UDC 81-139:811.111
DOI https://doi.org/10.32782/2617-3921.2024.25.196-208

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Corpus-based methods of *power* notion analysis in English

Корпусні методи аналізу поняття *power* в англійській мові

Summary*. The aim of the article is to use corpus linguistics as a methodology to empirically analyze the semantic aspects of "power" within various linguistic contexts. This approach provides a data-driven perspective, which allows for a more objective examination of language usage.*

In recent years, there has been a growing interest in research centered around data-driven approaches to language study. Corpus linguistics is now regarded as an integral part of linguistic inquiry rather than a distinct discipline in itself, focusing on the analysis of collections of texts to facilitate various linguistic investigations. It is noteworthy that corpus linguists base their studies on authentic language usage rather than fabricated examples, enabling empirical analyses within specific contexts. This reliance on naturally occurring data provides a valuable methodological tool for linguistic description.

Using the functionality of the Corpus of Contemporary American English, the study investigates the lexical semantics of "power" through extensive word frequency analysis, collocation examination, synonym exploration, and distributional semantics. The examination of the instances in the COCA dataset demonstrates that the lexeme "power" is spread across various genres. The academic genre stands out as the most prominent. Analyzing the frequency distribution data provided by COCA for all instances, it is evident that the frequency of the lexeme increases notably during the period between 1990 and 1994, followed by a decline in subsequent periods. Power is associated with a wide range of lexical items, which manifest the ways in which it is expressed and conceptualized. Distributional semantic analysis has revealed the clusters around the noun and verb forms of "power", indicating related concepts and contextual features. The clusters around the noun "power" include units denoting authority, energy, influence, and control, while the ones round the verb "power" contain words related to action, capability, and enablement. Collocation analysis has identified frequent word pairings and co-occurrences that shed light on the semantic associations of "power" in different contexts. Analysis of derivatives stemming from the lexical root "power" reveals a spectrum of related vocabulary, ranging from common forms to specialized lexemes, which reflect the scope of the notion and its linguistic manifestations. Thus, through a comprehensive

examination of corpus-based research areas, the article proves the efficacy of corpora as invaluable resources for linguistic investigation.

Key words: *corpus linguistics, corpus-based methods, COCA corpus, lexical semantics, linguistic contexts.*

Анотація. *Метою статті є опис використання методів корпусної лінгвістики в аналізі поняття "power" в сучасній англійській мові. Цей підхід ґрунтується на використанні статистичних даних, що дозволяє отримати об'єктивніше уявлення про використання мови.*

Упродовж останніх років, серед науковців зростає інтерес до досліджень, зосереджених на підходах до вивчення мови, що ґрунтуються на даних реального вжитку. Корпусна лінгвістика наразі розглядається як невід'ємна частина лінгвістичних досліджень, а не як окрема дисципліна, що зосереджується на аналізі сукупностей текстів з метою спрощення різних лінгвістичних розвідок. Варто зазначити, що у своїх корпусних дослідженнях, лінгвісти опираються на автентичне використання мови, а не на штучно створені приклади, що уможливлює проведення емпіричного аналізу в конкретних контекстах. Таке залучення природних даних є цінним методологічним інструментом для лінгвістичного опису.

Використовуючи функціональні можливості Корпусу сучасної американської англійської мови, дослідження вивчає лексичну семантику поняття "power" за допомогою детального аналізу частотності слів, словосполучень, дослідження синонімів та дистрибутивної семантики. Дослідження прикладів у корпусі демонструє, що лексема "power" розповсюджена в різних мовленнєвих жанрах, при цьому академічний виділяється як найвагоміший. Аналіз даних розподілу частотності, отримані з корпусу, доводить, що частотність лексеми помітно зростає в період між 1990 і 1994 роками, після чого спостерігається її спад у подальші періоди. Power асоціюється з широким спектром лексичних одиниць, які демонструють способи вираження та осмислення цього поняття. Аналіз дистрибутивної семантики виявив кластери навколо іменника та дієслова "power", що вказують на пов'язані з ними поняття та їхні контекстуальні особливості. Кластери навколо іменника "power" включають одиниці, що асоціюються з авторитетом, енергією, впливом і контролем, тоді як кластери навколо дієслова "power" – слова, пов'язані з дією, здатністю і можливістю. Аналіз словосполучень виявив частотні колокації та їхнє вживання, що розкриває семантичні асоціації поняття power у різних контекстах. Вивчення похідних, утворених від лексичного кореня "power", виявляє спектр спорідненої лексики – від загальновживаних до спеціалізованих лексем, які відображають обсяг поняття та його мовні прояви. Таким чином, комплексний аналіз напрямів корпусних досліджень доводить ефективність корпусів як цінного ресурсу для лінгвістичних розвідок.

Ключові слова: *корпусна лінгвістика, методи корпусної лінгвістики, корпус сучасної американської англійської мови, лексична семантика, мовні контексти.*

Introduction. The notion of *power* is a multifaceted concept that permeates various branches of knowledge and is characterized by unique

perspectives and interpretations. In philosophy, *power* is explored in relation to ethics and political theory. Philosophers focus on the notion of power dynamics, emphasizing its pervasive nature in human interactions. It is generally believed that *power* is a fundamental driving force underlying all human actions and aspirations. Sociologists investigate how *power* operates at various levels of society including interpersonal, organizational, and systemic ones. *Power* can manifest itself through social hierarchies, economic disparities, and cultural norms, shaping patterns of inequality, oppression, and resistance. Political science focuses on power relations within the context of governance and politics. Scholars study how *power* is acquired, exercised, and contested within political systems, including through institutions, ideologies, and social movements. Concepts like authority, sovereignty, and democracy are central to understanding political power. In economics, *power* is analyzed in terms of market mechanisms, resource allocation, and decision-making. Economic power can be concentrated among individuals, corporations, or governments, influencing wealth distribution, competition, and economic policies. Linguistics examines *power* through discourse analysis and language use. Language is considered to be a tool for exercising power, as seen in rhetoric, persuasion, and manipulation. Linguistic features such as vocabulary, syntax, and tone can convey authority, dominance, or subordination, reflecting underlying power dynamics in communication.

Due to the increasing recognition of the significance of analyzing authentic language usage, corpus linguistics has recently exerted a considerable influence on theories of language description. Researchers delineate three distinct schools within the rapidly expanding field of corpus linguistics: corpus-based studies within computational linguistics; corpus-based research focusing on tasks such as corpus tagging, parsing, and information retrieval; and the application of corpus analysis to explore various issues with diverse applications in contemporary linguistics, including language acquisition and learning, contrastive and translation studies, historical linguistics, as well as the development of lexicographical works and grammar reference materials [5].

The diverse corpus-based research areas discussed above affirm the effectiveness of corpora as a highly valuable methodological tool, offering benefits to a multitude of linguistic disciplines. Meyer emphasizes the manifold applications of corpus linguistics methodology as a novel avenue for exploring language, which significantly contributes to the advancement of linguistic studies: Corpora serve a multitude of purposes, spanning from theoretical to practical domains, thereby serving as invaluable resources for descriptive, theoretical, and applied discourse on language [9]. Owing to the fact that corpus linguistics operates as a

methodology, it is accessible to all linguists, including generativists, enabling them to potentially incorporate corpora into their language studies. Corpora are instrumental in various endeavors such as dictionary creation, investigation of language evolution and variability, comprehension of the language acquisition process, and enhancement of foreign and second language instruction [9, p. 28].

Data-oriented language research has demonstrated the substantial advantages of analyzing real language in use, specifically through naturally-occurring data. Consequently, there has been a proliferation of corpus studies over the past decades focusing on language varieties, linguistic typology, language acquisition, and language testing. Römer highlights the importance of these studies in language teaching and learning, as well as in interdisciplinary research collaborations [13]. Schnell and Schiborr emphasize the potential of corpus-based typology in understanding the distribution of conventionalized structures and their diachronic development across languages [14]. Cushing points to the benefits of corpus linguistics in language assessment, particularly in conducting comparative analyses of language use across contexts, genres, and language users [3]. Olohan dwells on the importance of contextualizing translation by combining corpus-based investigations with other kinds of methodologies and analyses [12].

The term "corpus" originates from Latin, meaning "body", with its broader implication referring to a collection of discourses (the volume of which is not fixed). However, in modern linguistic contexts, a corpus is far from being a mere compilation or accumulation of textual material. Instead, corpus-based analysis exhibits several essential characteristics: 1) empirical analysis: it entails examining the actual usage patterns found in natural texts; 2) utilization of large and principled collections: it relies on a substantial and methodically assembled collection of natural texts, commonly known as a "corpus", as the foundation for analysis; 3) integration of computer technology: it heavily utilizes computers for analysis, employing both automatic and interactive techniques; 4) application of quantitative and qualitative analytical techniques: it employs a combination of quantitative and qualitative analytical methods; 5) convenience and reliability: the popularity of corpus-based research within and beyond the linguistic domain is largely attributed to the convenience and reliability it offers for related studies.

Methods and material. COCA, an acronym for the Corpus of Contemporary American English, represents the most extensive compilation of English text, comprising over a million words sourced from a diverse array of eight genres. These encompass blogs, websites, television or movie subtitles, spoken language transcripts, fictional works, popular magazines, newspapers, and

academic writings. The COCA corpus is linked with numerous other English corpora and maintains a dynamic nature, continually expanding its word count across a diverse spectrum of genres. Equipped with a plethora of functions, COCA serves as a valuable tool for language analysis, offering capabilities such as frequency analysis, exact word searches, phrase queries, wildcard searches, lemma identification, part-of-speech tagging, and keyword in context (KWIC) functionality. Its search options extend beyond simple word queries, encompassing sentence-level searches, lemma-based inquiries, and more complex structural analyses. As the most up-to-date and regularly refreshed source within its category, COCA guarantees access to the most current linguistic information, with its latest revision reflecting data up to 2024 (for the NOW corpus). Focused primarily on American English, COCA draws its texts from a variety of American media sources. Providing users with the information on word and phrase frequency across different registers, COCA facilitates investigations into synonym usage and reveals variations in terminology prevalence within specific genres. Furthermore, users can employ COCA to identify collocates and common string associations, aiding in comprehensive examinations of word meanings. Given these attributes and functionalities, COCA emerged as the preferred instrument for the study at hand.

Results and discussion. The information on the notion of *power* can be effectively acquired through the usage of corpus linguistics, particularly by employing methods such as word-frequency analysis, concordance analysis, word frequency list, collocation analysis, distributional semantics, keyword analysis, etc.

Word frequency analysis can provide insights into the distribution of word lists across various registers. For example, research by Biber, Johnson, Leech, Conrad, and Finegan revealed that the most frequently occurring lexical verbs, such as “say”, “get”, “go”, “know”, and “think”, are predominantly found in conversation rather than in other linguistic registers [1]. Regarding genre distribution, the analysis of the 319187 instances within the COCA dataset reveals that the lexeme “power” is dispersed across a diverse array of genres (refer to Figure 1). The most prevalent genre is academic, with 58588 occurrences.

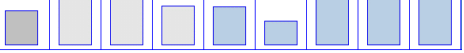
SECTION	ALL	BLOG	WEB	TV/M	SPOK	FIC	MAG	NEWS	ACAD
FREQ	319179	49272	52079	29904	29161	16743	47228	36204	58588
WORDS (M)	993	128.6	124.3	128.1	126.1	118.3	126.1	121.7	119.8
PER MIL	321.42	383.10	419.13	233.49	231.19	141.50	374.55	297.38	489.09
SEE ALL SUB-SECTIONS AT ONCE									

Fig. 1. Distribution of *power* across genres (Source: Davies, 2024)

Examining the frequency distribution data provided by COCA for all instances, it becomes apparent that the frequency of the lexeme rises during the period from 1990 to 1994, followed by a decrease in subsequent periods (Figure 2).

1990-94	1995-99	2000-04	2005-09	2010-14	2015-19
43542	38130	38457	34123	32160	31416
121.1	125.2	124.6	123.1	123.3	122.8
359.53	304.53	308.58	277.31	260.72	255.93

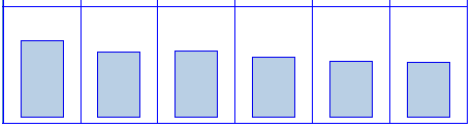


Fig. 2. Frequency of *power* for the period 1990–2019 (Source: Davies, 2024)

Collocation refers to the tendency of words to appear together more frequently than expected [7]. Sometimes, these pairings are logical, such as "power" co-occurring with "plant" rather than "factory". This type of collocation is termed as "motivated". However, Halliday provided an example of "strong tea" and "powerful car", where the adjectives "strong" and "powerful" have similar meanings but tend to co-occur with different nouns [6]. This kind of collocation is described as "unmotivated". Statistical measurements, such as those provided by corpora, offer a more reliable means of investigation. Two common measurements for collocation are the MI-score and T-score (see Figure 3).

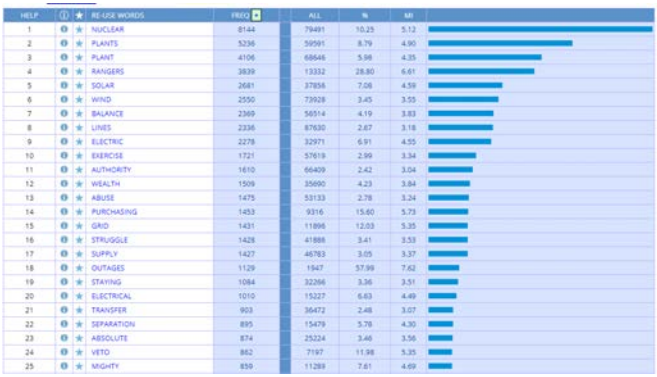


Fig. 3. MI-score and T-score analysis of collocations with *power* (Source: Davies, 2024)

The MI-score quantifies the strength of collocation by comparing the probability of observing two words together with the probabilities of observing them independently [8, p. 764]. It helps identify technical terms, idiosyncrasies, and fixed phrases. On the other hand, the measures the certainty of collocation, taking into account the frequency of occurrence. It reflects the amount of evidence present in a corpus, typically highlighting significant collocates that occur frequently. When examining the MI-score and T-score for the lexeme "power", it is evident that the highest MI-score is attributed to the collocation "power outages", while the highest T-score corresponds to "nuclear power". As illustrated in the figure, all of these possess an MI-score surpassing 3, indicating a strong association with the lexeme "power".

Moreover, the COCA Corpus facilitates the examination of collocations involving the term "power" across various parts of speech. As a noun, "power" commonly collocates with nouns such as "plant", "ranger", "source", "wind", "balance", "god", "outage", and "struggle"; verbs including "exercise", "gain", "wield", "grant", "restore", "generate", "possess", and "abuse"; adjectives like "nuclear", "political", "solar", "electric", "electrical", "absolute", "mighty", and "regional"; and adverbs such as "forwards", "expressly", "constitutionally", and "democratically" (Figure 4).

Fig. 4. Collocations with the noun "power" (Source: Davies, 2024)

When functioning as a verb, "power" exhibits diverse structural patterns, forming collocations with nouns such as "company", "entertainment", "engine", "battery", "energy", "car", "fuel", and "generator"; verbs like "detect", "blogging", "plug", "fuel", "delegate", "disconnect", "hurtle", and "propel"; adjectives including "proprietary", "electric", "solar", "nuclear", "renewable", "electrical", "internal", and "capable"; and adverbs such as "electrically", "entirely", "high", "solely", "adequately", "proudly", "automatically", and "wirelessly" (Figure 5).

Fig. 5. Collocations with the verb "power" (Source: Davies, 2024)

Furthermore, the COCA corpus allows for the analysis of complete texts featuring the term "power" and the identification of other keywords used in its proximity (see Figure 6).

226	**ACAD**: SocialPsych Power and Gender Influences on Responsibility...	power, partner, responsibility, disagreement, attribution, situation, status, relationship, hypothesis, participant, gender, argument, perceived, resource, extent, source, wish, resolve, choice, resolution,
211	**BLOG**: theoildrum.com The Oil Drum | The Liquid Fluoride Thorium Pa...	reactor, energy, nuclear, technology, thorium, fuel, wind, coal, salt, grid, electricity, efficiency, renewables, storage, waste, billion, core, neutron, cheap, cycle,
194	**ACAD**: Texas Law Review Liberty in Loyalty: A Republican Theory of Fi...	fiduciary, law, fiduciary, duty, power, note, supra, beneficiary, theory, rule, interest, relationship, legal, republican, loyalty, remedy, trust, eg, principal, classical,
193	**WEB**: ...arnegieendowment.org Why Fukushima Was Preventable - Carnegie Endo...	nuclear, plant, power, tsunami, safety, reactor, accident, regulator, generator, japanese, event, station, emergency, unit, earthquake, hazard, external, heat, expert, industry,
191	**WEB**: supreme.justia.com 17 US 316 - Justia US Supreme Court Center	power, government, constitution, mean, law, tax, sovereignty, bank, congress, execution, necessary, said, shall, carry, act, legislature, union, taxation, supreme, object,
189	**BLOG**: millburn.patch.com 514 Customers Still Affected by Power Outages...	power, town, pole, crew, mayor, county, wire, restore, tree, township, truck, customer, usage, transformer, fix, storm, utility, outage, infrastructure, restoration,

Fig. 6. Analysis of keywords in proximity to *power*
(Source: Davies, 2024)

The keywords associated with each website, listed under the "words" column, are determined by their actual to expected values. For instance,

the academic text “Texas Law Review” contains such keywords as “fiduciary”, “law”, “duty”, “note”, “supra”, “beneficiary”, “theory”, “rule”, “interest”, “relationship”, “legal”, “republican”, “loyalty”, “remedy”, “trust”, etc., which are used alongside the lexeme “power”.

Topics reveal words that co-occur throughout a given text, providing a valuable means to identify related words and concepts. While collocates primarily focus on words in close proximity to a specified term, topics offer a broader perspective, often encompassing a wider array of related words and concepts. For instance, comparing the topics for *power* with their collocates reveals a richer understanding of related terms (Figure 7).

	Same text	Word	PoS	Topics	Collocates
1	456	electricity	n	Topics	Collocates
2	452	energy	n	Topics	Collocates
3	361	generator	n	Topics	Collocates
4	324	utility	n	Topics	Collocates
5	314	plant	n	Topics	Collocates
6	254	electric	j	Topics	Collocates
7	236	solar	j	Topics	Collocates
8	226	grid	n	Topics	Collocates
9	217	wind	n	Topics	Collocates
10	208	fuel	n	Topics	Collocates

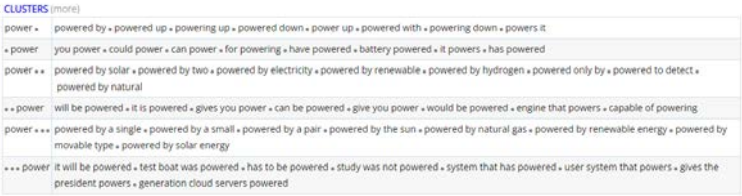
Fig. 7. Topics of the lexeme “power” (Source: Davies, 2024)

Distributional semantics allows exploring the meaning of *power* based on its distributional patterns within a corpus. Words that frequently co-occur with *power* in similar contexts provide clues about its semantic associations and different aspects of meaning. The semantics of the noun “power”, for instance, is revealed in several clusters as presented in Figure 8.

CLUSTERS (more)	
power *	power in * power to * power plants * power plant * power rangers * power over * power for * power from
* power	in power * to power * nuclear power * political power * for power * without power * with power * solar power
power * *	power to make * power to do * power of attorney * power to change * power and authority * power and influence * power and control * power to regulate
* * power	have the power * has the power * balance of power * in the power * with the power * to the power * by the power * had the power
power * * *	power of the state * power to the people * power in the world * power in the hands * power of the holy * power of the people * power to do so * power vested in me
* * * power	you have the power * everything in my power * n't have the power * we have the power * in positions of power * they have the power * everything in their power * not have the power

Fig. 8. Clusters with the noun “power” (Source: Davies, 2024)

As a verb, the lexeme “power” is represented in various clusters revealing its semantic character (see Figure 9).



CLUSTERS (more)

power »	powered by » powered up » powering up » powered down » power up » powered with » powering down » powers it
» power	you power » could power » can power » for powering » have powered » battery powered » it powers » has powered
power » »	powered by solar » powered by two » powered by electricity » powered by renewable » powered by hydrogen » powered only by » powered to detect » powered by natural
» » power	will be powered » it is powered » gives you power » can be powered » give you power » would be powered » engine that powers » capable of powering
power » » »	powered by a single » powered by a small » powered by a pair » powered by the sun » powered by natural gas » powered by renewable energy » powered by movable type » powered by solar energy
» » » power	it will be powered » test boat was powered » has to be powered » study was not powered » system that has powered » user system that powers » gives the president powers » generation cloud servers powered

Fig. 9. Clusters with the verb "power" (Source: Davies, 2024)

Regarding formality, we have analyzed the formality level of each line in the concordance data using the Key Word in Context (KWIC) format, which is widely used for such analysis, as depicted in Figure 10. In the figure below, the left column lists the different genres from which the data for each line were taken. It is important to note that the central node is highlighted within the line, surrounded by color-coded words indicating their parts of speech; for instance, verbs are marked in pink, nouns in bright blue, and adjectives in green. The utilization of color-coded KWIC in concordance analysis facilitates the examination of grammatical patterns by researchers [11].

CONCORDANCE LINES (more)

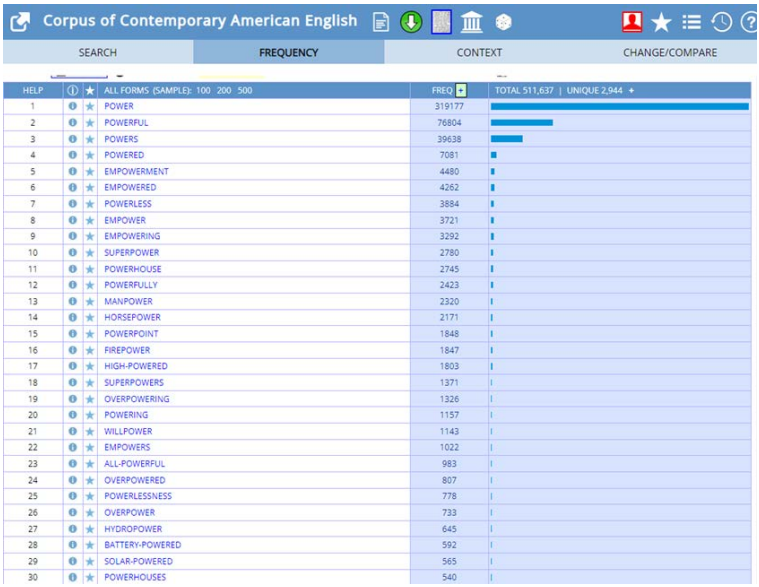
1	ACAD: 2016: Latin Am Research Re...	necessary to have a larger group of people to	have	bargaining	power	and	claims	with the government " (Pl , March 29 ,
2	MAG: 2002: Futurist	sorts of unmanned platforms and instrument	packages	to supply	power	and	communications	[] The tethered systems are connected to
3	WEB: 2012: ...s.washingtonpost....	is in the form of votes so they can	stay	in power	and	create	more	handouts (see definition above) which in the
4	SPOK: 1991: CNN_Crossfire	that . I think here 's a man who	so	understands power	and	force	and	fear , terror , and he will use everything
5	ACAD: 2016: BYU Law Rev	the federal Violence Against Women Act as	exceeding	commerce power	and	noting	that	an expansive reading of commerce power would
6	FIC: 1995: BkFallDenver	? Okay , Dave Smith wants power . And	Menken	has power	and	probably	does	n't want to lose it . " Was Smith
7	ACAD: 1991: IntlAffairs	as well as cultural consequences , since	questions	of political power	are	necessarily	involved	. In this sense , nationalism is the
8	ACAD: 1990: IntlAffairs	desire for power . He often considers man 's	drive	for power	as	a	datum	more basic than the chance conditions under which
9	SPOK: 2001: CNN_KingWknd	page proof to the printed magazine . It	takes	on greater power	as	it	goes	along . And the same thing happens with photographs
10	MOV: 2004: The Dog Days of Summ...	up . What do you do ? I	work	for the power	authority	now	[]	You know , we 're gon na flood this
11	ACAD: 2011: ArtBulletin	Taillen to save many people from persecution ,	serving	as a power	broker	and	Lady	Bountiful for countless petitioners. 16 Her
12	NEWS: 1995: WashPost	with their counterparts at	District-based	Potomac Electric Power	Co.	earlier	this	year , although neither company confirmed
13	BLOG: 2012: ...llenge.wordpress....	be done . # Appliances and electronics are	measured	in their power	consumption	[ ]		# Analogy and examples : # Kilowatt-hours (
14	SPOK: 2018: NPR_ATC	his office , his spare laptop , a	drawer	crammed with power	cords	for	appliances	that became obsolete in the 1990s , etc .
15	MOV: 2015: Life on the Line	Okay , so I 'm here with Duncan from the	Elite	Power Corporation	[]	Duncan	, I have a few questions for you ,
16	NEWS: 2017: Arizona Daily Star	as uninhabitable months before they moved in . #	With	the power	cut	off	[]	Rachael Jackson uses her phone light to find a
17	MAG: 1993: PopScience	been plagued in recent years by claims of	injuries	caused by power	equipment	[]	such	as carpal-tunnel syndrome , possibly caused by
18	ACAD: 2016: Kennedy Institute of...	and deduction is that only the latter has	strong	justificatory power	for	the	respective	conclusion . Also only the deductive model
19	BLOG: 2012: iag.me	: I used to lead teams for designing	control	systems for power	generation	and	transmission	, water and sewerage networks and
20	MAG: 1993: PopScience	. In the meantime , smooth , clean ,	and	efficient power	has	become	the	new standard for the industry . #

Fig. 10. The KWIC concordance li ne of *power* (Source: Davies, 2024)

As can be seen from Figure 6, words from the right and left contexts are color-coded differently, indicating their part-of-speech affiliation. For example, the adjective is marked in green, the noun in blue, and the verb in pink. The color-coded concordance format is convenient for visual perception of information and clearly illustrates the peculiarities of the unit's compatibility.

The analysis of derivatives stemming from the lexical root "power" within the COCA corpus reveals a diverse spectrum of linguistic

manifestations. These derivatives span a wide range of lexical categories and thematic domains, reflecting the multifaceted nature of the concept of power (see Figure 11). The lexeme "powerful" emerges as a prominent derivative with a frequency of 76,804 occurrences, suggesting its frequent usage in contemporary discourse.



HELP	ALL FORMS (SAMPLE): 100 200 500	FREQ	TOTAL 511,637 | UNIQUE 2,944
1	POWER	319177	
2	POWERFUL	76804	
3	POWERS	39638	
4	POWERED	7081	
5	EMPOWERMENT	4480	
6	EMPOWERED	4262	
7	POWERLESS	3884	
8	EMPOWER	3721	
9	EMPOWERING	3292	
10	SUPERPOWER	2780	
11	POWERHOUSE	2745	
12	POWERFULLY	2423	
13	MANPOWER	2320	
14	HORSEPOWER	2171	
15	POWERPOINT	1848	
16	FIREPOWER	1847	
17	HIGH-POWERED	1803	
18	SUPERPOWERS	1371	
19	OVERPOWERING	1326	
20	POWERING	1157	
21	WILLPOWER	1143	
22	EMPOWERS	1022	
23	ALL-POWERFUL	983	
24	OVERPOWERED	807	
25	POWERLESSNESS	778	
26	OVERPOWER	733	
27	HYDROPOWER	645	
28	BATTERY-POWERED	592	
29	SOLAR-POWERED	565	
30	POWERHOUSES	540	

Fig. 11. Derivatives stemming from the lexical root "power" (Source: Davies, 2024)

From common forms such as "powerful" and "powered" to more specialized terms like "empowerment" and "superpower", the data highlights the pervasive presence of power-related vocabulary in contemporary discourse. Additionally, the inclusion of technological terms like "battery-powered" and "solar-powered" manifests the intersection of power with advancements in energy technology. The variety and frequency of these derivatives allows studying the complex ways in which power is conceptualized and expressed across different linguistic contexts.

Words do not exist independently; instead, their meanings are shaped by the various lexical relationships they share. One such relationship is synonymy, which Carter describes as a mutual or symmetrical sense connection where multiple linguistic forms convey identical meanings [2]. However, Moon contends that from a corpus perspective, it becomes

evident that no two words can be viewed as perfect synonyms [10]. Corpus analysis reveals significant disparities in structural patterns with synonyms across different registers (formal versus informal) and communication modes (speech versus writing).

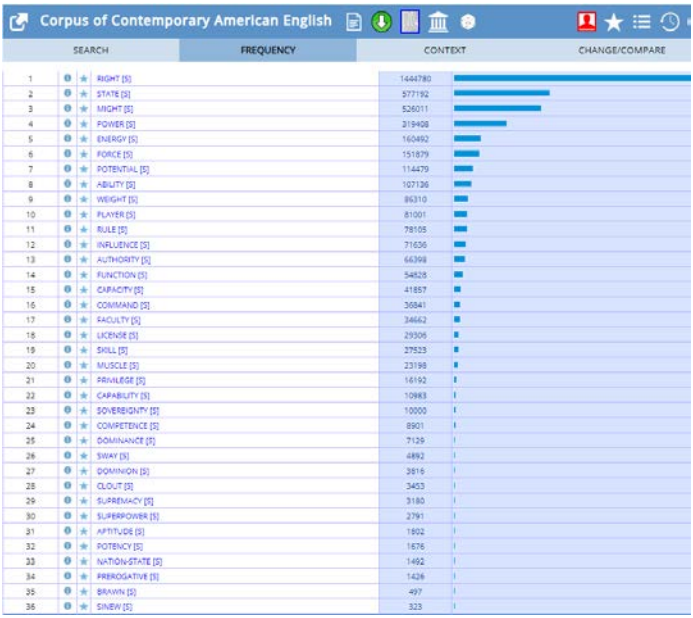


Fig. 12. Frequency of synonyms to the lexeme "power" (Source: Davies, 2024)

On the interface's left-hand side, a window exhibits a list of synonyms arranged by their frequency of appearance. The synonyms offered vary based on the particular meaning of "power" being contemplated. As seen from Figure 12, the most frequent synonyms to the noun "power" include "right", "state", "might", "energy", "force", "potential", "ability", "weight", etc.

Conclusions. The notion of *power* proves to be a multifaceted one, permeating various disciplines with distinct perspectives and interpretations. The field of corpus linguistics, now integral to linguistic inquiry, offers a data-driven methodology for exploring language usage authentically. It has transformed linguistic research by facilitating empirical analyses within specific contexts, influencing theories of language description, and serving as a valuable resource for various linguistic disciplines.

As the preferred instrument for this study, the Corpus of Contemporary American English provided valuable data through its comprehensive functionalities, including word frequency analysis, collocation analysis, distributional semantics, etc. The corpus-based methods allowed us to gain a comprehensive understanding of the diverse lexical manifestations of the lexeme "power" and its usage in different linguistic contexts.

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