English-Corpora.org: a guided tour (see video)

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Why variation matters Historical variation (recent changes)

Word frequency Dialectal variation

Phrases and collocations (and patterns) Virtual corpora (focusing on specific topics)

Grammar / syntax Tools for language learners and teachers

Semantics (meaning and usage via collocates)

Other tools and features

English-Corpora.org is the **most widely used** collection of corpora (highly searchable collections of texts) anywhere in the world. The corpora are used by more than 130,000 people each month, from more than 140 countries. In addition, hundreds of universities worldwide have **academic licenses**, which provide their users with expanded access to the corpora.

The corpora have been used as the basis of **thousands of academic articles**, theses, and dissertations, and they form the backbone of **courses on language and linguistics** throughout the world, at all levels of instruction. Virtually every book on "teaching English with corpora" in the last 5-10 years has focused primarily on these corpora (which are also sometimes called the "BYU Corpora", for the university where they were created).

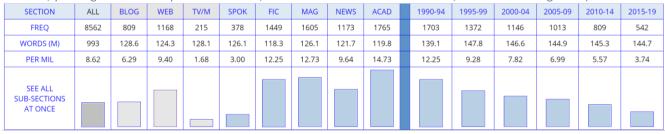
Since the first corpora were released in 2005, a total of seventeen corpora have been created:

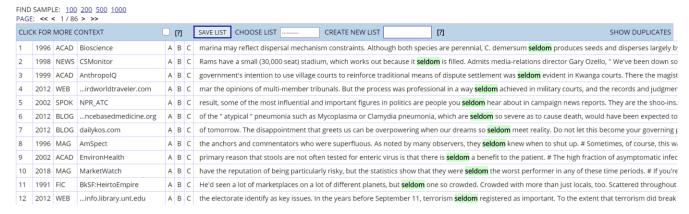
	Corpus	# words	Dialect	Time period	Genre(s)
1	iWeb: The Intelligent Web-based Corpus	14 billion	6 countries	2017	Web
2	News on the Web (NOW)	11.3 billion+	20 countries	2010-yesterday	Web: News
3	Global Web-Based English (GloWbE)	1.9 billion	20 countries	2012-13	Web (incl blogs)
4	Wikipedia Corpus	1.9 billion	(Various)	2014	Wikipedia
5	Hansard Corpus	1.6 billion	British	1803-2005	Parliament
6	Corpus of Contemporary American English (COCA)	1.0 billion	American	1990-2019	Balanced
7	Early English Books Online	755 million	British	1470s-1690s	(Various)
8	Coronavirus Corpus	673 million+	20 countries	2020-yesterday	Web: News
9	Corpus of Historical American English (COHA)	400 million	American	1810-2009	Balanced
10	The TV Corpus	325 million	6 countries	1950-2018	TV shows
11	The Movie Corpus	200 million	6 countries	1930-2018	Movies
12	Corpus of US Supreme Court Opinions	130 million	American	1790s-present	Legal opinions
13	Corpus of American Soap Operas	100 million	American	2001-2012	TV shows
14	British National Corpus (BNC)	100 million	British	1980s-1993	Balanced
15	TIME Magazine Corpus	100 million	American	1923-2006	Magazine
16	Strathy Corpus (Canada)	50 million	Canadian	1970s-2000s	Balanced
17	CORE Corpus	50 million	6 countries	2014	Web

Why variation matters (a lot) (go to beginning)

What sets English-Corpora.org apart from all other corpora is the insight that they give into **variation in English** – between genres, historical periods, and dialects. Other corpora are just giant "blobs" of data, with little if any indication of variation. Why is this important? Consider the simple word <u>seldom</u>. As COCA (the one billion word Corpus of Contemporary American English) shows, this word is used much more in formal genres than in informal genres, and its use is sharply declining over time.

(Note: in the case of *seldom* and all other searches in this file, click on the blue link to run the search. Depending on your browser, you might want to "Open in New Tab", and then close that tab afterwards, to facilitate navigation.)





If a large online corpus simply says that *seldom* occurs 87,000 times in a 17 billion word corpus, that is not very useful. Students would never know that if they use this word, they will sound like 1) a 70-80 year old person and/or 2) someone in a formal setting. This is just one simple example, dealing with word frequency. But this applies to thousands of words (frequency, meaning, and usage) and many grammatical constructions as well. Variation matters a great deal, and English-Corpora.org has the **only corpora that show this variation** in such detail.

Word frequency (go to beginning)

At the most basic level, users can see the **frequency of any word or phrase** in the different sections of the corpus, as well as sub-sections (in certain corpora). For example, they can see that <u>strategic</u> occurs most frequently in academic texts in COCA, and within the academic genre, it is the most frequent in business, history, and law / political science.

SECTION	ALL	BLOG	WEB	TV/M	SPOK	FIC	MAG	NEWS	ACAD	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19
FREQ	26103	3198	3435	459	2753	422	3614	3502	8720	3812	2547	3503	3027	3461	3120
WORDS (M	993	128.6	124.3	128.1	126.1	118.3	126.1	121.7	119.8	139.1	147.8	146.6	144.9	145.3	144.7
PER MIL	26.29	24.87	27.65	3.58	21.83	3.57	28.66	28.77	72.79	27.41	17.24	23.90	20.88	23.83	21.56
SEE ALL SUB-SECTION AT ONCE	NS														
History	Education		Geog/Soc	Sci	Law/Po	olSci	Huma	nities	Phil/Re	l Sci/	Tech	Medicine	Mis	с Е	Business
2552	1197		1130		1520	5	34	6	185	5	33	658	167	7	401
13.4	15.8		20.0		12.3	3	16	.2	7.8	1	7.5	10.8	4.8		1.2
190.51	75.88		56.42		124.2	21	21.	35	23.59	30	.54	60.87	34.6	6	339.77

Users can search for any word, phrase, or substring (e.g. words with *break*), and see all matching forms in the different sections of the corpus. For example, COCA shows the frequency in blogs, other web pages, TV/Movie subtitles, unscripted spoken TV and radio programs, fiction, magazines, newspapers, and academic journals.

HELP	CONTEXT	ALL	BLOG	WEB-GENL	TV/MOVIES	SPOKEN	FICTION	MAGAZINE	NEWSPAPER	ACADEMIC
1	BREAK	145708	13941	13958	26949	43525	14183	14284	13326	5542
2	BREAKING	41693	5553	5197	5555	6947	5410	5308	5406	2317
3	BREAKFAST	33610	2751	3022	7074	2027	7859	5456	4806	615
4	BREAKS	24620	3745	3861	2305	2750	3182	3772	3343	1662
5	BREAKDOWN	9321	1376	1371	745	1011	615	1363	1159	1681
6	OUTBREAK	7711	572	910	421	926	243	1133	1149	2357
7	BREAKTHROUGH	6998	653	769	534	1176	294	1748	1191	633
8	BREAKUP	4170	387	441	455	488	305	946	646	502
9	OUTBREAKS	3990	244	456	42	212	59	574	413	1990
10	HEARTBREAKING	3161	514	536	180	717	215	474	481	44
11	GROUNDBREAKING	2967	394	562	144	259	63	662	592	291
12	BREAKTHROUGHS	2197	232	280	98	253	60	713	289	272
13	BREAKOUT	2287	389	334	97	246	43	511	569	98
14	HEARTBREAK	2171	271	336	292	283	269	359	314	47

They can also compare any set of sections in a corpus, such as words with $\frac{*break*}{}$ that occur much more in (very informal) TV/Movies subtitles (left), compared to much more formal academic texts (right).

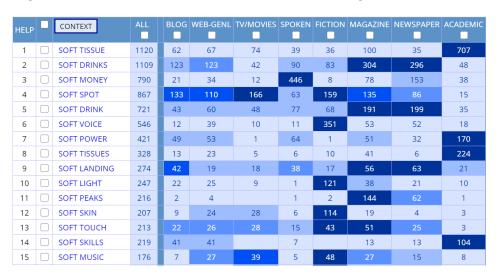
SEC 1	1 (TV/MOVIES): 128,074,534 WOR	DS					SEC 2	2 (ACADEMIC): 119,790,456 WC	RDS				
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO
1	BREAKIN	172	0	1.3	0.0	134.3	1	BREAKEVEN	62	1	0.5	0.0	66.3
2	HEARTBREAKER	101	1	0.8	0.0	94.5	2	OUTBREAKS	1990	42	16.6	0.3	50.7
3	DEAL-BREAKER	35	1	0.3	0.0	32.7	3	PATH-BREAKING	41	1	0.3	0.0	43.8
4	JAILBREAK	41	0	0.3	0.0	32.0	4	BREAKPOINT	32	1	0.3	0.0	34.2
5	BREAK-DANCE	20	1	0.2	0.0	18.7	5	PATHBREAKING	38	0	0.3	0.0	31.7
6	HEARTBREAKERS	55	3	0.4	0.0	17.1	6	STRIKEBREAKING	34	0	0.3	0.0	28.4
7	BED-AND-BREAKFAST	45	3	0.4	0.0	14.0	7	RULE-BREAKING	26	1	0.2	0.0	27.8
8	BREAK-IN	403	35	3.1	0.3	10.8	8	BREAKPOINTS	20	0	0.2	0.0	16.7
9	BREAKFAST	7074	615	55.2	5.1	10.8	9	ICEBREAKERS	20	3	0.2	0.0	7.1
10	LATE-BREAKING	30	4	0.2	0.0	7.0	10	BREAKAGE	97	15	0.8	0.1	6.9
11	BREAKER	403	56	3.1	0.5	6.7	11	OUTBREAK	2357	421	19.7	3.3	6.0
12	TIEBREAKER	34	5	0.3	0.0	6.4	12	STRIKEBREAKERS	42	9	0.4	0.1	5.0
13	BREAK-DANCING	20	3	0.2	0.0	6.2	13	BREAKDOWNS	171	44	1.4	0.3	4.2
14	HEARTBREAK	292	47	2.3	0.4	5.8	14	BREAK-EVEN	31	9	0.3	0.1	3.7

Researchers can also see *all* words that are used much more in one genre (or sub-genre) than in another. For example, the words at the left are words that are used in <u>COCA</u>: <u>Academic</u>: <u>Medicine</u> than in COCA: Academic generally. Users could easily find words related to any domain, such as business, medicine, law, or engineering.

SEC 1	(ACAD:Medicine): 10,809,528 WORDS						SEC 2	(ACADEMIC): 108,980,928 WOR	DS				
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO
1	MASTOID	226	1	20.9	0.0	2,278.5	1	GIFTED	8038	8	73.8	0.7	99.7
2	PAROTID	388	2	35.9	0.0	1,955.9	2	THEOLOGICAL	3626	4	33.3	0.4	89.9
3	TONSILLAR	184	0	17.0	0.0	1,702.2	3	FEMINIST	2605	3	23.9	0.3	86.1
4	MEDIASTINAL	142	0	13.1	0.0	1,313.7	4	ISLAMIC	7551	10	69.3	0.9	74.9
5	TRANSCUTANEOUS	122	1	11.3	0.0	1,230.0	5	ARAB	8591	12	78.8	1.1	71.0
6	SCAPULAR	114	1	10.5	0.0	1,149.3	6	FICTIONAL	2853	4	26.2	0.4	70.7
7	PLEOMORPHIC	110	1	10.2	0.0	1,109.0	7	PEDAGOGICAL	2079	3	19.1	0.3	68.7
8	OTOLOGIC	110	1	10.2	0.0	1,109.0	8	LITERARY	9567	14	87.8	1.3	67.8
9	FASCIAL	118	0	10.9	0.0	1,091.6	9	PROTESTANT	1880	3	17.3	0.3	62.2
10	ANTIHYPERTENSIVE	115	0	10.6	0.0	1,063.9	10	RULING	1760	3	16.1	0.3	58.2
11	ототохіс	114	0	10.5	0.0	1,054.6	11	RITUAL	2342	4	21.5	0.4	58.1
12	ETHMOID	113	0	10.5	0.0	1,045.4	12	IRAQI	3439	6	31.6	0.6	56.9
13	SPHENOID	112	0	10.4	0.0	1,036.1	13	BIBLICAL	2060	4	18.9	0.4	51.1
14	COELIAC	110	0	10.2	0.0	1,017.6	14	NATIONALIST	2044	4	18.8	0.4	50.7

Phrases and collocations (strings of words) (go to beginning)

Of course, users can search for much more than individual words. The following table shows phrases with <u>soft + NOUN</u> in the different genres of COCA. Notice <u>soft tissue(s)</u>, <u>power</u>, <u>skills</u> in academic, <u>soft spot</u> in TV/Movies, <u>soft voice</u>, <u>light</u>, <u>skin</u>, <u>touch</u>, <u>music</u> in fiction, and <u>soft drink(s)</u> or <u>landing</u> in newspapers and magazines. Again, a large "blob" of 15-20 billion words – with no indication of genre – would miss out on all of this.



Users can compare two sections of the corpora to find phrases that are much common in one section than the other. For example, these are <u>phrasal verbs with out</u> that are much more common in fiction (left) or academic (right).

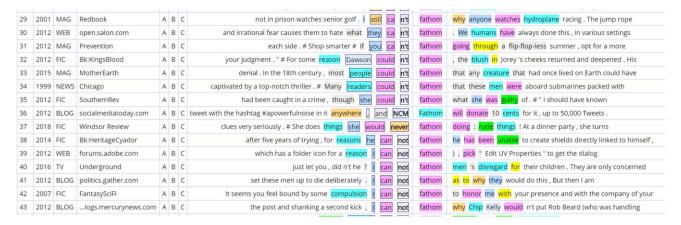
SEC 1	(FICTION): 118,322,084 WO	RDS					SEC 2	ACADEMIC): 119,790,456 WORL	os				
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO
1	STARED OUT	950	3	8.0	0.0	320.6	1	CONTRACTING OUT	34	1	0.3	0.0	33.6
2	GLANCED OUT	230	1	1.9	0.0	232.9	2	CARDED OUT	63	2	0.5	0.0	31.1
3	STEPS OUT	490	3	4.1	0.0	165.4	3	PARTIALED OUT	20	0	0.2	0.0	16.7
4	LEANING OUT	139	1	1.2	0.0	140.7	4	COOLING OUT	32	2	0.3	0.0	15.8
5	FLUNG OUT	119	1	1.0	0.0	120.5	5	BEARS OUT	33	3	0.3	0.0	10.9
6	LETS OUT	113	1	1.0	0.0	114.4	6	PHASING OUT	52	5	0.4	0.0	10.3
7	SHOOK OUT	205	2	1.7	0.0	103.8	7	CARRIED OUT	4467	434	37.3	3.7	10.2
8	STEPPED OUT	1426	14	12.1	0.1	103.1	8	SINGLES OUT	68	7	0.6	0.1	9.6
9	LAUGHED OUT	300	3	2.5	0.0	101.2	9	OPT OUT	56	6	0.5	0.1	9.2
10	PEERED OUT	369	4	3.1	0.0	93.4	10	POINTS OUT	2826	306	23.6	2.6	9.1
11	WHIPS OUT	83	1	0.7	0.0	84.0	11	BORNE OUT	216	25	1.8	0.2	8.5
12	WANDERED OUT	83	1	0.7	0.0	84.0	12	BEAR OUT	57	7	0.5	0.1	8.0

Patterns (go to beginning)

The corpora can also show the patterns in which words and phrases occur. Words do not occur in isolation, and learners need to understand the patterns that a given word takes. For example, <u>account as a verb</u> is nearly always followed by *for*:



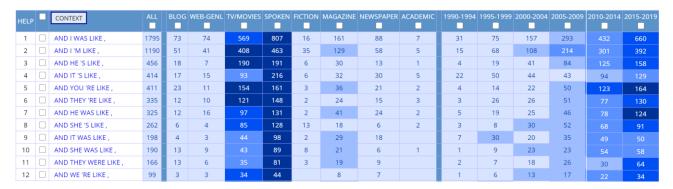
And <u>fathom</u> is nearly always preceded by a negative word. This is why a sentence like *I totally fathom what* you're saying (without any negation before the verb) would sound strange to a native speaker.



Corpora move far beyond a simple dictionary to show the patterns in which words occur.

Grammar / syntax (go to beginning)

One of the best uses of the corpora is to look at the frequency and use of syntactic constructions. For example, consider the "like construction" (and I'm like, he can't do it, or but she was like, let's just buy it). The corpora can show the frequency of all matching phrases, as well as the <u>frequency across sections</u> of the corpus (in this case, genres and time periods 1990-2019 in COCA).



SECTION	ALL	BLOG	WEB	TV/M	SPOK	FIC	MAG	NEWS	ACAD	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19
FREQ	7270	329	263	2257	3156	126	699	394	46	140	393	639	1145	1780	2581
WORDS (M)	993	128.6	124.3	128.1	126.1	118.3	126.1	121.7	119.8	139.1	147.8	146.6	144.9	145.3	144.7
PER MIL	7.32	2.56	2.12	17.62	25.02	1.06	5.54	3.24	0.38	1.01	2.66	4.36	7.90	12.25	17.83
SEE ALL SUB-SECTIONS AT ONCE															

CLIC	K FOR	MORE (CONTEXT [7]	SAV	E LIS	CHOOSE LIST CREATE NEW LIST [7] SHOW DUPLICATES
1	2018	SPOK	CBS_Morning	A E	С	you get into the game, you want to play some more and they 're like , well, if you buy this then you play more, you get a
2	2002	MOV	An Evening with Kevin Smith	A E	С	vault. " I was like, " For what? " And she 's like , " I don't know. " I was like, " Is it
3	2016	SPOK	ABC: The View	A E	С	because if your parents show body confidence, if you have that and you 're like , and you're like, this is what I have, this is what
4	2014	SPOK	CNN: CNN Live Event	A E	С	" Why couldn't you be normal and just be gay. And I was like , " Mom, who said that? " UNIDENTIFIED-FEMAL# I need a strong man
5	2012	MOV	Sleepwalk with Me	A E	С	, I should close strong. What Spanish do I know? And I 'm like , " I know. I'll say, Long live the Immigrant. "
6	1993	SPOK	PBS_Newshour	A E	С	about the trees, and I'm going to show you. And I was like , hey, you don't have to show me nothin', but what
7	1993	MOV	ve! The Valentine's Day Massacre	A E	С	passport is gone. Yeah. This bird came in and And I was like, "Huh?" You don't want to meet my family. I
8	2001	SPOK	ABC_GMA	A E	С	training command, and my training command took care of it, and it was like, We're not going to have this,' and it stopped.
9	2018	SPOK	ABC_20/20	A E	С	got one video that's coming up on a million views. And it 's like , wow, you know, they all want to hear what I have to
10	2018	SPOK	NPR_AskMe	A E	С	West Florissant, and these four officers come up to me. And they 're like', hey, you can't stand there. I was like, I just
11	2019	SPOK	NPR_ATCW	A E	С	, and I was - we were searching for a title. And I was like , well, how about "Room 41?" I mean, that's
12	2002	MOV	An Evening with Kevin Smith	A E	С	was like, " I'm here to interview you. " And was like , " Get out of here. You? " I couldn't not talk
13	2011	SPOK	CBS_48Hours	A E	С	that one of his clients had put up for adoption. BRUCE-LISKER: And she was like , what? Was sort of thrown, but came to just love it.
14	2008	SPOK	NBC_Dateline	A E	С	I was just talking to my dad about it one day. And I was like , Dad, I don't I don't get this. Why me

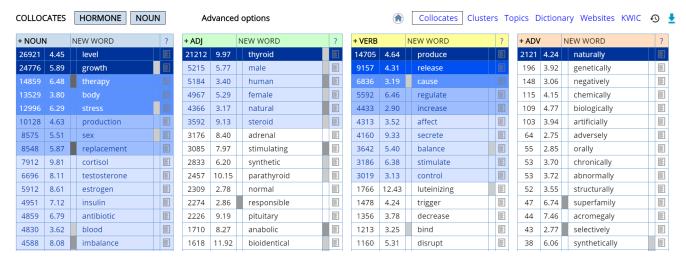
Or consider the frequency of the "BE passive" (he was hired; it was paid) or the "GET passive" (he got hired; it got paid) in COCA. The BE passive is more frequent in formal genres (which disproves the idea that the passive occurs mainly in "sloppy" speech) and it is slightly decreasing over time, while the GET passive occurs more in informal genres and is increasing over time. So if someone is writing an academic paper in English, it would sound much better to use the BE passive than the GET passive, which is too informal.



Because COCA is the only corpus of English that 1) has texts from a wide range of genres, 2) is large, and 3) is recent, it has been used as the basis for hundreds of in-depth studies of such syntactic variation in English.

Semantics (meaning and usage) (go to beginning)

Collocates (nearby words) can provide extremely useful insight into the meaning and usage of a word or phrase, following the idea that "you can tell a lot about a word by the words that it hangs out with". In iWeb (composed of 14 billion words from the Web) and COCA (one billion words, genre-balanced), users can see the frequency of collocates by part of speech (with indications about whether the collocates tend to occur before or after the word in question, and how "tightly bound" together the two words are). For example, these are the collocates of *hormone* in iWeb (via WORD search, and then COLLOCATES):



Collocates typically look at "nearby" words (e.g. 4 words left to 4 words right). Topics (which are unique to English-Corpora.org) look at words that co-occur *anywhere* in the text. In many cases, **topics provide even better insight** into the meaning and usage of a word (once again, *hormone* in iWeb):

TOPICS (more)

symptom, blood, diet, stress, gland, muscle, fat, testosterone, body, estrogen, pregnancy, protein, cell, supplement, disease, tissue, treatment, doctor, vitamin, acid

COLLOCATES (more)

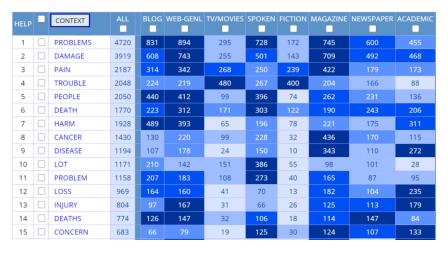
NOUN level, growth, therapy, body, stress, production, sex, replacement

VERB produce, release, cause, regulate, increase, affect, secrete, balance

ADJ thyroid, male, human, female, natural, steroid, adrenal, stimulating

ADV naturally, genetically, negatively, chemically, biologically, artificially, adversely, orally

Collocates sometimes show that a word has different "semantic prosody" than what might first be expected, where "semantic prosody" refers to the preference of certain words for negative or positive collocates. For example, notice how negative the noun <u>collocates of cause</u> (as a verb) are in COCA:



Collocates can also be used to investigate the difference between **words with similar meaning**, such as <u>totally</u> <u>vs completely</u> (+ADJ); note how much more informal the collocates of *totally* are (left).

WORD 1	(W1): TOTALLY (0.65)					WORD 2	(W2): COMPLETELY (1.55)				
	WORD	W1	W2	W1/W2	SCORE		WORD	W2	W1	W2/W1	SCORE
1	CUTE	35	0	70.0	108.4	1	CONTROLLABLE	21	1	21.0	13.6
2	FUN	42	1	42.0	65.0	2	RANDOMIZED	24	2	12.0	7.7
3	нот	107	4	26.8	41.4	3	BARE	56	7	8.0	5.2
4	GREAT	51	2	25.5	39.5	4	IMMOBILE	30	4	7.5	4.8
5	GAY	47	5	9.4	14.6	5	REVERSIBLE	30	4	7.5	4.8
6	LAME	51	6	8.5	13.2	6	UNNOTICED	30	4	7.5	4.8
7	AWESOME	276	33	8.4	13.0	7	RED	22	3	7.3	4.7
8	CREEPY	24	3	8.0	12.4	8	DRY	212	33	6.4	4.1
9	EXCITED	23	3	7.7	11.9	9	IDENTICAL	24	4	6.0	3.9
10	EXCELLENT	21	3	7.0	10.8	10	MAD	99	18	5.5	3.6
11	SWEET	24	4	6.0	9.3	11	STILL	22	4	5.5	3.6
12	COOL	375	75	5.0	7.7	12	UNUSABLE	22	4	5.5	3.6

Word meaning and usage can **vary by genre** as well. For example, consider the <u>collocates of care</u> in fiction (left; focus on what individuals *take care of*) and academic (right; more focus on institutions that provide *care*):

SEC 1 (FICTION): 118,322,084 WO	RDS					SEC 2	(ACADEMIC): 119,790,456 WO	RDS				
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO
1	DAD	36	2	0.3	0.0	18.2	1	SETTINGS	399	1	3.3	0.0	394.1
2	HORSES	17	1	0.1	0.0	17.2	2	MODEL	236	1	2.0	0.0	233.1
3	AUNT	17	1	0.1	0.0	17.2	3	SUPPORT	205	1	1.7	0.0	202.5
4	THING	32	2	0.3	0.0	16.2	4	COSTS	339	2	2.8	0.0	167.4
5	NIGHT	30	2	0.3	0.0	15.2	5	PROVIDERS	779	5	6.5	0.0	153.9
6	DOG	40	3	0.3	0.0	13.5	6	GROUP	155	1	1.3	0.0	153.1
7	DADDY	13	1	0.1	0.0	13.2	7	PRACTICE	309	2	2.6	0.0	152.6
8	MOM	38	3	0.3	0.0	12.8	8	SYSTEMS	298	2	2.5	0.0	147.2
9	KITCHEN	12	1	0.1	0.0	12.1	9	PHYSICIANS	272	2	2.3	0.0	134.3
10	GARDEN	12	1	0.1	0.0	12.1	10	MEMBERS	126	1	1.1	0.0	124.5
11	GRANDMA	11	1	0.1	0.0	11.1	11	INDIVIDUALS	123	1	1.0	0.0	121.5
12	TOWN	11	1	0.1	0.0	11.1	12	SERVICES	1048	9	8.7	0.1	115.0

Collocates can also move beyond strict "word meaning" to show "what we are saying" about different topics. For example, consider the collocates of <u>Asia</u> (left; perhaps more focus on countries and institutions) and <u>Africa</u> (right; perhaps more focus on individuals, health and well-being).

WORD	1 (W1): ASIA (0.50)					WORD 2	W2): AFRICA (2.00)				
	WORD	W1	W2	W1/W2	SCORE		WORD	W2		W2/W1	SCORE
1	COOPERATION	66	11	6.0	12.0	1	AIDS	286	14	20.4	10.2
2	SUMMIT	84	16	5.3	10.5	2	AID	162	10	16.2	8.1
3	ECONOMIES	124	25	5.0	9.9	3	COAST	429	41	10.5	5.2
4	MARKETS	177	40	4.4	8.9	4	ARTS	101	12	8.4	4.2
5	STABILITY	83	19	4.4	8.8	5	LIFE	125	17	7.4	3.7
6	RADIO	51	14	3.6	7.3	6	HUMANS	77	11	7.0	3.5
7	INFLUENCE	64	26	2.5	4.9	7	CHILDREN	197	29	6.8	3.4
8	SOCIETY	155	66	2.3	4.7	8	EDUCATION	75	12	6.3	3.1
9	FOUNDATION	66	29	2.3	4.6	9	WORK	117	19	6.2	3.1
10	PRESENCE	80	40	2.0	4.0	10	CONTINENT	257	43	6.0	3.0
11	SECURITY	102	59	1.7	3.5	11	HEALTH	71	12	5.9	3.0
12	MARKET	64	39	1.6	3.3	12	WOMEN	188	32	5.9	2.9

The corpora from English-Corpora.org are the only ones that can be searched by **synonym**, meaning that searches can focus on meaning as well as form (words). This can be extremely **useful for non-native speakers**, allowing them to see which of several "competing" words are actually used in a given context (such as <u>"strong" argument</u>) and thus have their writing or speech sound more "native-like".

List Chart Word Browse +	НЕ	LP	CONTEXT	ALL	BLOG	WEB-GENL	TV/MOVIES	SPOKEN	FICTION	MAGAZINE	NEWSPAPER	ACADEMIC
=strong ARGUMENT [POS	1	1	STRONG ARGUMENT	331	83	57	3	54	8	38	25	63
Find matching strings Reset	2	2	CONVINCING ARGUMENT	218	55	44	12	16	13	21	23	34
✓ Sections Texts/Virtual Sort	3	3	POWERFUL ARGUMENT	148	19		2	28	4	17	17	41
	4	4	PERSUASIVE ARGUMENT	137	21	23	12	16	5	15	14	31
	5	5	EFFECTIVE ARGUMENT	39			2	12			2	5
	6	5	POTENT ARGUMENT	12	1	4		2		2	2	1
	7	7	FORCEFUL ARGUMENT	13	3	4		1		1	1	3
	8	3	VIGOROUS ARGUMENT	10		2	1			1		6
	ē	9	INFLUENTIAL ARGUMENT	7		1				1		5

Synonyms also vary by genre. For example, consider the <u>synonyms of strong</u> in fiction (left) and academic (right). All of these synonyms might appear together in a thesaurus, but only the corpus data shows, for example, that writers might refer to (= "strong") *beefy, burly, strapping lumberjacks* in fiction, but (= "strong") *effective, compelling, persuasive arguments* in academic writing.

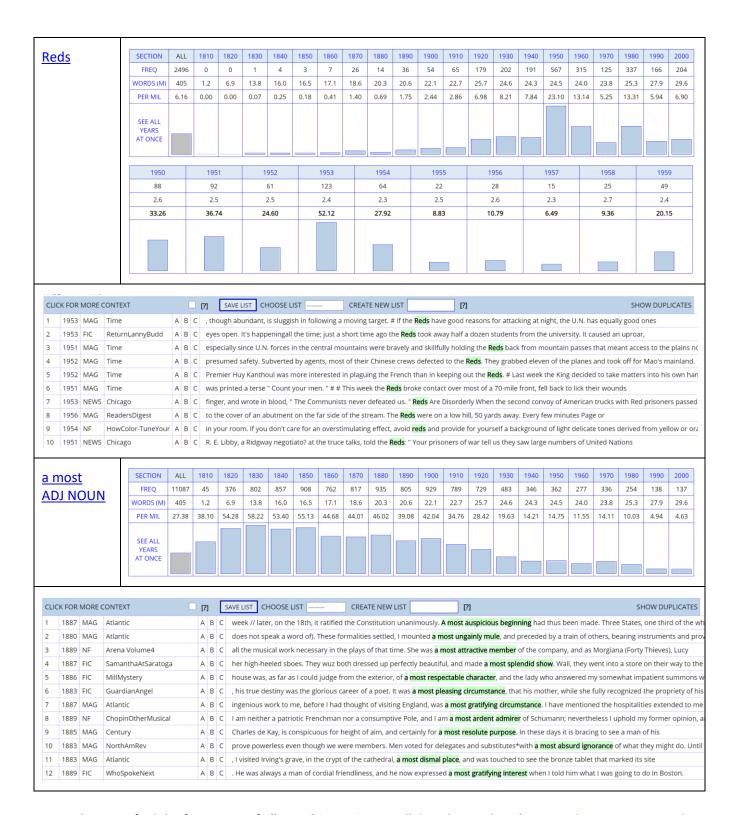
SEC 1	(FICTION): 118,322,084 WC	ORDS					SEC 2	2 (ACADEMIC): 119,790,456 \	WORDS				
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO
1	BEEFY	301	7	2.5	0.1	43.5	1	EFFECTIVE	28807	1272	240.5	10.8	22.4
2	BURLY	650	27	5.5	0.2	24.4	2	ROBUST	2829	444	23.6	3.8	6.3
3	STRAPPING	297	21	2.5	0.2	14.3	3	DEEP-SEATED	260	49	2.2	0.4	5.2
4	SPICY	507	53	4.3	0.4	9.7	4	COMPELLING	2845	602	23.7	5.1	4.7
5	PUNGENT	575	70	4.9	0.6	8.3	5	PERSUASIVE	1360	298	11.4	2.5	4.5
6	BITING	1545	230	13.1	1.9	6.8	6	CLEAR-CUT	405	92	3.4	0.8	4.3
7	BRIGHT	16050	2542	135.6	21.2	6.4	7	DURABLE	683	160	5.7	1.4	4.2
8	STURDY	1369	240	11.6	2.0	5.8	8	DEDICATED	3496	1166	29.2	9.9	3.0
9	нот	21731	3877	183.7	32.4	5.7	9	ZEALOUS	217	81	1.8	0.7	2.6
10	GLARING	1326	247	11.2	2.1	5.4	10	RESILIENT	550	210	4.6	1.8	2.6
11	DAZZLING	857	215	7.2	1.8	4.0	11	POTENT	1149	444	9.6	3.8	2.6
12	STOUT	953	270	8.1	2.3	3.6	12	POWERFUL	11539	5884	96.3	49.7	1.9

Historical change (go to beginning)

There are many corpora from English-Corpora.org that provide very useful data on language change, whether it is the 1400s-1600s (EEBO), 1810-2009 (COHA), 1800-2018 (US Supreme Court), 1803-2003 (Hansard; British Parliament), or 1926-2006 (TIME Magazine). The Movie Corpus (1930s-2010s) and the TV Corpus (1950s-2010s) are the only large corpora that provide a large amount of data on changes in very informal speech. And researchers can also focus on much more recent language change, as in COCA (1990-2019), the NOW Corpus (2010-2020) and the Coronavirus Corpus (2020). The last two corpora are updated *every night* with millions of words of data. Overall, there are billions of words of data, and most of these corpora are 50-100x as large as comparable historical corpora, which allows researchers to look at a **much wider range of phenomena**. In addition, these corpora allow a much wider range of searches than the simple searches for exact words and phrases in **Google Books n-grams**.

At the most basic level, researchers can see the **frequency of words and phrases by decade**. For example, the following charts from COHA (400 million words, 1810-2009) shows *steamship* by decade, and *Reds* by decade and even by year (note 1953, the year of the McCarthy hearings in the US Senate). As the search for *a most ADJ NOUN* shows, researchers can also look for phrases, including part of speech.

steamship	SECTION	ALL	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
	FREQ	2159	0	0	0	9	47	88	43	109	239	308	284	266	263	165	121	67	82	26	25	17
	WORDS (M)	405	1.2	6.9	13.8	16.0	16.5	17.1	18.6	20.3	20.6	22.1	22.7	25.7	24.6	24.3	24.5	24.0	23.8	25.3	27.9	29.6
	PER MIL	5.33	0.00	0.00	0.00	0.56	2.85	5.16	2.32	5.37	11.60	13.94	12.51	10.37	10.69	6.78	4.93	2.79	3.44	1.03	0.89	0.57
	SEE ALL YEARS AT ONCE																					



Researchers can find the **frequency of all matching strings** in all decades, such as *ism words in COHA. Note the higher frequency of patriotism, despotism, and heroism in the 1800s, socialism, communism, and nationalism in the mid-1900s, and capitalism and terrorism in the late 1900s and early 2000s.

HELP	CONTEXT	ALL	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
1	CRITICISM	13510	25	156	244	341	370	408	690	682	706	1016	1212	1123	860	771	922	974	975	835	659	541
2	PATRIOTISM	4931	26	148	439	359	333	406	259	308	357	329	482	290	222	179	114	116	156	170	125	113
3	COMMUNISM	4798				6	15	4	58	102	26	16	34	169	441	497	1451	940	292	279	321	147
4	MECHANISM	4546		20	71	141	96	107	121	98	152	286	276	381	359	291	376	330	338	268	492	343
5	SOCIALISM	3546				18	55	10	148	92		213	446	270	398	332	279	295	312	304	136	57
6	ORGANISM	3426		3	2	69	36	82	175	230	179	321	289	374	273	256	343	191	214	137	120	132
7	JOURNALISM	2633		3	1	57	17	34	87	60		108	151	196	131	201	177	183	207	292	283	346
8	OPTIMISM	2517		1	12	5		6	22	45	49	104	165	237	225	188	238	219	226	278	195	302
9	CAPITALISM	2513								3	7	12	65	135	271	247	218		259	453	436	199
10	DESPOTISM	2265	23	84	204	293	388	287	199	120	119	90	86	103	55	48	47	19	27	42	23	8
11	BAPTISM	2109		49	40	217	531		131	162	110	101	61	39	44	49	47	54	49	42	44	79
12	HEROISM	2040	18	61	71	115	169	163	113		133	109	171	113	84	91	83	62	69	95	60	80
13	REALISM	2018		5		1	13	24	49	123	120	123	112	198	147	140	237	165	116	152	158	135
14	NATIONALISM	1847				1	1	3	4	44	24	15	99	203	172	232	196	264	141	182	170	96
15	TERRORISM	1823			1	2	4	7	9	3	8	12	19	57	55	51	30	62	221	387	148	747

It is also possible to find **all words that are more common in one time period** than in another. For example, words with *heart* in COHA in the 1800s (left) vs the late 1900s (right), or *ess words in TIME in the 1920s-1930s (left) vs the 1980s-2000s (right); note older feminine forms like negress, authoress, sculptress, adventuress, and poetess.

	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO
1	HEART-STRINGS	188	0	1.4	0.0	144.9	1	HEARTBEAT	664	3	6.2	0.0	269.3
2	NOBLE-HEARTED	132	1	1.0	0.0	108.5	2	HEARTLAND	273	0	2.6	0.0	256.0
3	HEARTH-STONE	135	0	1.0	0.0	104.0	3	WHOLEHEARTEDLY	152	1	1.4	0.0	184.9
4	HEART-BROKEN	346	3	2.7	0.0	94.8	4	HALFHEARTEDLY	68	1	0.6	0.0	82.7
5	HEART-SICK	114	0	0.9	0.0	87.9	5	MIND-AND-HEART	85	0	0.8	0.0	79.7
6	HEARTSEASE	199	2	1.5	0.0	81.8	6	HEARTWARMING	60	1	0.6	0.0	73.0
7	SINGLE-HEARTED	69	1	0.5	0.0	56.7	7	HEART-STOPPING	56	0	0.5	0.0	52.5
В	HEARTH-RUG	72	0	0.6	0.0	55.5	8	OPEN-HEART	54	0	0.5	0.0	50.6
9	TRUE-HEARTED	199	3	1.5	0.0	54.5	9	HEART-TO-HEART	48	0	0.5	0.0	45.0
0	HEART-ACHE	60	0	0.5	0.0	46.2	10	HEARTTHROB	45	0	0.4	0.0	42.2
1	SIMPLE-HEARTED	160	3	1.2	0.0	43.8	11	HEART-HEALTHY	39	0	0.4	0.0	36.6
2	HEART-BURNINGS	55	0	0.4	0.0	42.4	12	HEART-ATTACK	38	0	0.4	0.0	35.6
	(1930s, 1920s): 20,292,651 W		TOKENS 2	PM 1	PM 2	RATIO		(1980s, 1990s, 2000s): 27,5		TOKENS 1	PM 2	PM 1	
C 1	(1930s, 1920s): 20,292,651 v WORD/PHRASE	VORDS TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		(1980s, 1990s, 2000s): 27,5. WORD/PHRASE	34,890 WORDS TOKENS 2	TOKENS 1	PM 2	PM 1	RATIC
C 1	(1930s, 1920s): 20,292,651 v WORD/PHRASE CINEMACTRESS	VORDS TOKENS 1 139	TOKENS 2	PM 1 6.8	PM 2	RATIO 685.0	SEC 2	(1980s, 1990s, 2000s): 27,5 WORD/PHRASE COMPETITIVENESS	34,890 WORDS TOKENS 2 116	TOKENS 1	PM 2	PM 1	RATIC 421.3
1 2	(1930s, 1920s): 20,292,651 v WORD/PHRASE CINEMACTRESS NEGRESS	VORDS TOKENS 1 139 62	TOKENS 2 0 0	PM 1 6.8 3.1	PM 2 0.0 0.0	RATIO 685.0 305.5	SEC 2	(1980s, 1990s, 2000s): 27,5 WORD/PHRASE COMPETITIVENESS SELF-AWARENESS	34,890 WORDS TOKENS 2 116 53	TOKENS 1 0 0	PM 2 4.2 1.9	PM 1 0.0 0.0	RATIC 421.3 192.5
C 1 1 2	(1930s, 1920s): 20,292,651 WORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS	VORDS TOKENS 1 139 62 23	TOKENS 2 0 0 0	PM 1 6.8 3.1 1.1	PM 2 0.0 0.0 0.0	RATIO 685.0 305.5 113.3	1 2 3	(1980s, 1990s, 2000s): 27,5. WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS	34,890 WORDS TOKENS 2 116 53 43	TOKENS 1 0 0 0	PM 2 4.2 1.9 1.6	PM 1 0.0 0.0 0.0	RATIO 421.3 192.5 156.2
1 2 3	(1930s, 1920s): 20,292,651 WORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS PROPRIETRESS	VORDS TOKENS 1 139 62 23 22	TOKENS 2 0 0 0 0 0	PM 1 6.8 3.1 1.1	PM 2 0.0 0.0 0.0 0.0	RATIO 685.0 305.5 113.3 108.4	1 2 3 4	(1980s, 1990s, 2000s): 27,5. WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS WEIGHTLESSNESS	34,890 WORDS TOKENS 2 116 53 43 34	TOKENS 1 0 0 0 0	PM 2 4.2 1.9 1.6 1.2	PM 1 0.0 0.0 0.0 0.0	RATIC 421.3 192.5 156.2 123.5
C 1 1 2 3 4 5	(1930s, 1920s): 20,292,651 WORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS PROPRIETRESS FESS	VORDS TOKENS 1 139 62 23 22 53	TOKENS 2 0 0 0	PM 1 6.8 3.1 1.1 1.1 2.6	PM 2 0.0 0.0 0.0 0.0 0.0	RATIO 685.0 305.5 113.3 108.4 71.9	1 2 3 4 5	(1980s, 1990s, 2000s): 27,5. WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS WEIGHTLESSNESS HIPNESS	34,890 WORDS TOKENS 2 116 53 43 34 32	TOKENS 1 0 0 0 0 0 0 0	PM 2 4.2 1.9 1.6 1.2 1.2	PM 1 0.0 0.0 0.0 0.0 0.0 0.0	RATIC 421.3 192.5 156.2 123.5 116.2
C 1	(1930s, 1920s): 20,292,651 WORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS PROPRIETRESS	VORDS TOKENS 1 139 62 23 22 53 50	TOKENS 2 0 0 0 0 1	PM 1 6.8 3.1 1.1 1.1 2.6 2.5	PM 2 0.0 0.0 0.0 0.0	RATIO 685.0 305.5 113.3 108.4 71.9 67.8	SEC 2 1 2 3 4 5 6	(1980s, 1990s, 2000s): 27,5. WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS WEIGHTLESSNESS HIPNESS AGRIBUSINESS	34,890 WORDS TOKENS 2 116 53 43 34	TOKENS 1 0 0 0 0	PM 2 4.2 1.9 1.6 1.2 1.1	PM 1 0.0 0.0 0.0 0.0	RATIC 421.3 192.5 156.2 123.5 116.2 105.3
C 1 1 2 3 4 5 6 7	(1930s, 1920s): 20,292,651 WORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS PROPRIETRESS FESS AUTHORESS	VORDS TOKENS 1 139 62 23 22 53	0 0 0 0 0 1	PM 1 6.8 3.1 1.1 1.1 2.6	PM 2 0.0 0.0 0.0 0.0 0.0 0.0	RATIO 685.0 305.5 113.3 108.4 71.9	1 2 3 4 5	(1980s, 1990s, 2000s): 27,5. WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS WEIGHTLESSNESS HIPNESS	34,890 WORDS TOKENS 2 116 53 43 34 32 29	TOKENS 1 0 0 0 0 0 0 0 0	PM 2 4.2 1.9 1.6 1.2 1.2	PM 1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RATIC 421.3 192.5 156.2 123.5 116.2
C 1 1 2 3 4 5 6 7	(1930s, 1920s): 20,292,651 WORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS PROPRIETRESS FESS AUTHORESS MARCHIONESS	VORDS TOKENS 1 139 62 23 22 53 50 50	TOKENS 2 0 0 0 0 1 1 1	PM 1 6.8 3.1 1.1 1.1 2.6 2.5 2.5	PM 2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RATIO 685.0 305.5 113.3 108.4 71.9 67.8 67.8	SEC 2 1 2 3 4 5 6 7	(1980s, 1990s, 2000s): 27,5. WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS WEIGHTLESSNESS HIPNESS AGRIBUSINESS SEXINESS	34,890 WORDS TOKENS 2 116 53 43 34 32 29 27	TOKENS 1 0 0 0 0 0 0 0 0 0 0	PM 2 4.2 1.9 1.6 1.2 1.2 1.1	PM 1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	RATIC 421.3 192.5 156.2 123.5 116.2 105.3 98.1
1 2 3 4 5	(1930s, 1920s): 20,292,651 WWORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS PROPRIETRESS FESS AUTHORESS MARCHIONESS SCULPTRESS	VORDS TOKENS 1 139 62 23 22 53 50 50 45	TOKENS 2 0 0 0 0 1 1 1 1	PM 1 6.8 3.1 1.1 1.1 2.6 2.5 2.5 2.2	PM 2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	RATIO 685.0 305.5 113.3 108.4 71.9 67.8 67.8	SEC 2 1 2 3 4 5 6 7 8	(1980s, 1990s, 2000s): 27,5. WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS WEIGHTLESSNESS HIPNESS AGRIBUSINESS SEXINESS PERMISSIVENESS	34,890 WORDS TOKENS 2 116 53 43 34 32 29 27 27	TOKENS 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PM 2 4.2 1.9 1.6 1.2 1.1 1.0 1.0	PM 1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	RATIC 421.3 192.5 156.2 123.5 116.2 105.3 98.1 98.1
C 1 1 2 3 4 5 6 7 8 9 110	(1930s, 1920s): 20,292,651 WWORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS PROPRIETRESS FESS AUTHORESS MARCHIONESS SCULPTRESS JEWESS	VORDS TOKENS 1 139 62 23 22 53 50 50 45 66	TOKENS 2 0 0 0 1 1 1 2	PM 1 6.8 3.1 1.1 1.1 2.6 2.5 2.5 2.2 3.3	PM 2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	RATIO 685.0 305.5 113.3 108.4 71.9 67.8 67.8 61.1 44.8	SEC 2 1 2 3 4 5 6 7 8 9	(1980s, 1990s, 2000s): 27,5 WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS WEIGHTLESSNESS HIPNESS AGRIBUSINESS SEXINESS PERMISSIVENESS TOGETHERNESS	34,890 WORDS TOKENS 2 116 53 43 34 32 29 27 27 26	TOKENS 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PM 2 4.2 1.9 1.6 1.2 1.1 1.0 0.9	PM 1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	RATIC 421.3 192.5 156.2 123.5 116.2 105.3 98.1 98.1 94.4
1 1 2 3 4 5 6 7 8 9	(1930s, 1920s): 20,292,651 WWORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS PROPRIETRESS FESS AUTHORESS MARCHIONESS SCULPTRESS JEWESS MARQUESS	VORDS TOKENS 1 139 62 23 22 53 50 50 45 66 181	TOKENS 2 0 0 0 1 1 1 2 7	PM 1 6.8 3.1 1.1 1.1 2.6 2.5 2.5 2.2 3.3 8.9	PM 2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	RATIO 685.0 305.5 113.3 108.4 71.9 67.8 67.8 61.1 44.8 35.1	SEC 2 1 2 3 4 5 6 7 8 9 10	(1980s, 1990s, 2000s): 27,5 WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS WEIGHTLESSNESS HIPNESS AGRIBUSINESS SEXINESS PERMISSIVENESS TOGETHERNESS DEFENSIVENESS	24,890 WORDS TOKENS 2 116 53 43 34 32 29 27 27 26 23	TOKENS 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PM 2 4.2 1.9 1.6 1.2 1.1 1.0 0.9 0.8	PM 1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	RATIC 421.3 192.5 156.2 123.5 116.2 105.3 98.1 98.1 94.4 83.5
C 1 1 2 3 4 5 6 7 8 9	(1930s, 1920s): 20,292,651 WWORD/PHRASE CINEMACTRESS NEGRESS EYE-WITNESS PROPRIETRESS FESS AUTHORESS MARCHIONESS SCULPTRESS JEWESS MARQUESS SEASICKNESS	VORDS TOKENS 1 139 62 23 22 53 50 50 45 66 181 43	TOKENS 2 0 0 0 0 1 1 1 1 2 7	PM 1 6.8 3.1 1.1 1.1 2.6 2.5 2.5 2.2 3.3 8.9 2.1	PM 2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	RATIO 685.0 305.5 113.3 108.4 71.9 67.8 67.8 61.1 44.8 35.1 29.2	SEC 2 1 2 3 4 5 6 7 8 9 10 11	(1980s, 1990s, 2000s): 27,5 WORD/PHRASE COMPETITIVENESS SELF-AWARENESS WEIRDNESS WEIGHTLESSNESS HIPNESS AGRIBUSINESS SEXINESS PERMISSIVENESS TOGETHERNESS DEFENSIVENESS FECKLESSNESS	24,890 WORDS TOKENS 2 116 53 43 34 32 29 27 27 26 23 22	TOKENS 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PM 2 4.2 1.9 1.6 1.2 1.1 1.0 1.0 0.9 0.8 0.8	PM 1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	RATIO 421.3 192.5 156.2 123.5 116.2 105.3 98.1 98.1 94.4 83.5 79.9

The corpora can also be used to investigate **grammatical change over time**, and they have been used for a wide range of studies during the last ten years (since COHA was released in 2010). For example, see the frequency of <u>GET + V-ed</u> (e.g. *get married, got painted*) in COHA during the last 200 years, or the frequency of <u>END up V-ing</u> (e.g. *ended up paying too much*); note how the construction only really began to be used about 100 years ago.

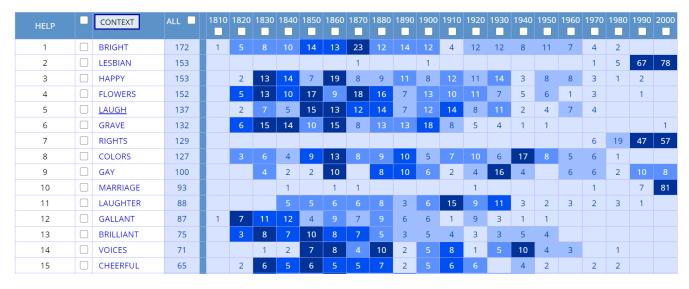
GET V-ed

SECTION	ALL	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
FREQ	34125	18	98	368	374	561	622	877	926	860	1199	1516	1559	2048	2413	2610	2703	3001	3001	4365	5006
WORDS (M)	405	1.2	6.9	13.8	16.0	16.5	17.1	18.6	20.3	20.6	22.1	22.7	25.7	24.6	24.3	24.5	24.0	23.8	25.3	27.9	29.6
PER MIL	84.26	15.24	14.15	26.72	23.30	34.06	36.47	47.25	45.58	41.75	54.26	66.78	60.77	83.24	99.10	106.34	112.73	126.01	118.54	156.22	169.31
SEE ALL YEARS AT ONCE																					

END up V-ing

SECTION	ALL	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
FREQ	1535	0	0	0	0	0	0	0	0	0	0	0	0	2	13	39	90	155	232	442	562
WORDS (M)	405	1.2	6.9	13.8	16.0	16.5	17.1	18.6	20.3	20.6	22.1	22.7	25.7	24.6	24.3	24.5	24.0	23.8	25.3	27.9	29.6
PER MIL	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.53	1.59	3.75	6.51	9.16	15.82	19.01
SEE ALL YEARS AT ONCE																					

Researchers can also investigate **changes in meaning using collocates**, with the idea that changes in nearby words can signal changes in meaning or usage. These are the <u>collocates of *qay*</u> decade by decade during the last 200 years. Notice the change from "happy, joyful" in the 1800s to "sexual orientation" in the second half of the 1900s.



Collocates can also signal **changes in "what we are saying" about certain topics**. For example, the <u>collocates of women</u> from texts in the 1800s (left) show a very sexist worldview, in which women were evaluated according to their moral characteristics (*noble, true, pure, cultivated, refined, wretched*); they were often seen as being weak (*unfortunate, abandoned, helpless*); and women that were intelligent or independent were marked as being unusual (*strong-minded, clever*).

SEC 1	(1820, 1830, 1840, 1850, 186): 174	1,553,979 WO	RDS				SEC 2	(1970, 1980, 1990, 2000): 106,640,094 V	VORDS				
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO
- 1	STRONG-MINDED WOMEN	24	1	0.1	0.0	14.7	-1	PREGNANT WOMEN	233	5	2.2	0.0	76.3
2	CLEVER WOMEN	24	0	0.1	0.0	13.7	2	BATTERED WOMEN	70	0	0.7	0.0	65.6
3	NOBLE WOMEN	36	2	0.2	0.0	11.0	3	AFRICAN-AMERICAN WOMEN	61	0	0.6	0.0	57.2
4	TRUE WOMEN	18	1	0.1	0.0	11.0	4	DIVORCED WOMEN	25	1	0.2	0.0	40.9
5	UNFORTUNATE WOMEN	17	1	0.1	0.0	10.4	5	MIDDLE-CLASS WOMEN	23	1	0.2	0.0	37.6
6	WRETCHED WOMEN	18	0	0.1	0.0	10.3	6	MUSLIM WOMEN	23	1	0.2	0.0	37.6
7	ABANDONED WOMEN	18	0	0.1	0.0	10.3	7	NATIONAL WOMEN	68	3	0.6	0.0	37.1
8	HELPLESS WOMEN	66	4	0.4	0.0	10.1	8	BLACK WOMEN	487	22	4.6	0.1	36.2
9	VERY WOMEN	15	1	0.1	0.0	9.2	9	MENOPAUSAL WOMEN	22	1	0.2	0.0	36.0
10	TURKISH WOMEN	15	1	0.1	0.0	9.2	10	SOVIET WOMEN	32	0	0.3	0.0	30.0
11	ELDER WOMEN	15	0	0.1	0.0	8.6	11	ADULT WOMEN	18	1	0.2	0.0	29.5
12	DEFENCELESS WOMEN	15	0	0.1	0.0	8.6	12	IMMIGRANT WOMEN	15	1	0.1	0.0	24.6
13	AGED WOMEN	28	2	0.2	0.0	8.6	13	AFGHAN WOMEN	26	0	0.2	0.0	24.4
14	FAIR WOMEN	69	5	0.4	0.0	8.4	14	MISSING WOMEN	14	1	0.1	0.0	22.9
15	PURE WOMEN	14	0	0.1	0.0	8.0	15	SUCCESSFUL WOMEN	14	1	0.1	0.0	22.9
16	HANDSOME WOMEN	37	3	0.2	0.0	7.5	16	GOOD-LOOKING WOMEN	13	1	0.1	0.0	21.3
17	CULTIVATED WOMEN	13	0	0.1	0.0	7.4	17	MATURE WOMEN	13	1	0.1	0.0	21.3
18	REFINED WOMEN	12	0	0.1	0.0	6.9	18	LOCAL WOMEN	22	0	0.2	0.0	20.6

Other than the corpora from English-Corpora.org, *no other historical corpora* are 1) large enough and 2) have a robust enough architecture, to allow studies like these two collocates-based searches. And note that complex searches like those shown above – which provide a wealth of useful data – take just 1-2 seconds in the 400 million word COHA corpus or in any of the other historical corpora.

More recent changes (go to beginning)

EEBO, COHA, US Supreme Court, and Hansard (British Parliament) focus on changes hundreds of years ago, or during the last 200 years or so. But the corpora from English-Corpora.org are also unique in the way that they allow researchers to look at more recent changes in the language. The Movie Corpus (1930s-2010s) and the TV Corpus (1950s-2010s) are the only corpora anywhere that focus on recent changes in very informal language, using large corpora. For example, they show words that were much more common from the 1930s-1960s (left) compared to the 1990s-2010s (right) (including lots more profanity in movies in recent decades).

	4000 4000 / 1 3	4000 0040 /
	More common 1930-1969 (movies)	More common 1990-2018 (movies)
ADJ	swell, splendid, sore, fond, delighted, dreadful,	fking, okay, cool, weird, damn, gd, huge,
	darn, phony, blasted, satisfactory, snappy,	awesome, pregnant, super, sexy, scary,
	darned, apt, no-good, cockeyed, screwy,	unbelievable, sexual, boring, pathetic, gross,
	disgraceful, crummy, beastly, frightful, double-	massive, nuclear, creepy, global, creative,
	crossing, phoney, bashful, confounded, shrewd,	magical, intense, ultimate, sh-tty, homeless,
	soapy, daffy	random, corporate, pissed
NOUN	darling, fellow, pardon, dough, wagon,	sh-t, hell, mom, fk, a-s, b-tch, dude, sex, drug,
	headquarters, chap, cigar, railroad, brandy,	ah, tv, bullsh-t, m-f-r, b-st-rd, girlfriend,
	telegram, corporal, crook, hunch, regiment,	relationship, d-ck, computer, video, tape, crap,
	squadron, handkerchief, shilling, cinch, butler,	bro, p-ssy, n-g, grunt, role, bike, chick, cancer,
	skipper, chauffeur, plenty, tailor, sonny, mink,	butt
	nuisance, mammy, waltz, newspaperman	
VERB	shall, suppose, pardon, phone, spoil, frighten,	fk, suck, screw, p-ss, focus, freak, date,
	telephone, permit, object, congratulate, oblige,	r-pe, pee, film, score, b-tch, sh-t, chill, define,
	dine, notify, faint, quarrel, acquaint, delight,	stress, evolve, f-rt, activate, surf, tape,
	amuse, intrude, dislike, slug, scram, furnish,	participate, process, monitor, target,
	sock, darn, consent, tangle, fuss, peddle, double-	manipulate, trigger, puke, initiate, generate
	cross	

We saw above how COCA can be used to look at genre-based variation in English. But because it has almost exactly the same genre-balance each year from 1990-2019, this billion word corpus can also look at **language change during the last 30 years** (and it is the only corpus in the world that allows such searches). For example, users can look at the frequency of words and phrases in five year periods (and if desired, even single years), such as the increase with *old-school* or *freak out* (which is more than four times as frequent than 25-30 years ago).

old-scho	<u>ol</u>					freak ou	<u>t</u>				
1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19
26	48	209	397	483	426	246	479	788	998	1121	1158
139.1	147.8	146.6	144.9	145.3	144.7	139.1	147.8	146.6	144.9	145.3	144.7
0.19	0.32	1.43	2.74	3.33	2.94	1.77	3.24	5.38	6.89	7.72	8.00

Researchers can also investigate **recent syntactic shifts** in English, such as the increase in END up V-ing (e.g. we ended up leaving at 9 AM instead) or the "like construction" (e.g. and I was like, I guess they can come).

END up V	/-ing					"like con	struction	"			
1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19
1826	2340	2489	2849	2949	3292	140	393	639	1145	1780	2581
139.1	147.8	146.6	144.9	145.3	144.7	139.1	147.8	146.6	144.9	145.3	144.7
13.13	15.83	16.98	19.66	20.30	22.74	1.01	2.66	4.36	7.90	12.25	17.83

We saw above how collocates could be used with *gay* to show changes in meaning in COHA. We can do the same with words in COCA to show **changes in meaning and usage during the last 30 years**. See the <u>collocates of *web*</u> (note the increase in words(right) referring to the World Wide Web after the early 1990s), and the noun collocates of *green* in the 2010s (below, right), which show the newer meaning of "environmentally friendly".

SEC	1 (1990-1994): 139,059,19	2 WORDS					SEC 2 (2005-2009, 2010-2014, 2015	5): 434,948,33	8 WORDS			
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO
1	SPIDER	142	219	1.0	0.5	2.0	1	SITE	8830	2	20.3	0.0	1,411.5
2	LIFE	39	86	0.3	0.2	1.4	2	SITES	2176	2	5.0	0.0	347.8
3	RELATIONSHIPS	20	45	0.1	0.1	1.4	3	PAGE	633	2	1.5	0.0	101.2
4	FOOD	25	187	0.2	0.4	0.4	4	PAGES	414	0	1.0	0.0	95.2
							5	SEARCH	366	0	0.8	0.0	84.1
							6	E-MAIL	356	0	0.8	0.0	81.8
							7	BROWSER	301	0	0.7	0.0	69.2
							8	VIDEO	194	1	0.4	0.0	62.0
							9	COMPANY	191	1	0.4	0.0	61.1
							10	ADDRESS	186	1	0.4	0.0	59.5
							11	RESOURCES	167	1	0.4	0.0	53.4

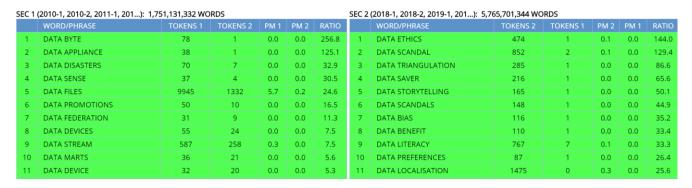
SEC 1	(1995-1999, 1990-1994): 286,8	33,557 WORDS					SEC 2	2 (2010-2014, 2015-2019): 290,0	03,115 WORDS				
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO
1	GREEN PEPPER	215	35	0.7	0.1	6.2	1	GREEN GAZETTE	96	0	0.3	0.0	33.1
2	GREEN CROSS	52	9	0.2	0.0	5.8	2	GREEN JOBS	87	0	0.3	0.0	30.0
3	GREEN VEGETABLES	73	32	0.3	0.1	2.3	3	GREEN PRACTICE	60	2	0.2	0.0	29.7
4	GREEN PEPPERS	94	47	0.3	0.2	2.0	4	GREEN ENERGY	170	7	0.6	0.0	24.0
5	GREEN MAN	58	31	0.2	0.1	1.9	5	GREEN ARROW	192	8	0.7	0.0	23.7
6	GREEN ACRES	52	31	0.2	0.1	1.7	6	GREEN BUILDING	130	18	0.4	0.1	7.1
7	GREEN BELL	154	92	0.5	0.3	1.7	7	GREEN SCREEN	85	12	0.3	0.0	7.0
8	GREEN PLANTS	61	37	0.2	0.1	1.7	8	GREEN ZONE	118	21	0.4	0.1	5.6
9	GREEN GLASS	61	37	0.2	0.1	1.7	9	GREEN LANTERN	96	21	0.3	0.1	4.5
10	GREEN WATER	120	74	0.4	0.3	1.6	10	GREEN SPACES	97	23	0.3	0.1	4.2
11	GREEN BERETS	69	46	0.2	0.2	1.5	11	GREEN BANK	84	21	0.3	0.1	4.0
12	GREEN MONSTER	57	39	0.2	0.1	1.5	12	GREEN MOVEMENT	93	25	0.3	0.1	3.7

The **NOW Corpus** is virtually unique in its ability to look at very recent changes. As of late 2020, it contains about 11.5 billion words from 2010 to the current time (literally, yesterday). *Every day*, 6-10 million words of data are added to the corpus, or about 200-250 million words each month. Users can see the **frequency of words and**

phrases in six-month increments (and even 10-day increments, if desired). For example, the following figures show the spike in *fake news* in the second half of 2016 (2016-2, in the chart), and they can zero in even more to see that it spiked between November 1-10 and November 11-20, which is immediately after the US presidential elections on 8 November 2016.

SECTIO	N AL	L 2010	-1 2010-2	2011-1	2011-2	2012-1	2012-2	2013-1	2013-2	2014-1	2014-2	2015-1	2015-2	2016-1	2016-2	2017	-1 2017-2	2018-1	2018-2	2019-1	2019
FREQ	1074	189 15	9	28	15	18	40	35	29	48	41	42	53	124	4770	1443	30 11389	15019	14483	16149	9833
WORDS	M) 113	00 115	1 129.1	144.9	159.8	185.0	186.3	196.7	204.7	209.7	219.8	223.6	288.9	681.8	849.6	859.	4 887.2	731.8	837.3	999.2	988.
PER MI	L 9.5	51 0.1	3 0.07	0.19	0.09	0.10	0.21	0.18	0.14	0.23	0.19	0.19	0.18	0.18	5.61	16.7	9 12.84	20.52	17.30	16.16	9.95
SEE AL SUB- SECTION AT ONC	NS =																				
16-Jul- 01	16-Jul-	16-Jul-	16-Aug-	16-Aug	- 16-A	ug- 16	S-Sep-	16-Sep-	16-Sep	- 16-C	40		46.00						46.5	- 46	_
	11	21	01	11	21	_	01	11	21	0'		5-Oct-	16-Oct- 21	16-No 01	v- 16-N		16-Nov- 21	16-Dec- 01	16-De 11		Dec- 21
10	11	21	01 19	11 25							1					1				2	
					21)	01	11	21	01	1	11	21	01	92	1 25	21	01	11	8	21
10	11	20	19	25	21	7 4	13	11 42	14	0°	1 .5 4	11 22	21 38	01 107	92 43	1 25 .9	21 665	01 972	11 978	8 43	63

The corpus also shows **changes in phrases during the last ten years**, such as phrases with <u>data + NOUN</u> that are more frequent from 2018-2020 (right; e.g. data ethics, data scandal) than in 2010-2013 (left).



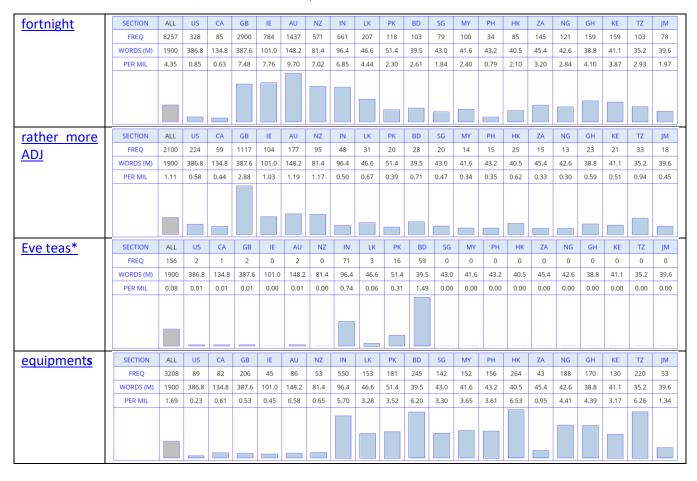
The **Coronavirus Corpus** is a subset of the NOW Corpus, and it contains articles from 2020 and beyond, which deal with COVID-19. As of late 2020 it is about 700 million words in size, and it is growing by about 60-70 million words each month. It shows the **frequency of words and phrases in ten-day increments** since January 2020, such as *flatten the curve*, which peaks in mid-March 2020, and has then "flattened out" since June 2020.



Dialectal variation (go to beginning)

The **GloWbE** Corpus contains about two billion words from 20 different English-speaking countries, and it allows researchers to look at changes between dialects in ways that are not possible with any other corpus. Since it was released in 2013, a large number of articles have been published that are based on this corpus.

At the most basic level, researchers can see the frequency of a word or phrase in all 20 countries, such as fortnight (notice its virtual absence in American and Canadian English, as well as Philippine English, which is based on American English), rather more ADJ (definitely the most frequent in GB: Great Britain), Eve teas* (which means "sexual harassment", and a word that is found almost exclusively in South Asia), and equipments (note the plural form), which occurs in most of the countries other than the six "Inner Circle" countries (US, Canada, Great Britain, Ireland, Australia, and New Zealand).



It is also possible to see the frequency of a number of words matching a particular string, in all 20 countries. For example, the following chart shows the most frequent *ism words.

HELP	CONTEXT	ALL -	US	CA	GB	IE	AU	NZ	IN	LK	PK	BD	SG	MY	PH	HK	ZA	NG	GH	KE	TZ	JM
1	TOURISM	66231	2862	3177	7376	3290	4237	3871	3564	3718	922	1706	2138	2451	2314	2950	2637	1094	2838	3746	6370	4970
2	CRITICISM	62753	14465	3646	15809	3165	4984	2298	3018	1841	2200	1148	811	1022	816	1125	1451	1316	1037	968	721	912
3	MECHANISM	44354	8851		8022	2293	3576	1793	3275	1737	1107	1178	886	920		1636	1065	760		1345	1067	754
4	TERRORISM	42215	8783	1912	6845	732	2102	882	2941	5427	5530	1570	317	472	318	417	397	1279	463	1024	544	260
5	JOURNALISM	41483	10282	2879	10441		3954	1090	1695	998	746	929	522	336	613	648	842	786	908	896	865	462
6	CAPITALISM	37344	9466	2269	10261	1944	2835	1551				874		220	368	875	850	517	394	372	819	624
7	RACISM	36556	11535	1896	8545	1860	2988	1052	797	1082	579	332	503	832	199	327	1185	586	676	508	368	706
8	BUDDHISM	21816	1830	310	1437	351	757	390	1791	9064	324	829	846	1205	314	1955	76	66	70	58	87	56
9	AUTISM	20350	7250	1514	5285	1590	<u>2211</u>	264	715	76	58	274	73	98	160	106	66	41	77	37	72	383
10	SOCIALISM	19851	6427	792	4292	1020	1732	734	746	292	284	536	192	114	225	534	413	174	202	156	690	296
11	OPTIMISM	15144	2950	1251	3767	767	990	533	678		375	324	347	244	328	303		364	379	483	242	257
12	NATIONALISM	14409	1523	880	3053	1022	851	270	1033	1474	887	773	143	186	287	310	368	347	277	213	230	282
13	COMMUNISM	14216	4466	630	3286		1249		504	190	321	377	204	227		330	395	161	118	132	208	150
14	BAPTISM	12386	2697		1315	967	918	814	193	179	83	795	130	89	696	253	285	224	572	166	302	202
15	FEMINISM	12235	4159	887	2932	557	1491	484	249	124	126	96	61	92	78	54	152	257	139	166	84	47

The **TV** Corpus and Movies corpora can also provide useful information on differences between dialects, since they contain 575 million words of data of extremely informal English from the six "Inner Circle" countries. For example, the following table shows words that are much more common in American or in British English. Of course these two corpora could also compare anything else between these six dialects, including word formation, syntax, or word meaning and usage (via collocates).

	American	British
ADJ	okay, crazy, damn, awesome, cute, dumb, federal, goddamn, gross, lame, adorable, lousy, crappy, sloppy, phony, downtown, cozy, busted, darn, cranky, highend, one-time, high-school, canned, cellular, big-time, African-American, goofy, off-limits, old-school, sassy, condescending, puffy, big-a-, sketchy, wordy, charmed, disoriented, kick-a, bitchy, narcissistic, crummy, self-centered, curt, trashy, whimsical, dorky, scrappy	daft, posh, dodgy, knackered, ruddy, barmy, sodding, poxy, dozy, soppy, mucky, disused, chuffed, tinned, whirly, manky, disorientated, pish, fiddly
NOUN	guy, mom, honey, dude, cop, agent, a, movie, buddy, apartment, truck, chef, buck, dollar, sweetie, mommy, attorney, mayor, butt, cookie, grandma, ah, candy, grade, parking, senator, couch, vacation, closet, homicide, garbage, jerk, baseball, grandpa, elevator, trash, math, thanksgiving, shooter, roommate, bud, assignment, prom, tech, mall, dessert, heck, bout, zombie, soda, motel, halloween, therapist, basketball, counselor, lawsuit, diaper, congressman, chili,	mum, bloke, a-se, quid, rubbish, b-ll-ck, solicitor, railway, vicar, telly, guv, grandad, petrol, ladyship, mammy, shilling, maths, lorry, ah, advert, motorway, tosser, tenner, pence, nutter, punter, gearbox, footballer, windscreen, pensioner, barman, pram, tuppence, prat, flatmate, lodger, roundabout, vicarage, workhouse, pillock, sixpence
VERB	guess, figure, kid, damn, date, quit, hire, freak, yell, bust, file, hook, testify, pee, coach, assign, schedule, graduate, violate, practice, dial, jerk, sniffle, participate, brag, party, merge, poop, hustle, reschedule	reckon, fancy, shag, sod, flog, w-nk, queue, burgle, snigger, snog, plod, splutter, clamber

A number of studies have also used GloWbE to examine **syntactic differences between the different dialects**. To provide two simple examples here, the "<u>like construction</u>" (and I'm like, no way can they do it) is the most frequent in American English, but it also occurs in other related "Inner Circle" countries, like Canada, Great Britain, Ireland, Australia, and New Zealand (although less in each successive country). The second chart looks at the construction <u>try and VERB</u> (I'm gonna try <u>and</u> talk to her, vs try <u>to</u> talk), which is stigmatized as being "incorrect" in American and Canadian English (due to certain prescriptive grammars in these two countries 50-100 years ago). But in the other countries (where the prescriptive rule was never as important), the construction is much more common.

<u>"like" cons</u>	structi	<u>on</u>							try and VERB									
SECTION	ALL	US	CA	GB	IE	AU	NZ	IN		SECTION	ALL	US	CA	GB	IE	AU	NZ	
FREQ	2620	897	264	599	95	163	63	51		FREQ	65002	10321	3678	20649	4245	7201	3653	
WORDS (M)	1900	386.8	134.8	387.6	101.0	148.2	81.4	96.4		WORDS (M)	1900	386.8	134.8	387.6	101.0	148.2	81.4	
PER MIL	1.38	2.32	1.96	1.55	0.94	1.10	0.77	0.53		PER MIL	34.21	26.68	27.29	53.27	42.02	48.59	44.88	

Due to the size of GloWbE (nearly two billion words) it is also possible to use collocates to look at **differences in meaning and usage between dialects**. For example, this chart shows the <u>collocates of scheme</u>, and shows that the word is much more negative in American English than in British English, as evidenced by the collocates (alleged, evil, fraudulent, nefarious).

SEC 1	(United States): 386,809,355	5 WORDS					SEC 2 (Great Britain): 387,615,074 WORDS									
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO			
1	BLOCKING	42	1	0.1	0.0	42.1	- 1	APPROVED	92	1	0.2	0.0	91.8			
2	URI	80	6	0.2	0.0	13.4	2	OCCUPATIONAL	88	1	0.2	0.0	87.8			
3	OFFENSIVE	61	6	0.2	0.0	10.2	3	MENTORING	53	1	0.1	0.0	52.9			
4	CONSTITUTIONAL	16	2	0.0	0.0	8.0	4	FLAT	36	1	0.1	0.0	35.9			
5	DEFENSIVE	89	13	0.2	0.0	6.9	5	ELIGIBLE	31	1	0.1	0.0	30.9			
6	SOCIALIST	20	3	0.1	0.0	6.7	6	OVERSEAS	31	1	0.1	0.0	30.9			
7	ALLEGED	26	5	0.1	0.0	5.2	7	DEFINED	127	5	0.3	0.0	25.3			
8	EVIL	48	10	0.1	0.0	4.8	8	GENEROUS	50	2	0.1	0.0	24.9			
9	LEGISLATIVE	15	4	0.0	0.0	3.8	9	LABOUR	25	1	0.1	0.0	24.9			
10	FRAUDULENT	62	18	0.2	0.0	3.5	10	TAX-AVOIDANCE	25	1	0.1	0.0	24.9			
11	NEFARIOUS	27	9	0.1	0.0	3.0	11	SCOTTISH	24	1	0.1	0.0	24.0			
12	PONZI	617	255	1.6	0.7	2.4	12	INNOVATIVE	70	3	0.2	0.0	23.3			

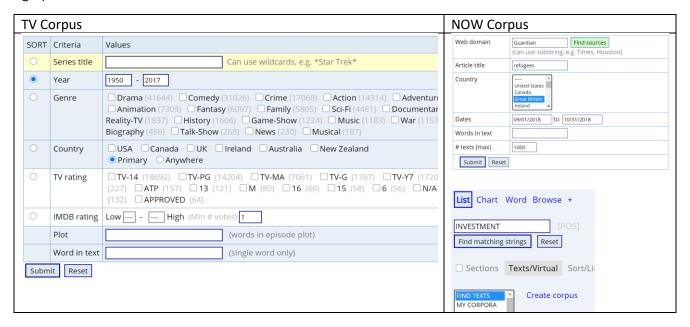
We can also use collocates to compare what is being said about different topics in different dialects, which may indicate interesting differences in culture and society. For example, the <u>collocates of wife</u> in the dialects of Asia and Africa (left) include words like *existing*, *temporary*, and *permanent*, which relate to cultural practices in these countries. Other collocates such as *chaste*, *obedient*, *good*, and *virtuous* also signal important cultural practices and norms in these countries. As we can see, a simple 2-3 second search can – with the right corpus – show interesting differences between the cultures of the different countries, which may be of interest to social scientists (in addition to linguists).

SEC '	l (India, Sri Lanka, Pakistan,): 64	4,753,594 WOR	DS				SEC 2 (United States, Canada, Grea): 1,239,817,686 WORDS									
	WORD/PHRASE	TOKENS 1	TOKENS 2	PM 1	PM 2	RATIO		WORD/PHRASE	TOKENS 2	TOKENS 1	PM 2	PM 1	RATIO			
1	EXISTING WIFE	25	1	0.0	0.0	48.1	1	PLURAL WIVES	35	1	0.0	0.0	18.2			
2	CHASTE WIFE	21	1	0.0	0.0	40.4	2	DESERTED WIFE	68	3	0.1	0.0	11.8			
3	PAKISTANI WIFE	23	3	0.0	0.0	14.7	3	GLAMOROUS WIFE	20	1	0.0	0.0	10.4			
4	SENIOR WIFE	21	3	0.0	0.0	13.5	4	MILITARY WIVES	172	11	0.1	0.0	8.1			
5	TEMPORARY WIFE	27	4	0.0	0.0	13.0	5	MILITARY WIFE	111	14	0.1	0.0	4.1			
6	OBEDIENT WIVES	23	6	0.0	0.0	7.4	6	DESERTED WIVES	22	3	0.0	0.0	3.8			
7	PERMANENT WIFE	45	0	0.1	0.0	7.0	7	PLURAL WIFE	20	3	0.0	0.0	3.5			
8	MUSLIM WIFE	94	26	0.1	0.0	7.0	8	DYING WIFE	31	6	0.0	0.0	2.7			
9	AFRICAN WIFE	20	7	0.0	0.0	5.5	9	ILL WIFE	29	6	0.0	0.0	2.5			
10	DIVORCED WIFE	41	15	0.1	0.0	5.3	10	DISABLED WIFE	23	5	0.0	0.0	2.4			
11	LEGAL WIFE	72	27	0.1	0.0	5.1	11	MERRY WIVES	50	11	0.0	0.0	2.4			
12	WEDDED WIFE	54	22	0.1	0.0	4.7	12	POLITICAL WIVES	29	0	0.0	0.0	2.3			
13	OTHER WIFE	109	48	0.2	0.0	4.4	13	THEN WIFE	89	20	0.1	0.0	2.3			
14	POTENTIAL WIFE	36	16	0.1	0.0	4.3	14	MISSING WIFE	26	6	0.0	0.0	2.3			
15	BEAUTIFUL WIVES	22	10	0.0	0.0	4.2	15	AMAZING WIFE	62	15	0.1	0.0	2.1			
16	MARRIED WIFE	40	20	0.1	0.0	3.8	16	HOT WIFE	44	11	0.0	0.0	2.1			
17	GOOD WIVES	51	26	0.1	0.0	3.8	17	AWESOME WIFE	23	6	0.0	0.0	2.0			
18	VIRTUOUS WIFE	25	13	0.0	0.0	3.7	18	IRISH WIFE	24	0	0.0	0.0	1.9			

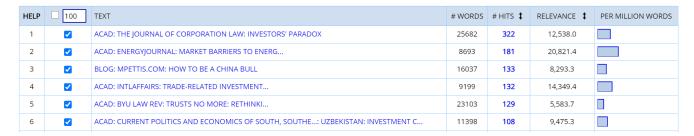
Virtual Corpora (go to beginning)

In the sections above, the corpora have been divided into sections that the researcher can use for their searches – such as genres, decades, or countries. But users can quickly and easily **create their own collections of texts in the corpora, and then search that "Virtual Corpus"** just as if it were its own corpus. For example, they could focus on texts dealing with any topic (e.g. biology, investments, nuclear energy, basketball, or Harry Potter), a specific author or source (e.g. the *New York Times*, or *Astronomy* magazine), a specific sub-genre (e.g. reality shows in the TV Corpus, or finance articles in COCA or the BNC), a particular date range, or any combination of these.

For example, the following is the page that researchers can use in the TV Corpus (left) and in the NOW Corpus (right) to create a Virtual Corpus, and similar pages are available in each of the 17 corpora from English-Corpora.org. They can also quickly and easily create a Virtual Corpus based just on words or phrases (lower, right).



The corpus then finds what it thinks are the best texts for the search, and users can select among these texts. They can also add and delete texts, or copy or move texts between other Virtual Corpora.



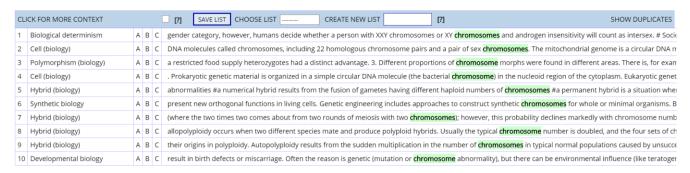
They can see all of their Virtual Corpora, and can organize them into user-defined category (e.g. science, finance, or sports).

HELP		‡	‡	LIST NAME ‡	# ARTICLES \$	# WORDS ‡	FIND KEYWORDS SPECIFIC FREQ
1			Sp	BASEBALL	100	413,279	NOUN VERB ADJ ADV N+N ADJ+N
2	î			BASKETBALL	100	257,867	NOUN VERB ADJ ADV N+N ADJ+N
3	î		Bi	BIOLOGY	100	142,355	NOUN VERB ADJ ADV N+N ADJ+N
4	ŵ		Sc	BRAIN	100	132,983	NOUN VERB ADJ ADV N+N ADJ+N
5	ŵ			BUDDHISM	100	228,673	NOUN VERB ADJ ADV N+N ADJ+N

Perhaps most importantly, they can see **keyword lists** from their Virtual Corpora, and can adjust how specific the words are to the Virtual Corpus. The following words are from the [biology] Virtual Corpus was created in the Wikipedia Corpus.



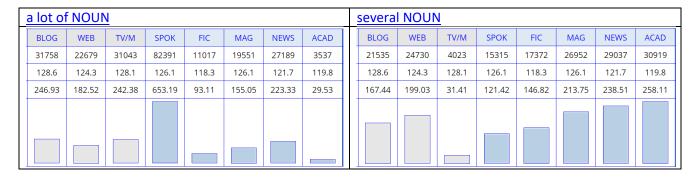
When users click on a keyword, they see the concordance lines from this particular Virtual Corpus:



And of course, they can do any other corpus search – word, phrase, substring, synonyms, collocates, etc – and then limit the search just to a particular Virtual Corpus. In this way, a Virtual Corpus is like a "corpus within a corpus", and it may be much more useful to researchers who are interested in a specific topic. And unlike other corpus sites, it takes just a few clicks and a few seconds to create Virtual Corpora at English-Corpora.org.

Tools for language learners and teachers (go to beginning)

Many of the searches shown above provide useful information for learners and teachers of English. Simple **frequency charts** can be useful to have students "calibrate" their usage for particular genres. For example, learners might not know intuitively that the phrase *a lot of* sounds very informal and that it is very uncommon in academic writing, whereas *several NOUN* sounds much better in formal writing:



As mentioned above, it is also very useful to see which of several "competing" words are the most common in

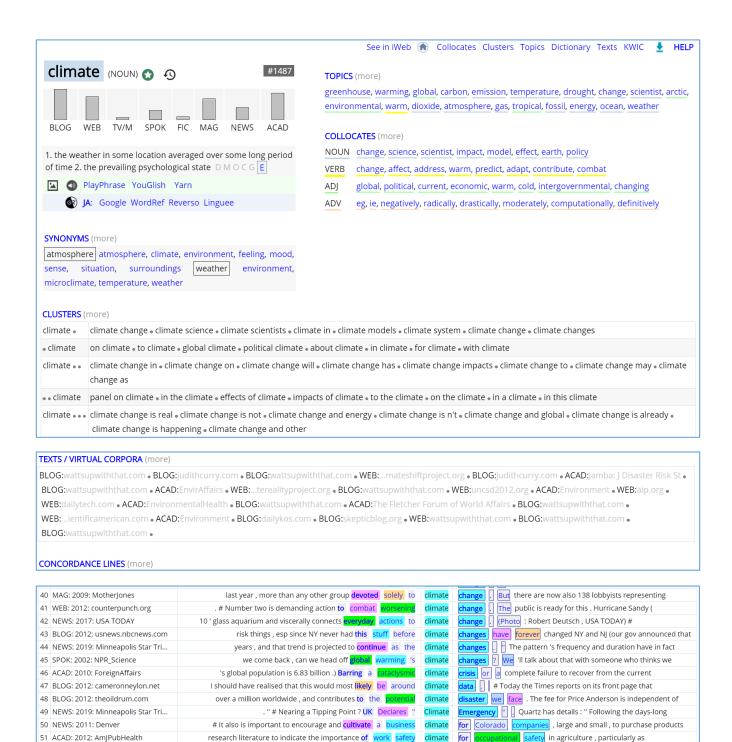
a given context, such as the collocates of <u>powerful</u> before <u>argument</u>. Again, this is the type of knowledge that either comes with a thousands of hours of exposure to the second language or (alternatively) just a few seconds of searching in a corpus. And data like this can be invaluable to those writing in a second language, including researchers from a wide range of academic fields.

HELP	CONTEXT	ALL	BLOG	WEB-GENL	TV/MOVIES	SPOKEN	FICTION	MAGAZINE	NEWSPAPER	ACADEMIC
1	STRONG ARGUMENT	331	83	57	3	54	8	38	25	63
2	CONVINCING ARGUMENT	218	55	44	12	16	13	21	23	34
3	POWERFUL ARGUMENT	148	19		2	28	4	17	17	41
4	PERSUASIVE ARGUMENT	137	21	23	12		5	15	14	31
5	EFFECTIVE ARGUMENT	39			2	12			2	
6	POTENT ARGUMENT	12	1	4		2		2	2	1
7	FORCEFUL ARGUMENT	13	3	4		1		1	1	3
8	VIGOROUS ARGUMENT	10		2	1			1		6
9	INFLUENTIAL ARGUMENT	7		1				1		5
	TOTAL	915	188	162	32	129	30	101	84	189

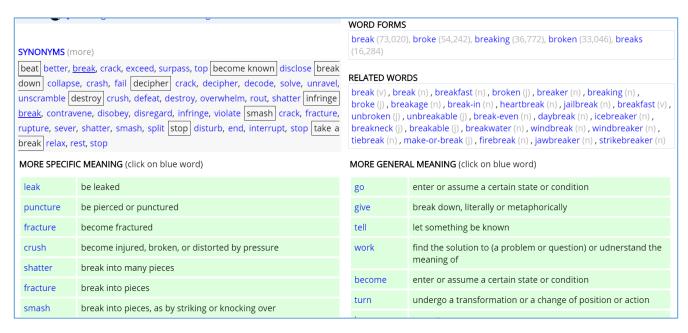
In addition to the many types of searches shown above, there are other features of the corpora that are designed specifically for language learners, and which are definitely not available from any other large corpora. For example, in COCA and iWeb, users can **browse through** a list of the **top 60,000 words** in the corpus (these are the only large, carefully corrected frequency lists of English). The small extracts below show samples of words at three different frequency bands: near 5,000 (i.e. the 5,000th most frequent word in the corpus), 25,000, and 45,000. For each word, there is a link to a "home page" for that word (see below), audio, video, images, and translations.

					_	_		
2	5197	11377	blogger	NOUN	•	⊳	_	€ ₹
3	5198	11374	utterly	ADV	•	⊳		•
4	5199	11372	trouble	VERB	•	D	A	G ₹
5	5200	11368	texture	NOUN	•	D	A	€ ₹
6	5201	11365	head	ADJ	•	D		©
9	25203	576	ergonomic	ADJ	•	D	_	•
10	25204	576	tailgate	VERB	•	D	_	©
11	25205	576	gasket	NOUN		D	🔼	€₹
12	25206	576	reopening	NOUN	4 0	(D)	🔼	€ ₹
13	25207	576	impolite	ADJ	a	D	<u> </u>	•
12	45213	113	monotonically	ADV	4	(b)	'	€₹
13	45214	113	arithmetical	ADJ	•	(b)		€ ₹
14	45215	113	apolipoprotein	NOUN	•	D	^	€ ₹
15	45216	113	muddied	ADJ	•	(D)	_	€ ₹
16	45217	113	benchmark	VERB	•	D	_	•

For each of the top 60,000 words (lemmas) in the corpus, there is a "home page", which provides an incredible wealth of information, including: frequency, word rank (e.g. #1-60,000), frequency by genre, definitions, links to additional definitions and etymologies online, images, videos, translations (to more than 100 languages), related topics, collocates, synonyms, clusters (2, 3, and 4 word strings), texts that use the word the most, and sample concordance lines.



All of the sections on the "home page" are just overviews, and users can click on almost any section for **even more information**. For example, the "dictionary" page for *break* as a verb (one of seven pages for this word that are available in COCA or iWeb) shows synonyms, frequency of word forms, related words, and more specific and more general words. Users can click on any word on the page to go to the "home page" for that word. In other words, all of the words are connected, which allows users to follow a "semantic trail" through related words.

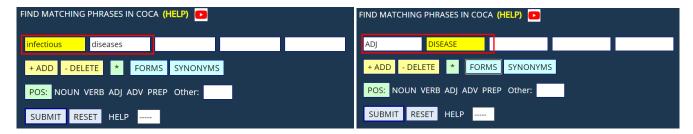


Finally, the "analyze text" functionality in COCA provides many features that are very useful to language learners and teachers. Users can enter entire texts (e.g. compositions that they have written, or articles from online newspapers or magazines). The corpus then highlights words in the text that are less frequent generally in English (and which are words that the learner might not know), and it shows the percentage of words in different frequency bands of English. It also shows the specific words in each of these frequency bands, ordered by frequency, which provide good information on the keywords in the text. So for example, in the following article from CNN (dealing with identifying carriers of COVID-19), some of the top keywords are infected, infection, antigen, symptoms, and virus.

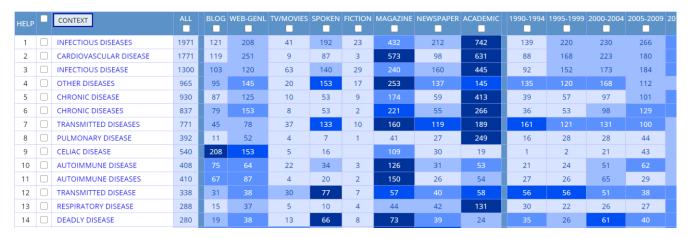


Users can then click on any word in the text, or any of the words in the frequency lists from the text, to see the full entry on that word, as was discussed above. This ability to easily **browse through unfamiliar words** and then to see detailed information on any of the words is completely unique to COCA.

Finally, users can click on any words in the text to form phrases, and then **quickly and easily find related phrases** in **COCA**. For example, the phrase *infectious diseases* occurs in this text. Users can click on these two words (below, left) and then click on POS (Part of Speech) to show that they want any adjective instead of *infectious*, and then FORMS to find any form of *diseases* (right).



After clicking on SUBMIT, they can see the matching phrases in COCA, ordered by frequency in the different genres.

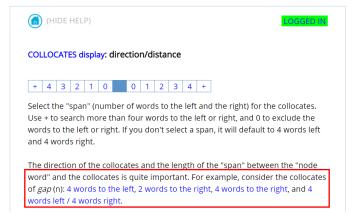


The ability to "click and see" many related phrases might be particularly useful for teaching writing, or for non-native researchers writing in English. They can **click on any of the phrases in their composition**, for example, and see the frequency across genres (e.g. is it a formal or informal phrase), and quickly and easily find related phrases that might be even better (such as with phrases related to **powerful argument**, shown above).

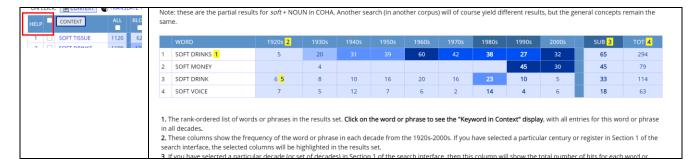
Other tools and features (go to beginning)

As is shown above, users can do a wide range of queries. Especially at the beginning, however, this can sometimes be overwhelming. Fortunately, every page has a wide range of "context sensitive" help files that guide users through the options (e.g. of [Collocates] below). Most of these context-sensitive help files also have sample searches that users can click on, and thus interact with the corpus even more.

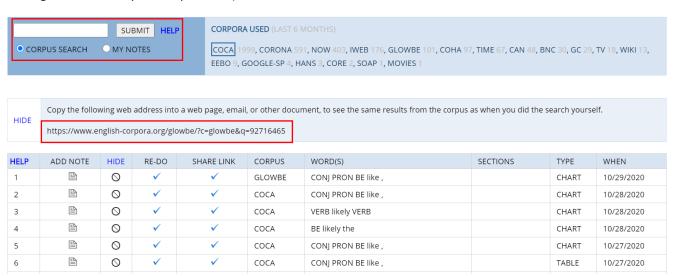




In addition, each of the "results" pages has a [HELP] link, which helps users to understand what the data means:



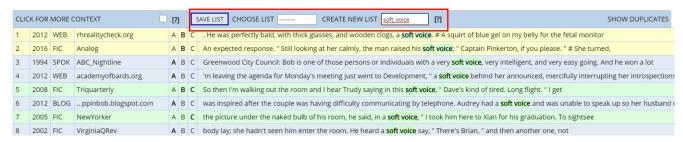
Users can see a "history" of their searches, and can even find past searches that contain specific words or phrases. They can then copy links to their searches and embed them in research papers or web pages, so that other people will see exactly what the user saw when s/he originally did the search (and thus help make the findings from the corpora "replicable").



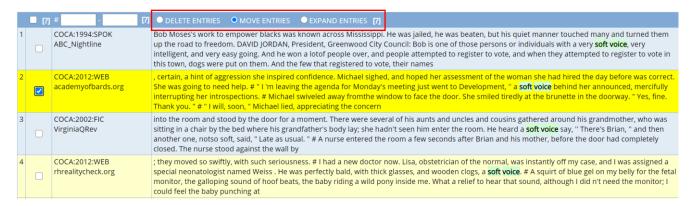
They can also "annotate" their searches by adding notes or comments, and then search through these annotations for all matching queries (e.g. all searches for a particular class lecture, or for a paper they are writing).



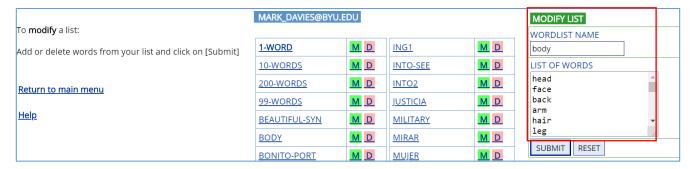
Users can also **save concordance lines** from a search, and categorize the lines into different groups (note the three different colors below):



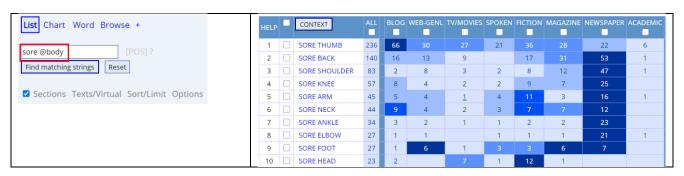
Later, they can expand, delete, and move these lines:



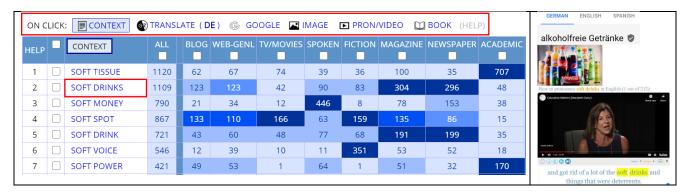
Users can create "**customized wordlists**" for any set of words that they want to use in a search, such as words relating to the body, or to emotions, or a certain class of verbs:



They can then use these words directly as part of any search, and thus search the corpus "semantically":



In the "results" page of any search, there are **links to a wide range of external resources**, such as translations (to more than 100 languages), Google searches for web, images, and books; and pronunciation and videos.



Finally, researchers can download for offline use a wide range of data that is based on the online corpora, such as full text data (www.corpusdata.org), word frequency data (www.wordfrequency.info), collocates (www.collocates.info), and n-grams (www.ngrams.info).

Summary

The corpora from English-Corpora.org are the **most widely used corpora in the world**, and they are used by 130,000+ distinct researchers, teachers, and learners each month. The corpora are used as the basis for thousands of research **articles** each year, as well as being an integral part of **classrooms** throughout the world.

The corpora allow researchers to look at variation in English (e.g. genre-based, historical, and dialectal variation) in ways that are not even remotely possible with any other collection of corpora. They allow researchers in fields like history, cultural studies, and legal studies to look at societal and cultural issues through the lens of huge collections of texts. They provide non-native researchers (in a wide range of academic fields) with tools to analyze their English in ways that standard dictionaries and thesauruses never could. And they offer a wealth of possibilities in terms of language learning and teaching that are completely and totally unique to these corpora.