



Let us look at the morphemes associated with some of the edges. Edge 126, in the top left corner, contains the following labels (stems). The ones in blue are surely correct; the shorter ones, like *eth-* or *com-* are probably incorrect.

Edge number 126 To state: 67

method	mag	log	ecolog	ideolog	psycholog
chronolog	graph	geograph	philosoph	eth	com
anatom	mechan	clin	cyn	typ	numer
categor	rhetor	histor	class	mathemat	tact
theoret	polit	uncrit	skept	vert	statist
analyt	paradox				

These are all analyzed as appearing before the suffix *-c*, and then *-al*, and then either followed by nothing or by *ly*.

Edge 66 is associated are stems that do not end in *-c*, but are followed by *-al*, and then either followed by nothing or by *ly*:

Edge number 66 To state: 36 Stem

unequivoc	fisc	judici	unoffici	artifici	superfici
substanti	exponenti	quintessenti	potenti	sequenti	dism
phenomen	nomin	occasion	provision	congression	education
gravitation	fraction	addition	condition	uncondition	intention
convention	exception	proportion	unconstitution	etern	intern
cerebr	bilater	liter	sever	architectur	structur
accident	incident	coincident	increment	horizont	continu
usu	factu	contractu	perpetu	habitu	conceptu

How does this get produced? Here is an ordered list of the first 10 morphemes that are pulled out by this strategy:

Order:	From state:	Edge number	To state:	morpheme
1	20	37	2	er
2	21	39	2	tion
3	22	41	2	ing
4	23	43	5	e
5	24	44	6	e
6	25	46	2	ment
7	26	48	7	s
8	27	49	2	ist
9	28	51	24	at
10	29	53	2	ian

Let's look at the first morphemes that are specifically pulled out of the stems that precede NULL.s:

Order:	From state:	Edge number	To state:	morpheme
1	20	37	2	er
2	21	39	2	tion
3	22	41	2	ing
6	25	46	2	ment
8	27	49	2	ist
10	29	53	2	ian
11	30	55	2	tor
13	32	59	2	on
16	35	65	2	le
22	41	77	2	nce
23	42	79	2	nt
24	43	81	2	te
27	46	87	2	re
29	48	91	2	al
36	55	103	2	ne
37	56	105	2	et
39	58	109	2	ic
41	60	113	2	ship
42	61	115	2	out
44	63	119	2	de
45	64	121	2	ard
47	66	125	2	tive

The first set of stems has pulled off *-er* as a suffix on 540 words. In the following table, stems in blue are correct, and stems in green are arguably correct, though the vast majority of them are of the form *noun-verb-er*, where the noun is the object of the verb (as in *bartender*). Some cases are less regular: a *biographer* is not someone who biographs, but rather someone who writes biographies; but analyzing *biograph-er* seems perfectly reasonable.

scrubb	limb	climb	bomb	cucumb	plumb
trac	ulc	danc	announc	enforc	sauc
ringlead	cheerlead	load	grad	crusad	invas
shredd	feed	breed	raid	spid	provid
weld	homebuild	shipbuild	guild	fold	cardhold
stakehold	debthold	unithold	mold	bould	land
highland	island	salamand	command	bystand	defend
gend	spend	contend	bartend	bind	cind
remind	grind	transpond	decod	schrod	forward
camcord	intrud	auctione	convention	overse	waf
coff	counteroff	lif	aquif	golf	surf
villag	teenag	pag	arbitrag	voyag	bridg
rodg	dagg	digg	jogg	mugg	folg
rang	strang	messeng	harbing	gunsling	ring
wing	charg	cheeseburg	hamburg	lug	bleach
schoolteach	ranch	launch	crunch	dispatch	watch
vouch	biograph	demograph	photograph	goph	philosoph
wash	dishwash	finish	extinguish	push	math
fanci	pacifi	amplifi	clothi	ski	chandeli
fli	highfli	colli	copi	photocopi	barri
couri	hoosi	dossi	fronti	courti	sneak
break	shak	lak	peacemak	pacemak	troublemak
dealmak	filmmak	carmak	moneymak	tak	caretak
hack	pack	meatpack	crack	firecrack	track
woodpeck	traffick	kick	slick	stick	knickerbock
block	rock	suck	seek	bik	hik
strik	talk	tank	think	drink	bunk
onlook	mark	casework	cowork	york	hawk
heal	gambl	assembl	recycl	peddl	toddl
swindl	feel	jewel	muffl	juggl	smuggl
mail	trail	fil	oil	sprinkl	install
resell	booksell	bestsell	tell	dwel	zell
kill	painkill	drill	thrill	roll	stroll
school	stapl	sampl	wrestl	hustl	settl
haul	rul	trawl	bowl	guzzl	dream
fram	ibm	disclaim	tim	programm	glimm
swimm	somm	drumm	newcom	monom	astronom
inform	perform	transform	polym	clean	afrikan
open	sweeten	fasten	listen	campaign	sign
bargain	complain	train	retain	entertain	din
berlin	airlin	jetlin	marin	bann	scann
beginn	spinn	sinn	forerunn	parishion	pension
practition	petition	question	common	soon	earn
northern	southern	eastern	western	midwestern	burn
vintn	kindergartn	down	landown	skyscrap	beep
peacekeep	housekeep	gatekeep	bookkeep	innkeep	shopkeep

Edge number 66 To state: 36 (continued)

minesweep	snip	junip	wip	help	camp
jump	interlop	troop	paratroop	rop	handicapp
rapp	wrapp	shipp	clipp	flipp	stripp
whopp	stopp	casp	jasp	bear	wear
murder	suffer	gather	cater	adulter	admir
labor	scor	explor	reinsur	lectur	adventur
las	rais	fundrais	apprais	exercis	merchandis
cruis	cleans	dispens	endors	pass	hairdress
accus	trous	heat	sweat	skat	float
floodwat	backwat	street	cathet	diet	telemarket
paramet	millimet	centimet	odomet	kilomet	thermomet
interpret	raft	draft	freight	fight	firefight
granddaught	stepdaught	wait	arbit	typewrit	songwrit
screenwrit	sportswrit	scriptwrit	copywrit	recruit	smelt
supercent	rent	dissent	point	headhunt	discount
scoot	shoot	adapt	chapt	helicopt	start
comfort	support	transport	frankfurt	forecast	postmast
roast	toast	disast	mobst	semest	forest
harvest	gangst	youngst	canist	pollst	hamst
rost	dumpst	bust	dust	adjust	platt
gett	sett	hitt	transmitt	critt	sitt
spott	cutt	gutt	putt	stutt	pollut
telecommut	minicomput	microcomput	supercomput	rescu	leagu
sav	lifesav	believ	reliev	nev	waiv
sliv	cabdriv	solv	revolv	holdov	changeov
hangov	rollov	mov	turnov	leftov	layov
observ	draw	review	interview	skew	widow
whistleblow	wildflow	sunflow	follow	mow	superpow
mix	box	ballplay	pay	ratepay	pray
moy	destroy	dry	fry	blaz	freez
stabiliz	fertiliz	tranquiliz	organiz	appetiz	bulldoz

analyz

The second set of stems is this, based on a suffix *-tion*:

Edge number 66 To state: 36 Stem

perturba	medica	indica	syndica	specifica	modifica
amplifica	magnifica	clarifica	classifica	identifica	certifica
implica	complica	aplica	fabrica	loca	reloca
disloca	provoca	depreda	consolida	liquida	recommenda
delega	allega	obliga	interroga	denuncia	affilia
varia	appropria	negotia	renegotia	devia	abbrevia
revela	installa	cancella	viola	transla	specula
miscalcula	circula	regula	simula	formula	manipula
popula	congratula	proclama	exclama	affirma	confirma
transforma	explana	designa	resigna	combina	vaccina
origina	machina	inclina	examina	elimina	recrimina
denomina	termina	determina	rumina	assassina	destina
incarna	participa	preoccupa	declara	prepara	separa
vibra	delibera	reverbera	considera	exaggera	altera
aspira	expira	collabora	decora	perfora	explora
aberra	arbitra	concentra	registra	demonstra	illustra
configura	accusa	expecta	interpreta	cita	solicita
imita	limita	consulta	planta	presenta	misrepresenta
connota	quota	adapta	tempta	flirta	exhorta
manifesta	infesta	worksta	muta	reputa	amputa
valua	evalua	devalua	insinua	equa	fluctua
depriva	ova	renova	innova	observa	reserva
nationaliza	rationaliza	liberaliza	generaliza	capitaliza	hospitaliza
reorganiza	immuniza	characteriza	authoriza	dramatiza	privatiza
infrac	contrac	abstrac	distrac	attrac	defec
imperfec	rejec	injec	projec	selec	reflec
recollec	connec	interconnec	inspec	intersec	contradic
predic	afflic	depic	restric	evic	convic
injunc	concoc	abduc	deduc	reduc	reproduc
dele	comple	secre	inhibi	prohibi	exhibi
edi	rendi	precondi	defini	admoni	deposi
disposi	exposi	repeti	supersti	tui	deten
absten	atten	inven	lo	no	po
decep	misconcep	percep	mispercep	intercep	subscrip
prescrip	inscrip	redemp	exemp	assump	adop
interrup	disrup	asser	exer	por	distor
sugges	contribu	distribu	solu	resolu	substitu

Edge number 22 To state: 13 Stem

describ prescrib surfac outpac embrac balanc distanc experienc silenc sentenc influenc denounc persuad pervad cor