

Trailing Clouds of **dhē* One Proto-Indo-European Root and Its English Descendants

The British philosopher John Austin says that English words come to us “trailing clouds of etymology” such that

a word never – well, hardly ever – shakes off its etymology and its formation. In spite of all changes in and extensions of and additions to its meanings [and forms], and indeed rather pervading and governing these, there will still persist the old idea [and form].¹

Speaking of past and present word meaning in modern genetic terms, the biologist Lewis Thomas says that “The way a word is used this year is its phenotype, but it has a deeply seated, immutable meaning, often hidden, which is the genotype.”² The following discussion explores some of the ways in which over the centuries a word’s genotype can in different environments produce different phenotypes. It also explores some of the ways in which Austin’s clouds of etymology are manifested in a word’s history of changing form and sense.

The **Proto-Indo-European** (PIE) root **dhē-* “to set, put” is highly productive in Modern English. The descendants of its various forms and senses appear in nearly two thousand words in the Lexis database. These descendant words have come to us along four of the 15 or so main branches of the Indo-European super-family of languages – the Germanic, the Hellenic, the Italic, and to a lesser extent the Indo-Iranian. They have come from and through at least 12 Indo-European languages – Old English, Latin, Italian, French, Spanish, Portuguese, Greek, Russian, Old Iranian, Persian, Urdu, and Sanskrit.³

¹ “A Plea for Excuses” in his *Philosophical Papers*, 2nd edn. London and NY: Oxford UP, 1970, p. 201.

² “Living Language” in *The Lives of a Cell: Notes of a Biology Watcher* (Toronto and NY: Bantam, 1981), p. 158.

³ In the following discussion information about PIE roots is based on Calvin Watkins, *The American-Heritage Dictionary of Indo-European Roots*, 1st, 2nd & 3rd eds. (Boston & New York: Houghton Mifflin, 1985, 2000, 2011). Statements about historical word senses are from *The Oxford English Dictionary Online*. John Simpson, ed. <<http://www.oed.com/>>. (Oxford: Oxford UP, 2013). The lists of words from Lexis are from the Lexis database elsewhere on this site. For a graphic display of this productivity and spread, go to [*dhE](#) at “Lineages from Indo-European Roots” on this website.

Forms. PIE roots had different forms with different vowel sounds or with extensions – often via suffixation and compounding, less often via prefixation and duplication. The following are some of **dhē*'s proposed forms with some of their proposed senses:

**Dhē-* had the suffixed forms **dhē-k-*, **dhē-ti-* “thing laid down or done, law,” **dhē-to-* “set down, created,” and the reduplicative form **dhe-dhē-*.

It also had the ablauted form **dhō-*, which in turn had the suffixed forms **dhō-men-*, **dhō-mo-*, **dhō-t-*.

Its ablauted form **dhə-* had the prefixed forms **kom-dhə-*, **kom-dh(ə)-yo* “put or done together”; the compounded forms **dwi-dh(ə)-* “making two,” **g^wrə-dh(ə)-o*, **kred-dhə-* “to place trust”; the suffixed forms **dhə-k-* (or perhaps **dhə-k-*), **dhə-k-li-*, **dhə-s-*, **dhə-ti-* “a placing,” **dhə-to-* “placed,” **dhə-mn-*; the reduplicative **dhi-dhə-*.

And it had the reduced form **dh-* with the compound **au-dh* “to place, perceive.”

These forms and their descendants are discussed below.

The Germanic Branch: Mostly Old English. In the Germanic branch the PIE voiced aspirate [dh] – pronounced [d] with a release of breath – systematically simplified to the unaspirated dental stop [d] today regularly spelled <d>. The Modern English (MnE) words descending from **dhē* through the Germanic line divide handily into two groups:

those from the PIE ablauted form **dhō*, a group that includes the modern verb *do* and its various forms, and

those from the PIE suffixed forms **dhē-ti* and **dhō-mo*, a group that includes MnE *deed*, *doom*, and the suffix *-dom*)¹.

The PIE **dhō* led to Old English (OE) *dōn*, with the common Germanic infinitive ending [n], subsequently simplified in Middle English (ME) to our *do*. The OE and ME 3rd person singular *doeth*, *doth* was replaced in Early Modern English (EMnE) with the northern *does*. The OE past participle *ġedōn*, like other participles, lost its (*ġe-* prefix, leading to our *done*. Our

past tense *did* comes from OE *dyde*. The <y> to <i> shift in ME was probably part of the general accommodation of the vowels <y> and <i> in ME and EMnE spelling.

The two verbs *don* and *doff* “put on” and “put off” merge and contract the phrases “do on” and “do off.” The *dun* in *whodunit* is a phonetic respelling of *done*. The *dy2* in *howdy* merges and contracts “do ye.”

Our word *deed* descends from the suffixed PIE form **dhē-ti*, which led to the Germanic **dēdiz* “doing, thing done,” with the intervocalic PIE [t] becoming voiced [d], which led in turn to the OE *dæd* “deed, action.” The suffixed PIE form **dhō-mo* led to the following:

doom “thing put down, judgement,”

deem “to judge,” and thus *deemster* and its variant *dempster*, with an intrusive [p] between [m] and a voiceless consonant, as in *empty* (from OE *æmtig*), *glimpse* (OE *glimsian*), and perhaps in Latinate participles reflected in *assumption*, *attempt*, *consumption*, *contempt*, *tempt*,

duma “judgement” from Germanic through Russian, and

the suffix *-dom* “condition, rank,” which occurs in 59 words in Lexis – for instance:

bachelordom	freedom	saintdom
bestsellerdom	heathendom	selfdom
boredom	heirdom	serfdom
chiefdom	hippiedom	shahdom
clerkdom	kingdom	sheikdom
computerdom	martyrdom	stardom
czardom	moviedom	thralldom
dukedom	officialdom	whoredom
fandom	popedom	wisdom
filmdom	princedom	yuppiesdom

The Hellenic Branch: Greek. The PIE voiced aspirate [dh] became the voiceless fricative [th] in Greek, today spelled <th>. The PIE suffixed form

**dhē-ŋ-* produced *theme* and its five derivatives in Lexis: *monothematic*, *thematic*, *thematically*, *themeless*, *themes*. It also produced the bound base *them2*, which occurs in nine words in Lexis: *apothem* and *anathema* and their derivatives.

The PIE reduplicative **dhi-dhē-* produces in the Lexis analysis the bound bases *thet1* and *thes* and the contraction *th2*, which occur in 77 words – for instance:

Word	Explication	Etymological Sense
antithesis	<u>(anti1+thes+is)1</u>	“Something set or put opposite”
biosynthetic	<u>bi2+o4+(syn+thet1+ic)1</u>	“Having been put together biologically”
diathesis	<u>(dia+thes+is)1</u>	“Something placed across or through”
epenthetic	<u>(ep+(en2+thet1+ic)1</u>	“Placed within”
epithet	<u>(epi+thet1</u>	“Something put on or added”
hypothesis	<u>(hypo+thes+is)1</u>	“Something that places under or supposes”
hypothetical	<u>(hypo+thet1+ic)1+al)1</u>	“Placed under, supposed”
metathesis	<u>(meta+thes+is)1</u>	“Something put after”
nomothetic	<u>nomē+o4+thet1+ic)2</u>	“Put or placed in law”
parentheses	<u>(par1+(en2+thes+es)2</u>	“Something that puts beside or inserts”
parenthetical	<u>(par1+(en2+thet1+ic)2+al)</u>	“Being put beside or inserted”
prosthesis	<u>(pros+thes+is)1</u>	“Something put toward or added”
synthesis	<u>(syn+thes+is)1</u>	“Something put together”
synthetic	<u>(syn+thet+ic)2</u>	“Having been put together”
theses	<u>thes+es)2</u>	“Puttings or settings forth”
thesis	<u>thes+is)1</u>	“A putting or setting forth”

In the above and following lists “Etymological Sense” simply puts together the earlier senses of the elements that make up the word. Thus, it presents something like Thomas’ genotype.

The PIE suffixed form **dhē-k-* produces *bodega* (bo+deg+a)2 from Greek through Latin then Spanish. From Greek through Latin then French it produces *boutique* (bou+tique and *discotheque* disc+o4+theque and *cinematheque* cine1+ma)+theque, and their plurals. The bases *deg*, *tique*, and *theque* alter Latinate *thec* “receptacle, store,” which itself appears in 33 words in Lexis, including:

Word	Explication	Etymological Sense
amphithecium	<u>(amphi+thec+ium)2</u>	“A small surrounding receptacle or store”
apothecary	<u>(apo+thec+ary)2</u>	“Store away, storehouse”
apothecial	<u>(apo+thec+ial)</u>	“Pertaining to a storehouse”
bibliotheca	<u>bibli+o4+thec+a)2</u>	“A store of books”
cleistothecium	<u>cleisto+thec+ium)2</u>	“A closed small receptacle or store”
endothecium	<u>(endo+thec+ium)2</u>	“A small inner receptacle or store”
hypothecate	<u>(hypo+thec+ate)1</u>	“To place or set beneath”
ootheca	<u>oo1+thec+a)2</u>	“A receptacle for eggs”
perithecial	<u>(peri+thec+ial)</u>	“Pertaining to an enclosing receptacle”
spermathecal	<u>sperm+a08+thec+al)1</u>	“Of a receptacle for semen”
thecate	<u>thec+ate)2</u>	“Having a case or receptacle”

The Italic Branch: Latin. In Latin the PIE voiced aspirate [dh] regularly became the voiceless fricative [f], spelled <f>. The PIE suffixed form *dhək- has produced an amazing number and variety of bases and affixes with the general sense “make, do.” For instance, the base *fac1* from PIE *dhək- occurs in 22 words in Lexis, as in:

Word	Explication	Etymological Sense
abortifacient	<u>(ab1+ort2+i1+fac1+ient)</u>	“Something that causes a disappearance”
facsimile	<u>fac1+sim3+il)4+e)3</u>	“Something made similar”
factotum	<u>fac1+tot1+um)1</u>	“One who does everything”
febrifacient	<u>febr+i1+fac1+ient)</u>	“Something that causes a fever”
parturifacient	<u>part4+ur)3+i1+fac1+ient)</u>	“Something that produces childbirth”
rubefacient	<u>rube2+fac1+ient)</u>	“Producing redness”
somnifacient	<u>somn+i1+fac1+ient)</u>	“Producing sleep”
stupefacient	<u>stup1+e5+fac1+ient)</u>	“Producing stupor”
telefacsimile	<u>tele1+fac1+sim3+il)4+e)3</u>	“Something made similar at a distance”

Closely related is *face1*, in 101 words in Lexis, including:

Word	Explication
barefaced	<u>bare+facē1+ed)2</u>
bifacial	<u>bi1+facē1+ial)</u>
boldface	<u>bold+face1</u>

craniofacial	<u>cran1+io+facē1+ial)</u>
deface	<u>(de+face1</u>
efface	<u>(e/x+f+face1</u>
face	<u>face1</u>
facial	<u>facē1+ial)</u>
interface	<u>(inter+face1</u>
maxillofacial	<u>max3+ill)1+o4+facē1+ial)</u>
surface	<u>(sur2+face1</u>
typeface	<u>type+face1</u>

Shamefaced shame+facē1+ed)1 misinterprets the etymology and form of OE *shamefast*, which had the sense “bashful, modest, shy.” Through a metaphoric association based on similarity of sound it became *shamefaced* and developed the more pejorative sense “ashamed, abashed.”

In the word *surficial* “near the surface of the earth” the recently-formed base *surfic* merges and contracts *sur(face)* and (*super*)*fic(ial)*.

In the Lexis database 95 words contain the free base *fact1*, which descends from the past participle stem of Latin *facere* “to do.” A sample:

Word	Explication	Etymological Sense
artifact	<u>art1+i1+fact1</u>	“Something made with skill”
benefactor	<u>bene+fact1+or)2</u>	“One who does good”
counterfactual	<u>(counter+fact1+ual)</u>	“Contrary to fact”
fact	<u>fact1</u>	“Something made or done”
faction	<u>fact1+ion)1</u>	“A manner of doing or acting”
factitious	<u>fact1+itious)</u>	“Made artificially, sham”
factor	<u>fact1+or)2</u>	“One that makes or does”
factory	<u>fact1+ory)</u>	“Oil press, a place for making”
malefactor	<u>mal1+e5+fact1+or)2</u>	“One who does wrong”
manufacture	<u>manu+fact1+ure)</u>	“Make by hand, esp. work metal”
olfactory	<u>ol2+fact1+ory)</u>	“Making or causing smell”
petrification	<u>petr1+i1+fact1+ion)1</u>	“To turn to stone”
satisfactory	<u>sat6+is)2+fact1+ory)</u>	“Making sufficient, doing sufficiently”

PIE **dhə-k-* also led to the bound base *fect*, from *perfectus*, the past participle of the Latin verb *perficere*, itself from *facere*. *Fect* occurs in 172

words in Lexis, including:

Word	Explication	Etymological Sense
affect	<u>(ad+f+fect)</u>	“To do or act to”
affection	<u>(ad+f+fect+ion)1</u>	“The state of acting toward, disposition”
confection	<u>(con+n+fect+ion)1</u>	“Something made together, prepared”
countereffective	<u>(counter+(ex+f+fect+l've)</u>	“Opposite to working out”
disinfectant	<u>(dis+(in2+fect+ant)1</u>	“Something that reverses a putting in”
effectuate	<u>(ex+f+fect+uate)1</u>	“To make outside, bring about”
imperfection	<u>(in1+m+(per1+fect+ion)1</u>	“Something not done thoroughly”
infect	<u>(in2+fect</u>	“To put in or stain”
perfect	<u>(per1+fect</u>	“Thoroughly or completely done”
pluperfect	<u>plu+(per1+fect</u>	“More than thoroughly done”
prefecture	<u>(pre+fect+ure)</u>	“The office of one placed before or above”
refectory	<u>(re+fect+ory)</u>	“Place where one is made anew”
trifecta	<u>tri1+fect+a)2</u>	“Something done triply”
unaffected	<u>(un1+(ad+f+fect+ed)1</u>	“Not done or acting to”

PIE **dhək-* also led to the base *fic1* “to make, do,” which occurs in 51 words in Lexis. A sample:

Word	Explication	Etymological Sense
beneficial	<u>bene+fic1+ial)</u>	“Producing or doing good”
coefficient	<u>(co+(ex+f+fic1+ient)</u>	“Producing to the same degree”
deficit	<u>(de+fic1+it)2</u>	“The opposite of a doing or making”
efficacious	<u>(ex+f+fic1+ac/y)+ious)</u>	“Able to do or accomplish”
efficiency	<u>(ex+f+fic1+iency)</u>	“The quality of working out or doing”
official	<u>(ob+f+fic1+inal)</u>	“Able to do work”
proficient	<u>(pro1+fic1+ient)</u>	“Able to make or do forward, progress”
superficies	<u>(super+fic1+ies)</u>	“Outer imposed form”

Closely related to *fic1* is terminative *fice1*, which occurs in 67 words in Lexis. A sample:

Word	Explication	Etymological Sense
artificial	<u>art1+i1+fic1+ial)</u>	“Made with skill or craft”
edifice	<u>ed3+i1+fice1</u>	“Building, something built”
insufficient	<u>(in1+(su/b+f+fic1+ient)</u>	“Not made or done up to”
office	<u>(o/b+f+fice1</u>	“Performance of work, duty”

officially	<u>(ob+f+ficē1+ial)+ly</u> 1	“By one who does duty”
officiate	<u>(ob+f+ficē1+iate)</u> 1	“To do one’s work or duty”
orifice	<u>or2+i1+ficē1</u>	“A mouth form, opening”
sacrifice	<u>sacr+i1+ficē1</u>	“To make sacred”
suffice	<u>(sub+f+ficē1</u>	“To make or do up to”
sufficiency	<u>(su/b+f+ficē1+ieny)</u>	“A making or doing up to”
superficial	<u>(super+ficē1+ial)</u>	“Of the outer form”

The complex suffix *-farious*) “making” apparently descends from PIE *dhə- and occurs in six Lexis words: *multifarious*, *omnifarious*, and their derivatives.

The base *fit2*, from PIE *dhə-k- came from Latin through French and occurs in 34 Lexis words, including:

Word	Explication	Etymological Sense
benefit	<u>bene+fit2</u>	“A good deed”
confiture	<u>(con+n+fit2+ure)</u>	“Something made together”
discomfit	<u>(dis+(com+fit2</u>	“To undo something made together”
profit	<u>(pro1+fit2</u>	“To make or do forward”

The base *fet3*, from Latin through French then Portuguese, occurs in 13 Lexis words – the variants *fetich* and *fetish* and their derivatives, with an earlier sense of “made by craft, artificial,” then a specialized sense “a charm, sorcery.”

The Latin *fex* “maker” and its French form *iff* occur in 13 words in Lexis: *pontifex* pont1+i1+fex “One who prepares the way, bridge-builder,” plus its variant *pontiff* pont1+iff, and *spinifex* spinē+i1+fex, *tubifex* tubē+i1+fex, and their plurals.

The bound base *fair3* occurs in only four Lexis words: *affair* and *affaire* and their plurals, the latter of which occurs only in French phrases like *affaire d’coeur*.

The bound base *fash* comes from Latin *facere* “make, do” through French and occurs in 15 Lexis words: *fashion*, plus fourteen of its derivations, including *fashionable*, *fashioner*, *fashionmonger*, *refashion*, *unfashionable*.

The bound base *feas*, also from Latin *facere* through French, occurs in 20

words in Lexis, including three that refer to ways of doing wrong:

Word	Explication	Etymological Sense
defeasance	<u>(de+feas+ance)</u>	“An undoing, annulment”
defeasible	<u>(de+feas+ible)</u>	“Able to be undone”
feasibility	<u>feas+ibil)+ity)</u>	“Ability to do”
feasible	<u>feas+ible)</u>	“Capable of being done”
indefeasible	<u>(in1+(de+feas+ible)</u>	“Not capable of being undone”
malfeasance	<u>mal1+feas+ance)</u>	“A wrong or bad doing”
misfeasance	<u>(mis+feas+ance)</u>	“An improper doing”
nonfeasance	<u>(non+feas+ance)</u>	“Failure to do”

The free base *feat*, another French form from *facere*, occurs in 23 words in Lexis, for instance:

Word	Explication	Etymological Sense
defeat	<u>(de+feat</u>	“Something not done well”
defeatist	<u>(de+feat+ist)1</u>	“One for whom things do not go well”
disfeature	<u>(dis+feat+ure)</u>	“To undo something done (well)”
feat	<u>feat</u>	“Something done (especially well)”
featly	<u>feat+ly)1</u>	“Done adroitly”
feature	<u>feat+ure)</u>	“The act of doing (well)”

The free base *chafe* and the bound base *chauff* also came from Latin through French. They contract the Vulgar Latin compound *calefāre* “to make warm,” itself a merging and contraction of Latin *calēre* “to be warm” and *facere* “to make, do.” They occur in nine Lexis words: *chafe* and *chauffeur* chauff+eur) with their inflections and the very French *réchauffé* (ré+chauff+é)2 “warmed leftovers, rehashed material.”

The base *fett*², an Italian form of Latin *fect*, appears only in *confetti*.

*Hac*², from Spanish, appears only in *hacienda* hac2+iend)+a)2 and its plural. *Hacienda* comes from Latin *facienda* “things to be done,” with the Latin [f] changing to Spanish [h]. According to Partridge, the sense development in Spanish was “things to be done,” leading to “employment,”

leading to “place of employment,” leading to “estate.”⁴

The adjective-forming suffixes *-fic*) and its extended form *-ific*), and the verb forming *-fy*) and its extended form *-ify*) also descend from Latin *facere*. The suffix *-fic*) occurs in 53 Lexis words, for instance:

Word	Explication	Etymological Sense
edification	<u>edi2+fic)+ation)</u>	“An act of building, instruction”
magnificent	<u>magni+fic)+ent)</u>	“Greatness of doing”
maleficent	<u>male2+fic)+ent)</u>	“Maliciously done”
mystification	<u>mysti+fic)+ation)</u>	“A doing that is silent or with closed eyes”
ossification	<u>ossi+fic)+ation)</u>	“A making into bone”
pacifism	<u>paci+fic)+ism)</u>	“A making binding or peaceful”
petrification	<u>petri1+fic)+ation)</u>	“A making into stone”
pontificate	<u>ponti+fic)+ate)1)</u>	“To make a bridge”
specific	<u>speci+fic)</u>	“Observed, formed, of a kind”
transpacific	<u>(trans+paci+fic)</u>	“Across the peaceful (ocean)”
vilification	<u>vili+fic)+ation)</u>	“A making cheap, base, despicable”
vitriification	<u>vitri+fic)+ation)</u>	“A making into glass”

But *-fic*)’s extension *-ific*) occurs in 170 Lexis words, ranging from *acetification* ac1+et)6+ific)+ation) “the process of converting to acetic acid or vinegar” to *vivification* vive+ific)+ation) “to bring to life or animate.”

The suffix *-fy*) occurs in 128 Lexis words, ranging from *argufy* argu+fy) to *vitriify* vitri+fy). The extended form *-ify*) occurs with the sense “to make, do” in 508 Lexis words, including

Word	Explication	Etymological Meaning
acidify	<u>ac1+id)1+ify)</u>	“To make sharp, bitter”
beatify	<u>beat2+ify)</u>	“To make blessed, happy”
certify	<u>cert1+ify)</u>	“To make distinctive”
dignify	<u>dign+ify)</u>	“To make worthy”
identify	<u>ident+ify)</u>	“To make the same”
modify	<u>mode+ify)</u>	“To make appropriate”

⁴Eric Partridge. *Origins: A Short Etymological Dictionary of Modern English*. 1958. Reprint. NY: Greenwich House, 1983

nullify	<u>null1+ify)</u>	“To make not, none”
quantify	<u>quant1+ify)</u>	“To make how much, measure”
testify	<u>test2+ify)</u>	“To make witness”
verify	<u>ver1+ify)</u>	“To make true”

The suffixed PIE form **dhə-k-li-* has the descendant bound base *fac3*, which occurs in 13 words in Lexis with the sense “easy to do,” including *facile, facilitate, facility*.

PIE **dhə-k-li-* also led to the unusually expanded bound base *+ficult*, which occurs in four Lexis words: *difficult, difficulty, difficulties, and difficultly*, with the etymological sense “not (easily?) done.” Closely related is *facult*, as in the four Lexis words *facultative, facultatively, faculties, and faculty*.

The suffixed form **dhə-s-* is perhaps the same as PIE **dhēs-*, dealing with religious concepts. It has the reflex *far3*, which occurs in three Lexis words: *nefarious, nefariously, nefariousness*, with the sense “not lawful.”

The PIE prefixed form **kom-dhə-* has the reflex *cond1*, clipped from Latin *condere* “to put together,” which occurs in ten Lexis words, including

Word	Explication	Etymological Sense
abscond	<u>(abs+cond1</u>	“To put away”
incondite	<u>(in1+cond1+ite)2</u>	“Not (well) put together”
recondite	<u>(re+cond1+ite)2</u>	“To put back, hide”

Closely related is *sconce2* “a lighting fixture,” whose etymology is complex: Latin *abscondere* had the participle *abscōnsa* “hidden,” which led to “hiding place, lantern.”

The prefixed and suffixed PIE form **kom-dh(ə)-yo-* has two reflexes, both of which deal with seasoning – *cond3*, which occurs in three Lexis words (*condiment, condimental, condiments*), and *gund*, which occurs in two (*salmagundi, salmagundis*):

Word	Explication	Etymological Sense
condiment	<u>cond3+iment)</u>	“Result of putting together”
salmagundi	<u>salma+gund+i)1</u>	“Put together with salt”

The PIE compound **sac-ro-dhō-t-* has the reflexes *sacer* “sanctify, sacred” and, from **dhē, dot2* “give,” which combine to convey the sense “priest” and occur in four Lexis words: *sacerdotal, sacerdotalism, sacerdotalisms, sacerdotally*: sacer+dot2+al)1+ etc.

Watkins suggests that perhaps the PIE compound **kred-dhə-* “place belief or faith in” has reflexes with the base *cred*, which occurs in 45 words in Lexis, including

Word	Explication
accredit	<u>(ad+c+cred+it)2</u>
credence	<u>cred+ence)</u>
credentials	<u>cred+ent)1+ial)+s)3</u>
credenza	<u>cred+enza)</u>
credible	<u>cred+ible)</u>
credit	<u>cred+it)2</u>
creditor	<u>cred+it)2+or)2</u>
credo	<u>cred+o)5</u>
discredited	<u>(dis+cred+it)2+ed)1</u>
incredible	<u>(in1+cred+ible)</u>

Credenza “buffet, sideboard” comes from Medieval Latin *crēdentia* “trust” through Italian. *W3* and *AHD* suggest that the “sideboard” sense comes from the earlier practice of placing food and drink on a sideboard to be tasted by a servant before being served to ensure that it contained no poison.

Also possibly from PIE **kred-dhə-* are the free base *grant* “To agree, consent, allow, concede” and the bound base *cre5* – which occur in twelve and seven Lexis words respectively, including *grant, grant, granter*, and *grantsmanship* grant+s)5+man1+ship), and

Word	Explication	Etymological Sense
miscreant	(mis+cre5+ant)1	“Believing wrongly
recreancy	(re+cre5+ancy)	“Going back on one’s beliefs”
recreant	(re+cre5+ant)1	“One who goes back on his beliefs”

Probably the PIE compound **gwrə-dh(ə)-o-* “he who makes praises” has

the reflex *bard*¹ “poet”, which occurs in *bard*¹, *bardic*, *bards*.

The reduced form **dh-* compounded with **au*⁴- to form PIE **au-dh-* “To perceive.” Reflexes include the variants *aesth* and *esth* and their much more common extensions *aesthes*, *aesthet*, *esthes*, *esthesi*, and *esthet*, which occur in 35 and 55 Lexis words respectively, including

aesthete	<u>aesth+ete)1</u>
aesthetic	<u>aesthet+ic)1</u>
anaesthesiology	<u>(an01+aesthesi+ology</u>
anaesthetic	<u>(an01+aesthet+ic)1</u>
anesthesia	<u>(an01+esthes+ia)1</u>
anesthesiologist	<u>(an01+esthsi+ology+ist)</u>
anesthetic	<u>(an01+esthet+ic)1</u>
cryptaesthesia	<u>crypt+aesthes+ia)1</u>
cryptesthesia	<u>crypt+esthes+ia)1</u>
esthete	<u>esth+ete)1</u>
esthetic	<u>esthet+ic)1</u>
hyperaesthesia	<u>(hyper+aestes+ia)1</u>
hyperesthesia	<u>(hyper+esthes+ia)1</u>
kinesthetic	<u>kin2+esthet+ic)1</u>
paraesthesia	<u>(par1+aesthes+ia)1</u>
paresthesia	<u>(par1+esthes+ia)1</u>
somesthetic	<u>som+esthet+ic)1</u>
synaesthesia	<u>syn+aesthes+is)1</u>
synesthesia	<u>(syn+esthes+ia)1</u>

The PIE compound **au-dh-* also produced the bound base *aud*¹ “To hear” and its extensions *audi* and *audio*, which occur in 53 Lexis words, including

audible	<u>aud1+ible)</u>	audiovisual	<u>audio+vis2+ual)</u>
audience	<u>audi+ence)</u>	audit	<u>aud1+it)2</u>
audile	<u>aud1+ile)1</u>	audition	<u>aud1+it)2+ion)</u>
audio	<u>audi+o)2</u>	auditorium	<u>aud1+it)2+orium)</u>
audiocassette	<u>audio+cass1+ett)+e)1</u>	auditory	<u>aud1+it)2+ory)</u>
audiologist	<u>audio+log1+ist)1</u>	clairaudient	<u>clair+audi+ent)</u>
audiophile	<u>audio+phile</u>	inaudibility	<u>(in1+audi+bil)+ity)</u>
audiotape	<u>audio+tape</u>	subaudition	<u>(sub+aud1+it)2+ion)1</u>
audiotypist	<u>audio+type+ist)1</u>		

PIE **au-dh-* also produced, via considerable alteration, the bound bases *ey1*, which occurs only in *obey*, its inflections and derivations, 10 words in Lexis: *obey* (ob+ey1 “To listen to.” Closely related to *ey1* is *edi1*, which occurs in seven words in Lexis, *obedient* and its derivations: (ob+ed6+ient) “Listening to.”

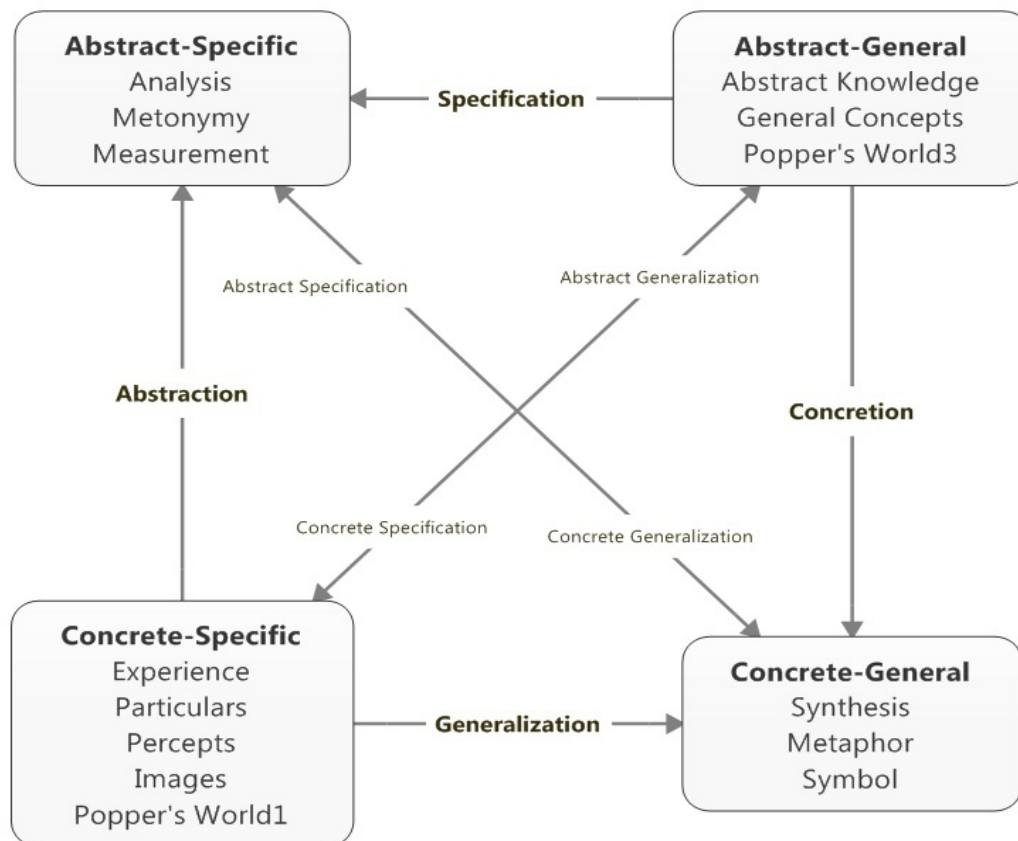
Our word *abdomen* is of obscure origin. The *OED* says that “It has been suggested that classical Latin *abdōmen* derives from *abdere* ‘to stow away, conceal, cover’ . . . but this may be just a popular etymology; it is more probable that it is borrowed from a non-Indo-European language.” Watkins supports the derivation from *abdere*, tracing *abdomen* back to PIE **dhō-men-*, with the sense “part placed away.”

The Indo-Iranian Branch: Persian and Sanskrit. From PIE **dhē-* from Persian through Urdu comes *pardah* (pard+ah)² “curtain or screen, religious sex segregation” and from Persian through Arabic then Italian then French comes *bard*² “horse armor.” From PIE **dhē-to-* comes *khedive* khedive “a Turkish viceroy” from Iranian then Persian then Turkish then French. From the PIE reduplicative **dhe-dhē-* through Sanskrit comes *sandhi* san3+dhi “morphemic sound change.”

The Extension of Senses. Many of the etymological senses are identical to or close enough to modern definitions to suggest that these senses, or something very much like them, have been with us since the days of Proto-Indo-European – for instance, “Producing or doing good” as in our *beneficial*, or “Thoroughly or completely done” as in our *perfect*, or “To listen to” as in our *obey*. But several other words have etymological senses different enough from their modern definitions to illustrate the various ways a word’s sense can change and be extended over time, as new phenotypes. I believe that these extensions are produced via one or both of two main modes of associative thought: metaphoric and metonymic. Metaphor is an association based on similarity; metonymy is an association based on, roughly, contiguity – such as first-next, cause-effect, part-whole, agent-product, act-result, etc.⁵

⁵ For more on this distinction see “Metaphor and Metonymy” in the article [“Orthography as an Evolving Complex System”](#) on this website.

The diagram below proposes a two dimensional map of cognitive space, based on two axes of thought – the vertical being concrete vs. abstract; the horizontal, specific vs. general. The map defines four basic modes of thought: the concrete-specific, the concrete-general, the abstract-specific, and the abstract-general. And it also provides for various types of cognitive movement among the four basic areas: generalization (for instance, the movement from the concrete-specific to the concrete-general), specification, abstraction, concretion. And it provides for complex movements such as abstract generalization (the movement from the concrete-specific directly to the abstract-general); its opposite, concrete specification; and the two opposites concrete generalization and abstract specification:



Historically the senses in very early languages like PIE would tend to be in the concrete-specific cognitive area, the area of physical experience. Much the same is true of the development of word sense in individuals. However,

any of the four cognitive areas can be the starting place for a change of a word's sense. And any of the remaining areas would be the realm of the sense towards which the original moves, its new phenotype. For instance, take the concrete-specific sense of human *mother*. It could move via similarity to the concrete-general, to refer, for instance, to the mother of a calf. From there it could move to the abstract-general as conveyed in an abstraction such as in *motherhood*. As contexts and purposes change, a word's sense shifts and expands to fit.

Some Examples of Sense Extension in Words from PIE **dhē-*. The following paragraphs use the scheme outlined above to describe the extensions of sense over the centuries in ten words with bases that descend from PIE **dhē-*:

Artificial (art1+i1+ficé1+ial), etymologically “Made with skill or craft,” even in Latin had contrasting senses: on one hand, the complimentary “indicating skill or craft”; on the other, the pejorative indicating cunning or craftiness. This duality continued in French and Norman French and in English. (Notice the parallel to *crafty*: In OE *cræftlic* “strong, powerful”, then “skillful, clever, ingenious”, then “cunning, artful, wily,” its most common sense today.)

Confection (conh+n+fect+ion)¹ has the etymological sense “Something made or put together.” Its earliest recorded sense in English was “a mixture or compound” as in Trevisa’s “Pat man closede a confeccioun of brymston and of blak salt in a vessel of bras, and sette hit on þe fire” (ante 1387). Thereafter it specialized to “a medicinal preparation,” including sweetened ones. Oddly, during the 15th-17th centuries it also was used to refer to a poison, which could have been either pejoration or irony. From the 14th century to the present it has referred to a sweet or delicacy, as in preserves and candy. By metaphoric shifts of context it was used to refer to literary and musical compositions (17th-19th centuries), and briefly in the 19th century to a style of female fashion.

Facade (face1+ade)² “Face or front of a building,” through movement from the concrete and specific to the general and abstract developed the pejorative sense “false, artificial, superficial appearance” – probably due to the fact that many buildings with elaborate facades were otherwise quite normal, or mediocre, or even shoddy.

Facet face1+et1 “Small face” specialized in 17th century English to the sense “a polished face of a gem.” By the 18th century it had re-generalized via metaphor to refer to a polished surface of any object and then re-specialized in a metaphoric context shift to “a segment of an insect’s compound eye.” By the early 19th century, it had generalized and abstracted even more to the sense “any aspect of anything.”

Facile fac3+ile1 “Easily done” was originally neutral or even positive, but over time one branch of it became pejorative via the scalar metonymy “too little-too much” with the sense “too easy, simplistic, superficial, glib.” But the positive sense also persists as “(of things or actions) effortless, working freely” and, through personification, “(of people) affable, gentle, mild.”

Factor fact1+or2 has the etymological sense “one that makes or does.” In Latin *factor* had the sense “agent, maker” and the sometimes slightly pejorative “perpetrator.” In English through a slight shift of context it developed the sense “one who buys or sells or manages affairs for another.” In the 17th century through a process of abstraction and specification it extended to include its mathematical sense of “a number which when multiplied by another produces a given number.” It then further generalized and abstracted to “any circumstance or fact that helps produce a result.” In our *factory* it continues something much like its etymological sense.

Factotum fac1+tot1+um1 has the etymological sense “One who does everything.” Through depersonification, a shift of context, and metaphor on the idea of “fulfilling many services,” its sense was extended in the technical register of printing to “an ornamental border that could enclose any oversized capital letter.” The *OED* also defines a slightly pejorative sense, “one who meddles with everything, a busybody,” but gives no quotation.

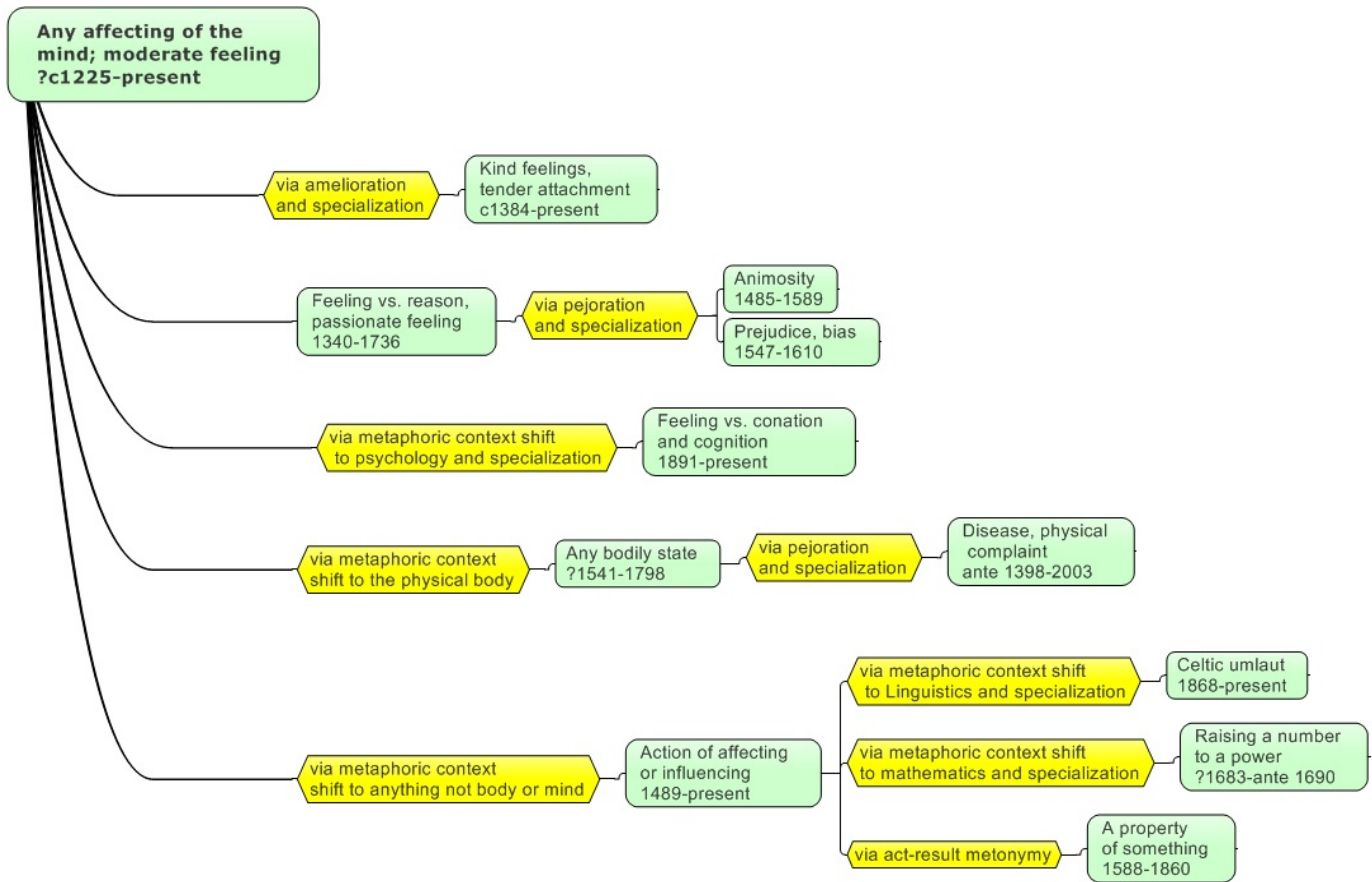
Faculty fac3+ult+y3 originally had the abstract sense “ability, aptitude.” Variations of this early sense came and went over the centuries. It specialized to the sense “area or department of knowledge,” and in time it personified to refer to the professors in a department of a university or other school.

Infect in2+fect has the etymological sense “To put in,” which specified to

the idea of staining, dying, and then discoloring, which began to assume a pejorative quality. The pejoration generalized in the abstract generalization “to imbue with bad opinions” and the more concrete generalization “to imbue with physical harm.”

The history of **office** (ob+f+ficē)¹ with the etymological sense “Performance of work, duty” illustrates metaphor working to cut across different contexts and across levels of abstraction and generality. It originally referred to religious services and then was generalized and abstracted to refer to responsibilities and duties in general. It then concretized and specified to refer to the place where workers fulfilled their duties, or did their work.

Affection (ad+f+fect+ion)¹ “The state or condition of acting toward”: The map below illustrates several of the sense extensions over the centuries for the word affection. The green rectangles contain senses the word has had, together with their approximate dates. The yellow hexagons indicate the various metaphoric and metonymic modes, movements, and scales that led to the extended senses.



The map shows again the various movements within cognitive space. That it may look like it is trailing Austin's clouds of etymology is fortuitous, but not entirely accidental. It also illustrates how common is the scalar metonymy of pejoration. But mostly, like all of the foregoing discussion, the map shows the wonderful productivity of a single PIE base, as well as the strands of unity and coherence in the centuries-long development of that productivity.