *diver disease*, *farmer lung*, *golfer elbow*, *hangman fracture*, *pigeon breeder disease*, and *surfer knots*.

The sixth edition (1976) of the *AMA Stylebook/Editorial Manual* makes the unconditional statement, "Note that the 's is not used with eponyms."¹¹ During the 1980s, however, the genitive forms of some eponyms reappeared without explanation in AMA publications, only to vanish again later.

All evidence points to the conclusion that the desire to do away with the formal genitive in eponymous terms is based largely on the view, among editors and others who are obsessed with consistency and order, that the form is used inconsistently. Some of the inconsistency, as noted earlier, is due to phonetic variants involving sibilants at the end of the proper name (*Mees lines*, *Mees's lines*) or at the beginning of the modified noun (*Cushing syndrome*, *Cushing's syndrome*). But most of the apparent diversity arises from the mistaken notion, discussed and refuted earlier, that the substantival adjunct (*the Krebs cycle*, *Plummer-Vinson syndrome*) is an unmarked or null genitive.

Some of the arguments offered by editors and other to justify exclusion of the genitive from eponyms are simply ludicrous. One reason often given for not using the "possessive" form is that the person named did not suffer from the disease in question. A *JAMA* editor wrote: "Since Dr Cushing did not actually *have* the disease he described, we merely write 'Cushing disease.'"¹²

A second argument, even more inane, is that the person named does not “own” the designated structure, phenomenon, or disease: “The National Down Syndrome Society advocates the use of *Down syndrome*, arguing that the syndrome does not actually *belong* to anyone.”¹³ “Montgomery did not own his tubercles, Austin Flint his murmur nor Ranvier his nodes.”¹⁴

A curious variation on this argument is offered by McKusick: “[T]he eponym is merely a ‘handle’; often the person whose name is used was not the first to describe the condition...or did not describe the full syndrome as it has subsequently become known.”¹⁵ This might be a weak argument for abolishing all eponyms, but it is no argument at all for dropping the ‘s’ possessive form while retaining a possibly unhistorical proper noun.

Expressions such as *a Bennett’s fracture* and *a Hunner’s ulcer* are spoken and written constantly in formal medical English. Yet most of the sources I have quoted state that an article is never used with a phrase that includes a synthetic genitive. Whether this statement, made by writers who view the synthetic genitive as a grammatical fossil and a wellspring of irregularities, is a deliberate attempt to deceive or just a further manifestation of ignorance, it is demonstrably false.

As long ago as 1938, Morris Fishbein, then editor of *The Journal of the American Medical Association*, clearly perceived the adjectival character of the substantival adjunct. He wrote, “In general, the use of the possessive form relates the thing designated to the worker for whom it is named more emphatically and personally than does the use of the name as an adjective modifier... In instances in which two names joined with a hyphen are used as a modifier, the possessive form should never be used.”¹⁶

But more modern writers, led astray by the

delusion that the substantival adjunct is a genitive whose inflectional ending has been “eroded,” have advocated the replacement of all genitive eponyms in current use with substantival adjuncts. Thus Anderson justifies the abolition of the ‘s’ genitive with the extraordinary statement, “The English language has been losing case endings for centuries.”¹⁴ (As a matter of historical fact, English has lost no case endings in the past 600 years.) The *American Medical Association Manual of Style* plunges even deeper into absurdity by equating this construction with a parasynthetic compound: “The English language readily accommodates unmarked attribution as in ‘shopkeeper’...”¹³

Most of the writers whom I have cited allude to the awkwardness of using certain so-called uninflected genitives without an article (*a* or *the*), but not one of them seems to have observed the situation with sufficient attention or discernment to dispel the underlying confusion. McKusick remarks, “When the nonpossessive form of an eponym is used, adding ‘the’ before it—e.g., the Marfan syndrome, the Hunter syndrome—may be recommended but is not essential.”¹⁵ However, his examples, both of which include the principal noun *syndrome*, fail to bring out the essential difference between the construction with a substantival adjunct and the illusory null genitive. Huth also limits his attention to eponymic terms formed with *syndrome*, and then irrelevantly gives two examples that are not eponyms at all: “Note that eponym terms ending with *syndrome* should open with the article *the*: *the acquired immunodeficiency syndrome*, *the CREST syndrome*.”¹⁷

The most vigorous and inflexible opponents of the ‘s’ genitive thus repeatedly reveal their ignorance of grammar and their disdain for linguistic tradition. It is abundantly clear that they had already judged this grammatical form and sentenced it to extinction before they began examining the evidence and marshaling their argu-

ments, and that, with or without good reasons, they are determined to rid medical language of it altogether.

This rigid intolerance and nihilistic position are well exemplified by the *AMA Manual of Style*. After recommending the omission of 's in certain cases (*Schwann cell*, *Colles fracture*) "to promote mellifluous usage and minimize misspellings," this work concludes, "In view of the rationale given for preferring the nonpossessive form in particular instances, recommendations of authorities, and in keeping with the desire to promote clarity and consistency in scientific writing, we recommend that the possessive form be omitted in eponymous terms."¹³

Will even the homely lay term *Adam's apple* (nuez, *prominentia laryngea*) eventually come under the universal ban?

Conclusions

The synthetic genitive in English medical eponyms, although based on centuries of linguistic tradition, is viewed by some as a source of inconsistency, uncertainty, and error. The move to expel this form from medical language, like the compulsive use of gender-neutral language in English-language publishing ("He or she should carry proof of his or her insurance coverage with him or her at all times"), has been engineered by an influential minority of writers and editors who display ignorance of linguistics, a superficial and mechanistic view of language, disdain for tradition, and, sometimes, the arrogance of authority.

One would wish that, in their zeal for order and consistency, these reformers would seek to purge medical terminology of some of its many ambiguities and inaccuracies instead of presuming to intervene with such a heavy hand in the history of a living language.

I am not ready to advocate an English language academy, or even an English medical language academy, but I venture to think that, if such an academy existed, it would proceed with more intelligence, wisdom, and restraint than has been shown by the self-appointed revisers and purifiers of English who seek to outlaw the synthetic genitive. ■

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References

1. Blakeley L. *Old English*. London: Hodder and Stoughton, 1976; p 36
2. Lounsbury TR. *History of the English Language*. New York: Henry Holt, 1907; pp 220-228
3. Johnson S. *A Grammar of the English Tongue*. In: *A Dictionary of the English Language...*, abstracted from the folio edition by the author. London: Thomas Tegg, 1814; p 11
4. Simpson JA, Weiner ESC, editors. *The Oxford English Dictionary*. 2nd ed. Oxford: Clarendon, 1989
5. *The American Heritage Dictionary of the English Language*. Boston: Houghton Mifflin, 1992
6. Jespersen O. *A Modern English Grammar on Historical Principles*, 3rd ed. Heidelberg: Carl Winter's Universitätsbuchhandlung, 1927 Vol II; p 327
7. Raynaud de Lage G. *Introduction à l'ancien français*. Paris: Société d'Édition d'Enseignement Supérieur, 1959; pp 24-5
8. *International Anatomical Nomenclature Committee: Nomina Anatomica*. Edinburg, New York: Churchill Livingstone, 1989
9. *Federative Committee on Anatomical Terminology. Terminologia Anatomica*. Stuttgart, New York: Thieme, 1997
10. Gordon BL, Barclay WR, editors. *Current Medical Information and Terminology*. 4th ed. Chicago, IL: American Medical Association, 1971
11. *Stylebook/Editorial Manual of the AMA*. Littleton, MA: Publishing Sciences Group, 1976; p 54

12. Archer J. Epitomes. JAMA 1975;234:152
13. Iverson C. et al, editors. American Medical Association Manual of Style. A Guide for Authors and Editors. 9th ed. Baltimore: Williams & Wilkins, 1998; pp 469-471
14. Anderson JB. The language of eponyms. J R Coll Phys Lond 1996; 30: 174-177
15. McKusick VA. Mendelian Inheritance in Man: A Catalog of Human Genes and Genetic Disorders. 11th ed. Baltimore: Johns Hopkins University, 1994; pp xl-xlii
16. Fishbein M. Medical Writing. The Technique and the Art. Chicago: American Medical Association, 1938; p 7
17. Huth EJ. Writing and Publishing in Medicine. 3rd ed. Baltimore: Williams & Wilkins, 1999; p 222

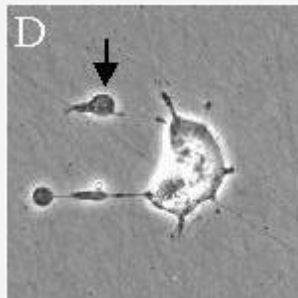
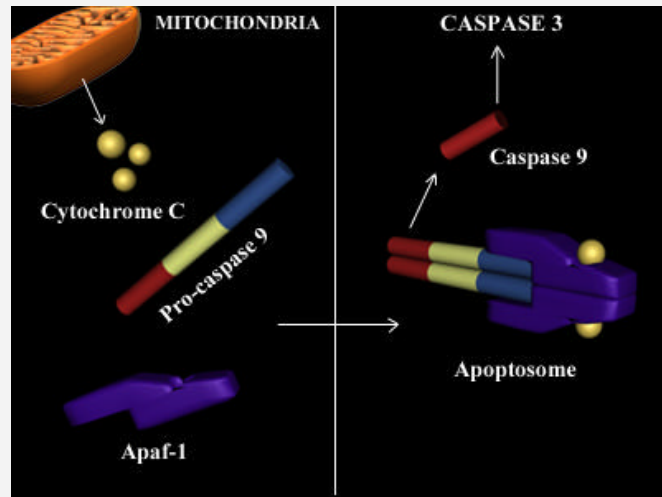
Vericuetos *apoptosome y apoptotic body*

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Se equivocaría todo el que, siguiendo la lógica, pensara que son sinónimos.

Apoptosoma [*apoptosome*]. Complejo molecular cuyo ensamblaje es fundamental para la activación de la apoptosis. Sus componentes son el factor 1 activador de las proteasas de la apoptosis (Apaf-1) [*apoptosis protease activating factor-1*], el citocromo c [*cytochrome c*], la procaspasa 9 [*procaspase-9*] y el trifosfato de desoxiadenosina [*dATP*].¹ La liberación mitocondrial de citocromo c inducida por señales proapoptóticas conduce a la formación del apoptosoma y a la consiguiente activación de las caspasas 9 [*caspase-9*] y 3 [*caspase-3*].²



Cuerpo apoptótico [*apoptotic body*] (flecha). Desde el punto de vista morfológico, la apoptosis se caracteriza por la reducción del volumen [*shrinkage*] de la célula, la formación de vesículas en su superficie [*blebbing, budding*], proceso conocido también como zeiosis [*zeiosis*], la condensación de la cromatina, la fragmentación del DNA [*DNA fragmentation*] y, finalmente, la fragmentación de la célula en corpúsculos rodeados de membrana, llamados cuerpos apoptóticos.³

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<http://www.sghms.ac.uk/depts/immunology/~dash/apoptosis/>

Referencias

1. Evan G, Littlewood T. A matter of life and cell death. Science. 1998;281(5381):1317-22.
2. Concannon CG, Orrenius S, Samali A. Hsp27 inhibits cytochrome c-mediated caspase activation by sequestering both pro-caspase-3 and cytochrome c. Gene Expr 2001;9:195-201.
3. Panneerselvam N. Apoptosis and gene regulation. Disponible en <http://www.iisc.ernet.in/~currsci/october/> (acceso el 30/08/01).