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Semantic preference and prosody of the ‘aftermath of N’ construction: A corpus-based investigation

**Preferencje semantyczne i prozodia konstrukcji ‘aftermath of N’:
Analiza oparta na korpusie językowym**

Abstract

This article examines the ‘aftermath of N’ construction using usage-based construction grammar along with concepts such as *semantic preference* and *prosody*. Based on data from the Corpus of Contemporary American English (COCA) and employing a quantitative corpus-based approach, the author identifies the discourse prosody of this construction and its semantic preference for specific categories of nouns. The study also establishes the structural, semantic, pragmatic, distributional, and discourse-functional properties of the construction while identifying the nouns most closely associated with it. The results indicate that the construction in question primarily exhibits a negative semantic prosody and a marked semantic preference for nouns denoting violent, catastrophic, or emotionally charged events. Thus, it functions as a discursive tool for reflecting on the consequences of impactful events. However, the corpus evidence also reveals that when the construction occurs with neutral or positive nouns (e.g., *visit*, *meeting*, or *success*), particularly in contexts where a logical order or sequence of events is more significant than an evaluative stance, its usual negative semantic prosody is weakened or neutralized. The phrase no longer evokes the negative connotations associated with disasters or crises. Rather, it fulfils the function of a temporal and causal marker, denoting simply ‘after/ following’.

Keywords: construction, semantic preference, prosody, COCA, corpus-based analysis

Abstrakt

Przyjmując ramy teoretyczne gramatyki konstrukcji opartej na uzusie oraz koncepcję preferencji semantycznej i prozodii, autor analizuje konstrukcję *aftermath of N*, aby ustalić jej właściwości strukturalne, semantyczne i dystrybucyjne oraz zidentyfikować jej prozodię dyskursywną i preferencję semantyczną wobec określonych kategorii rzeczowników. W tym celu wykorzystuje dane z Korpusu Amerykańskiej Odmiiany Języka Angielskiego (COCA) oraz stosuje ilościową metodologię korpusową. Autor

stwierdza, że konstrukcja ma tendencję do częstego współwystępowania z określoną grupą negatywnych, neutralnych lub pozytywnych rzeczowników, jest umotywowana przez metaforę oraz pełni określone funkcje w dyskursie. Wyniki analizy jakościowej pokazują, że omawiana konstrukcja wykazuje przede wszystkim negatywną prozodię semantyczną i wyraźną preferencję semantyczną dla rzeczowników oznaczających wydarzenia związane z przemocą, katastrofami lub silnymi emocjami. Konstrukcja ta funkcjonuje zatem jako narzędzie dyskursywne służące do refleksji nad konsekwencjami wydarzeń o dużym znaczeniu społecznym i historycznym. Analiza danych korpusowych pokazuje ponadto, że w połączeniu z rzeczownikami neutralnymi lub pozytywnymi (np. *wizytą, spotkaniem, sukcesem*), szczególnie w kontekstach narracyjnych, gdzie istotniejsza jest sekwencja wydarzeń niż ocena, zwyczajowa negatywna prozodia semantyczna tej konstrukcji ulega osłabieniu lub neutralizacji. Wyrażenie to nie wywołuje już swoich prototypowych konotacji związanych z katastrofami lub kryzysami. Pełni raczej funkcję łącznika czasowego i przyczynowego, oznaczającego po prostu „po/następnie”.

Słowa kluczowe: konstrukcja, preferencja semantyczna, prozodia, COCA, analiza korpusowa

1. Introduction

Over the past thirty years, the concepts of *semantic preference* and *semantic prosody* have attracted considerable scholarly interest and have emerged as central topics in the field of corpus linguistics (Stubbs 2001; Partington 2004; Whitsitt 2005; O'Halloran 2007; Liu 2020). Despite their prominence in linguistic research, these two terms have not always been employed with precision. In fact, there has been frequent overlap and occasional conflation in the way they are used. At times, semantic preference and semantic prosody have been treated as interchangeable, while at other times they have been applied to describe distinct yet closely related linguistic phenomena.

The term *semantic prosody* has been used to denote the following three core dimensions of lexical meaning and collocational behavior: (1) the tendency of a lexical item to co-occur with either positively or negatively evaluative expressions (Partington 2004; Whitsitt 2005); (2) the evaluative connotation – positive or negative – that arises from such recurring collocational patterns (Stubbs 1995; Bublitz 1995; Hunston 2002: 142; Partington 1998: 75, 2004: 150, 151); and (3) broader attitudinal or connotative meanings of lexical items, irrespective of polarity, that emerge through repeated contextual usage (Stubbs 2001: 202; Sinclair 2004a: 144–145; see O'Halloran's study 2007 on the dependence of prosody upon registers and genres; Bednarek 2008: 132 on its dependence upon literal or figurative meaning)¹.

¹ A detailed overview of works on semantic prosody is provided by Stewart (2010).

Likewise, *semantic preference* has been subject to multiple interpretations. It has been applied to describe three distinct aspects of the phenomenon: (1) patterns of positive or negative collocation (Partington 2004; Sinclair 1990; Stubbs 1995); (2) the affective or evaluative meanings that result from these patterns (Stubbs 1995; Bublitz 1995; Hunston 2002; Partington 1998, 2004); and (3) the tendency of a lexical item to co-occur with semantically related words, typically belonging to the same lexical or conceptual set (Sinclair 2004a: 142; Stubbs 2001: 65)². This variability in usage has led to a lack of consensus regarding the precise definitions and boundaries of these terms.

Sinclair (2004a, 2004b) and Bednarek (2008) have attempted to make distinctions between the two terms. They use the term *positive or negative semantic preference* to refer to the tendency of lexical items to co-occur with either positively or negatively valenced words or semantic sets. In contrast, they reserve the term *positive or negative semantic prosody* to describe the complex attitudinal and/or functional meaning of lexical items: specifically, the evaluative connotation, whether positive or negative, that a lexical item either possesses through its literal or figurative meaning or acquires through repeated contextual use.

This paper adopts the distinction between semantic preference and semantic prosody as proposed by Sinclair (2004a, 2004b) and Bednarek (2008). Accordingly, the term *semantic preference* is reserved for the co-occurrence of lexical items with positively or negatively valenced collocates or with more or less specific semantic subsets. In contrast, the term *semantic prosody* is used to refer to connotations of all kinds. Semantic prosody thus includes not only positive or negative connotations but also more complex attitudinal meanings, influencing both individual lexical items and larger units of meaning, such as phrases. That is, it encompasses both 'traditional' connotation (typically associated with single words) and 'prosodic' connotation – connotation that is "distributed prosodically across a textual sequence" (Stubbs 2001: 202).

In this study, I argue that the construction *in the aftermath of N* exhibits both a negative semantic preference and a negative semantic prosody. However, this prosody is not solely context-dependent; rather, it arises from the metaphorical extension of the literal sense of the word *aftermath*. In addition to identifying the semantic preference and semantic prosody of the construction in question, this study seeks to attain two further objectives: first, to investigate the structural, semantic, pragmatic, distributional, and

² Some research (see Bednarek 2008, for an overview) has shown that semantic preference also interacts with, or depends on, speakers, genres, syntax, meaning, and context.

discourse-functional properties of the construction; and second, to identify the nouns that are strongly attracted to the pattern under investigation. More specifically, based on data from the Corpus of Contemporary American English (COCA), the study aims to show that the construction has a distinctive syntactic structure and meaning, fulfills a range of discourse functions, displays varying distribution across different registers in COCA, and regularly co-occurs with specific categories of nouns belonging to particular semantic fields.

The rest of the article is organized as follows. Section 2 outlines the theoretical framework and corpus-based methodology, including the data sources, their characteristics, and the tools and procedures used for data retrieval and evaluation. Section 3 first examines the structural, semantic, distributional, and discourse-functional properties of the construction under investigation, and then presents and interprets the results of the quantitative analysis of nouns occurring in the construction. Section 4 offers concluding remarks.

2. Theory and methodology

In this work, in addition to the concepts of semantic preference and semantic prosody, construction grammar is applied in a usage-based model to identify the structural and semantic properties of the construction under study. Models of grammar that are based on usage (e.g., Barlow and Kemmer 2000; Bybee and Beckner 2010; Perek 2023) rest on the assumption that grammar is constituted of constructions, conventional pairings of form and meaning/function, that range along a continuum of complexity and schematicity. These constructions include everything from simple morphemes and lexical items to fixed expressions, idioms, and highly abstract syntactic patterns (e.g., ditransitive constructions), each governed by associated semantic, pragmatic, and discourse-functional constraints. In usage-based theories, any linguistic item can be stored and internally represented as a construction, as long as it occurs with sufficient token frequency to be entrenched in the interlocutor's mental grammar (see Schmid 2016).

In this approach, the phrase *in the aftermath of-N* (e.g., *in the aftermath of war*) is identified as a construction. It has a relatively consistent structural pattern, consisting of the preposition *in*, the definite article *the*, and the noun *aftermath*, along with a conventionalized meaning or discursive function. By and large, this expression is used idiomatically and metaphorically to signal the effects, repercussions, or lingering effects of some prior event,

especially when the consequences are important, spectacular, or newsworthy. The word *aftermath* in its modern usage originated from agricultural practices. It can be traced back to the Old English word *æftermæþ*, where *æfter* means ‘after’ and *mæþ* pertains to ‘a mowing’ or ‘cutting’ (see <https://www.etymonline.com/>). Originally, the term was applied to the second growth of grass that follows the initial harvest: more precisely, the regrowth that appears in the same field after the initial cut. Significantly, *math* is still used in some parts of the United Kingdom to refer to the process of cutting grass or hay and the resultant crop. By the 16th century, the phrase had extended its meaning to include a more widely accepted figurative sense: the time that elapses following a serious and usually disastrous event (<https://www.merriam-webster.com/>). It was used to symbolize the long-lasting effects of events such as wars, natural disasters, or other serious disturbances. Consequently, the word developed a decidedly pejorative connotation commonly associated with devastation, loss, or chaos.

In addition, this study adopts a quantitative, corpus-based methodology. Specifically, it employs the attraction–reliance measure proposed by Schmid (2000) to assess the strength of association between individual nouns and the *aftermath of-N* construction. This method is designed to identify not only which nouns are more strongly associated with this construction than others, but also which nouns display a stronger tendency to occur in the construction compared to their distribution across other contexts in the corpus. The attraction component quantifies the extent to which the construction attracts a specific noun, whereas the reliance component measures the degree to which that noun is dependent on the construction as its primary collocational environment in the corpus (in contrast to other patterns or contexts in the corpus). Although the analysis involves the statistical quantification of corpus data, the interpretation of the results is qualitative in nature. The identified nouns are categorized into semantic fields or sets, and their contextualized uses in the construction are examined in order to uncover patterns of meaning, function, and usage.

The primary source of data in this study is the well-balanced Corpus of Contemporary American English (COCA). This corpus covers the years between 1990 and 2019 and includes over one billion words of text. It is composed of eight genres: spoken (a wide variety of TV and radio programs), fiction (short stories and plays), popular magazines (different magazines covering a wide array of domains such as finance, health, news, sports, religion, fashion, and travel), newspapers (ten American newspapers, including *USA Today*, *San Francisco Chronicle*, *New York Times*, etc.),

academic texts (from roughly 100 peer-reviewed journals), TV and movie subtitles, blogs, and other web pages.

The procedure adopted for data retrieval and statistical evaluation consisted of several steps. First, the observed frequencies of nouns were extracted from the corpus. More specifically, the search engine's automatic collocate retrieval function was used to perform corpus searches and extract all occurrences of nouns in the construction in question. To this end, the pattern *aftermath of* was entered into the search engine, and a specific collocation window of six words to the right was set to extract noun collocates. This collocation window allowed for retrieving the majority of relevant collocates.

Then, all occurrences of nouns were manually inspected to identify authentic combinations: i.e., those that accurately reflect the grammatical patterns of usage indicated by the combination specified in the search query. All false hits (i.e., occurrences that did not correspond to the 'aftermath of N' construction) were discarded from further quantitative analysis. For instance, the example *The aftermath of 9/11 saw the largest deployment of SAR (search-and-rescue) dogs in U.S. history* (BLOG: <http://www.toptenz.net/top-10-rescue-dogs-from-911.php>), in which the noun *deployment* is not a collocate of *aftermath of*, was excluded from the study. The observed frequencies of occurrence (e.g., a: the frequency of the noun *war* in the 'aftermath of N' construction, and x: the total frequency of all nouns in the construction), as shown in Table 1 below, were calculated manually by inspecting concordance lines. In contrast, the total frequencies of nouns in COCA (e.g., e: the total frequency of the noun *war*) were computed automatically by the software program.

Table 1. Frequency data for a quantitative analysis

noun	a	x	e	attraction	reliance
war	540	5289	350684	10.21%	0.15%

Note: a = The frequency of the noun *war* in the 'aftermath of N' construction; x = The total frequency of all nouns in the construction; e = The total frequency of the noun *war* in COCA

Once the observed frequencies had been determined, the values (a, x, and e) presented in Table 1 were entered into an Excel worksheet to calculate Schmid's (2000) measures of attraction and reliance. The attraction score was obtained by dividing the raw frequency of a noun occurring in the 'aftermath of N' construction by the total frequency of all nouns found in this construction. In contrast, reliance was calculated by dividing the frequency of a noun in the construction by its overall frequency in the COCA corpus (cf. Schmid 2000: 54). The resulting figures were then converted into

percentages by multiplying the frequency of each noun in the construction by 100. These percentages served as indices of attraction and reliance: the higher the percentage, the greater the noun's attraction to, and reliance on, the 'aftermath of N' construction.

A preliminary examination of Table 1 shows that the noun *war* has an attraction score of 10.21% and a reliance score of 0.15%. This indicates that *war* appears in 10.21% of all noun occurrences in the 'aftermath of N' construction, suggesting a strong association with this specific grammatical pattern. Conversely, only 0.15% of all instances of *war* in the corpus occur within this construction, implying that the noun is predominantly used in other syntactic environments. In other words, while *war* is highly attracted to the 'aftermath of N' construction, it does not rely heavily on it for its overall usage. Finally, the quantitative data were ranked based on the attraction measure and subsequently evaluated through qualitative and interpretative analysis.

The following steps were followed to classify the words into semantic categories. I began by attempting to grasp the denotative meaning of each word. I checked standard dictionary definitions to see what the word actually means. For example, *hurricane* is 'a violent weather event', so I put it under NATURAL DISASTER. *Election* is 'the selection of a person for office by vote; therefore, it falls under POLITICAL EVENT. Then I examined the usual contexts where each word occurs, especially in media, historical writing, or legal/political discourse. This helped to identify the pragmatic function or domain of the word. For example, *summit* often occurs in geopolitical contexts; therefore, I placed it under POLITICAL EVENT. *Massacre* can be found in reports of conflict or crime, so it fits under WAR or CRIME/VIOLENCE. In the third step, I grouped words with related themes or subject matter. These included categories such as WARFARE AND MILITARY ACTIONS, NATURAL DISASTERS AND ENVIRONMENTAL EVENTS, LEGAL PROCEEDINGS AND COURT TERMS, CRISES, and FINANCIAL/ECONOMIC TERMINOLOGY. For example, words related to 'violent human conflict' were grouped under WAR/MILITARY CONFLICT. I then considered which words frequently co-occur in language. Words that tend to appear in similar lexical environments are likely part of the same semantic set. For example, *case*, *trial*, *verdict*, and *hearing* often occur together in LEGAL/JUDICIAL contexts. After that, I sorted the words into broader semantic fields such as HEALTH, POLITICS, VIOLENCE, ECONOMY, MEDIA, and LIFE EVENTS. These conceptual domains help organize how words relate to each other functionally and thematically. When dealing with polysemous words or those with overlapping meanings, I selected the most

salient interpretation for this context: typically one related to news, disaster, or conflict. In some cases, I acknowledged category overlap. For example, *outbreak* can belong to both HEALTH and DISASTER.

3. Results and discussion

This section summarizes the results of the quantitative and qualitative investigation.

3.1. Properties

A vast body of empirical data collected from COCA, along with the frequent co-occurrence of the noun *aftermath* with the prepositions *in* and *of* and the definite article *the*, suggests the presence of a partially lexically-filled construction: *in the aftermath of*. This idiomatic construction combines both form and function, consisting of several fixed lexical elements: namely, the prepositions *of* and *in* (with *in* being optionally omitted), the definite article *the*, and the noun *aftermath*. It also includes two variable slots: one for adjectives (inserted between *the* and *aftermath*) and one for nouns following *of*, which typically belong to specific semantic categories.

Examples (1)–(4) in Section 3.4 illustrate that the construction can appear in various syntactic positions. It may occur at the end of a sentence, as in (1), or at the beginning, followed by a comma, as in (3). An adjective can be inserted between the definite article *the* and the noun *aftermath*, as seen in (2)³. Occasionally, the preposition *in* is omitted, as in (4), where the construction appears as *the aftermath of*.

The construction *in the aftermath of* seems to be motivated by the conceptual metaphor TIME AND EVENTS AS CROPS. In this metaphor, the passage of time and the unfolding of events are understood as the growth and reaping of plants in an agricultural cycle. A major event, like a war or natural disaster, can be likened to the initial harvest or mowing, which disrupts the field or alters the status quo because this initial cutting of a crop leaves the land changed. The consequences that follow are seen as the second growth: the regrowth or residue that naturally emerges in the wake of that disturbance.

³ Corpus evidence indicates that *aftermath* can be modified by the following adjectives: *immediate, chaotic, emotional, violent, initial, devastating, political, heady, bloody, direct, terrible, turbulent, tragic, tumultuous*, and many others.

This metaphor is based on a set of systematic correspondences: a significant event (e.g., *war*, *disaster*) is like the first mowing or harvest; the consequences that emerge afterward are compared to regrowth (the aftermath, which is usually not as beneficial as the first crop); the time delay between the event and the consequences reflects the period required for regrowth; and dealing with consequences resembles managing the regrowth: i.e., tending to whatever grows back, often undesirably (e.g., weeds or an inferior second crop).

More abstractly, this metaphor suggests a cyclical view of time and events: just as mowing a field leads to a new growth phase, disruptive events give rise to new, often unintended consequences. These results may be unwelcome or hard to manage, thereby reinforcing the negative connotation that *aftermath* carries in modern usage.

In discourse, the phrase *in the aftermath of* is a marker that provides both a causal and temporal connection. It signals that a certain situation or action arises after, and usually as a result of, a preceding notable event. It is used to highlight an effect or outcome that occurs after that earlier event, usually one that is significant, disruptive, or of public interest.

Pragmatically speaking, the phrase performs three main functions. First, it explains the cause-and-effect and clarifies the relationship between a prior event and its later consequences. Second, it gives contextual understanding of the situation by setting a time reference point, thus placing the reader or hearer in the time that follows the main event. Third, it highlights the importance of the consequences of the event, usually inviting reflection on what happened afterward and why. When used in political speech, for example, a phrase like *in the aftermath of the election* suggests that what is to be said is a result of the electoral process and tends to focus attention on political, social, or emotional reactions.

3.2. Distribution across different registers

As for the distributional properties of the 'aftermath of N' construction, Table 2 presents the distribution of the most frequent nouns occurring in this construction. A cursory examination of the frequency data in Table 2 reveals that the construction under study predominates in academic contexts (e.g., *war* – 207, *crisis* – 37, *revolution* – 33) and news-related registers (e.g., *war* – 72, *attacks* – 49, *tragedy* – 22, *death* – 30). It tends to occur frequently in texts characterized by analytical, explanatory, or narrative reporting styles, such as magazines and newspapers. This is likely due to the

nature of the construction ‘aftermath of N’, which typically frames and reflects on significant events, thereby making it especially suitable for genres where retrospection, commentary, and analysis are common. However, it is relatively less frequent in spoken and fictional registers, such as TV/Movies, spoken conversation, and fiction. In fiction and speech, more colloquial or emotionally direct expressions are favored, whereas ‘the aftermath of N’ conveys a formal, abstract tone that is often associated with a detached or analytical style.

Table 2. Distribution of the construction with nouns in various registers of COCA

NOU ^N _a	ALL	BLOG	WEB	TV/M	SPOK	FIC	MAG	NEWS	ACAD
war	521	32	53	2	62	14	79	72	207
hurricane	378	102	88	2	80	4	26	52	24
attack	175	26	38	2	39	4	17	29	20
attacks	154	12	11	1	22	1	33	49	25
storm	126	40	31		11	12	6	16	10
election	121	29	32	1	17	2	12	17	11
crisis	112	14	22		11	2	12	14	37
death	92	3	7	1	13	12	18	30	8
shooting	85	3	4	3	25	1	14	34	1
disaster	81	20	12		6	4	10	15	14
earthquake	72	11	12	1	11	2	10	12	13
tragedy	68	8	8	1	11		12	22	6
revolution	64	5	9	2	3	1	6	5	33
incident	51	10	5		9	2	4	9	12
bombing	49		3		18	2	5	14	7
crash	44	5	4		8	2	6	14	5
events	43	10	7		7	1	2	8	8
collapse	41	6	5		2	2	7	6	13
battle	41	3	7	1	1	6	11	3	9
explosion	41	4	5	3	5	7	7	8	2
accident	39	3	9		4	6	6	9	2
massacre	37		8	2	5	2	6	5	9
invasion	35	6	2		6	1	4	3	13
assassination	35	4	2		6		8	8	7
elections	35	11	7		5		1	4	7

^a Note that the table presents the observed frequencies of nouns in their singular and plural forms separately.

3.3. Quantitative findings

A detailed examination of concordance lines revealed 5,289 occurrences of the 'aftermath of N' construction in COCA (denoted as 'x' in Table 1). Frequency analysis of the noun tokens within this construction shows that *aftermath* of collocates with 848 distinct noun types. Notably, 471 of these nouns – such as *abortion*, *abduction*, and *betrayal* – appear only once in the construction. This suggests that the bulk of nouns are relatively weakly associated with the pattern, indicating a broad but low-frequency distribution across semantic categories. However, due to space limitations, this section focuses only on the 150 lexemes most strongly associated with the construction. Table 3 below presents the results of the attraction and reliance measures for the 30 most strongly attracted nouns, while Table 4 in Section 3.4 lists the 150 lexemes, along with their observed frequencies in the construction (marked as 'a' in Table 1), which are included in the semantic analysis and classification.

Table 3. The results of attraction and reliance for the 30 most strongly attracted nouns

rank	noun	e	attraction	reliance
1	2	3	4	5
1.	war	350684	10.21%	0.15%
2.	hurricane	31125	7.43%	1.26%
3.	attack	128897	6.22%	0.26%
4.	election	156548	2.99%	0.10%
5.	storm	60425	2.55%	0.22%
6.	crisis	73702	2.21%	0.16%
7.	shooting	34970	2.00%	0.30%
8.	disaster	38827	1.99%	0.27%
9.	death	233438	1.87%	0.04%
10.	earthquake	16053	1.40%	0.46%
11.	tragedy	23619	1.38%	0.31%
12.	bombing	16988	1.36%	0.42%
13.	revolution	40044	1.34%	0.18%
14.	event	194759	1.21%	0.03%
15.	incident	45311	1.10%	0.13%
16.	explosion	21954	0.95%	0.23%
17.	accident	52788	0.91%	0.09%
18.	crash	25485	0.87%	0.18%

cont. Table 3

1	2	3	4	5
19.	battle	74476	0.85%	0.06%
20.	collapse	19925	0.79%	0.21%
21.	massacre	7250	0.76%	0.55%
22.	victory	58446	0.72%	0.07%
23.	killing	23084	0.70%	0.16%
24.	scandal	23525	0.70%	0.16%
25.	assassination	9424	0.68%	0.38%
26.	invasion	19112	0.68%	0.19%
27.	violence	83884	0.64%	0.04%
28.	riot	12177	0.62%	0.27%
29.	murder	73403	0.61%	0.04%
30.	defeat	14716	0.59%	0.21%

As shown in Table 2, the frequencies are arranged according to the measure of attraction. At the top of the list are relatively frequent nouns such as *war*, *hurricane*, and *attack*. This is largely due to the fact that their overall frequency in COCA significantly influences the likelihood of their appearance in the ‘aftermath of N’ construction. For instance, *war* (Attraction score: 10.21%) and *hurricane* (7.43%) show much higher attraction scores than less frequent nouns like *murder* (0.61%) or *defeat* (0.59%), primarily because they occur more often in the construction, as reflected in Table 2. By contrast, the arrangement based on reliance highlights nouns that, while less frequent overall in the corpus, demonstrate a high degree of reliance on the construction for their occurrences. For example, *earthquake* (Reliance score: 0.46%) and *massacre* (0.55%) score higher on reliance, as this measure takes into account the total frequency of each noun across the entire corpus and reflects the extent to which a noun ‘relies’ on the construction for its usage. In other words, although *war* occurs much more frequently in the construction than *earthquake*, the latter receives a much higher reliance score because its total frequency of occurrence in COCA is much lower (16,053 occurrences). Hence, the reliance of *earthquake* on the construction is greater (0.46%). This, however, also implies that *earthquake* is used in other constructions or contexts in 99.54% of its occurrences. Note that *hurricane* is the noun that relies on the construction to the greatest extent (Reliance score: 1.26%). In addition to *earthquake*, *bombing*, and *massacre* listed in Table 3, *tsunami* (0.44%) and *debacle* (0.47%), which are not included in Table 3, also strongly rely on this construction.

3.4. Semantic classification

The nouns under study can be grouped into several semantic categories, as shown in Table 4. These categories reveal distinct semantic preferences associated with the 'aftermath of N' construction and its negative semantic prosody. A close examination of these groupings suggests that the construction is predominantly used with nouns signifying violent, destructive, or disruptive events.

Table 4. A semantic classification of nouns and their frequencies^a

Semantic fields, nouns, and their frequencies in the construction (marked as 'a' in Table 1)	Semantic preference	Semantic prosody
1	2	3
WAR/MILITARY CONFLICT/POLITICAL VIOLENCE: war (540), attack (329), shooting (106), bombing (72), revolution (71), massacre (40), victory (38), killing (37), assassination (36), invasion (36), violence (34), defeat (31), conflict (25), coup (24), battle (45), operation (15), raid (14), fight (14), encounter (14), occupation (12), genocide (12), bomb (11), uprising (10), WWII (10), blast (9), carnage (9), combat (6), fighting (6), intervention (6), Tiananmen square (6), conquest (6), overthrow (6), confrontation (5), slavery (5), takeover (5), unification (5), apartheid (4)	war, political violence, armed conflict	strongly negative
NATURAL DISASTERS/WEATHER AND ENVIRONMENTAL EVENTS: hurricane (393), storm (135), disaster (105), earthquake (74), tsunami (23), flood (16), destruction (15), eruption (15), tornado (14), devastation (12), superstorm (12), quake (11), catastrophe (11), flooding (9), spill (6), Big Bang (7), outbreak (5), apocalypse (4)	environmental disasters, extreme weather	clearly negative
POLITICAL EVENTS/GOVERNANCE/SOCIAL CHANGE: election (158), scandal (37), decision (28), case (22), trial (21), vote (20), affair (19), campaign (11), Arab spring (11), hearing (10), ruling (9), announcement (9), reelection (9), protest (9), controversy (9), reform (8), resignation (8), comment (7), convention (7), party (6), movement (6), overthrow (6), deal (5), agreement (5), summit (5), meeting (5), session (5), unification (5), withdrawal (5), proposition (5), rejection (5), apartheid (4)	significant or destabilizing political developments	typically, negative or neutral
CRISES/ECONOMIC AND FINANCIAL EVENTS: crisis (117), collapse (42), loss (30), recession (26), debacle (16), bubble (14), depression (Great Depression) (11), impact (9), market (8), failure (8), sale (6), bust (5), breach (5), shock (5)	large-scale economic or institutional failures	strongly negative
ACCIDENTS/INCIDENTS/UNEXPECTED EVENTS: attack (329), shooting (106), explosion (50), accident (48), crash (46), incident (58), fire (28), collision (15), assault (19), strike (19), fall (19), arrest (8), attempt (9), impact (9), blast (9), spill (6), shock (5), outbreak (5)	sudden, harmful events	negative

cont. Table 4

1	2	3
CRIME/VIOLENCE/TRAGEDY: massacre (40), killing (37), violence (34), murder (32), assault (19), suicide (16), crime (17), genocide (12), rape (10), trauma (9), abuse (8), arrest (8), beating (6), slavery (5), ordeal (5), apocalypse (4)	acts of violence and personal tragedy	strongly negative
SOCIAL/ PERSONAL EVENTS/ LIFE CHANGES: death (99), loss (30), fall (19), affair (19), suicide (16), divorce (13), departure (13), act (11), breakup (10), day (10), era (10), years (10), season (10), trauma (9), injury (8), experience (7), flight (7), visit (6), illness (5), demise (5), ordeal (5), withdrawal (5), end (5)	emotionally impactful personal events	negative but reflective
LEGAL/JUDICIAL TERMS: case (22), trial (21), assault (19), crime (17), verdict (13), hearing (10), ruling (9), arrest (8), breach (5), deal (5)	high-profile legal decisions or proceedings	neutral to negative
MEDIA/COMMUNICATION/REPORTS: report (12), story (9), announcement (9), comment (7), release (5)	mediated representation of significant events	typically, neutral
EVENTS/ABSTRACT CONCEPTS/ TEMPORAL: event (64), incident (58), strike (19), operation (15), encounter (14), game (13), act (11), campaign (11), day (10), era (10), years (10), season (10), attempt (9), story (9), action (7), situation (7), experience (7), comment (7), episode (6), time (5), series (5)	abstract or general time-based references	variable – neutral or negative
HEALTH/EPIDEMIC/MEDICAL: death (99), suicide (16), trauma (9), injury (8), outbreak (5), illness (5), ordeal (5)	physical/mental suffering, epidemic consequences	negative
SUCCESS/ACHIEVEMENT: victory (38), success (8), conquest (6), unification (5), agreement (5), deal (5)	outcomes of significant achievements	ambivalent
FAILURE/COLLAPSE: collapse (42), defeat (31), loss (30), debacle (16), fall (19), failure (8), demise (5), shock (5)	end states, systemic breakdowns	highly negative
CELEBRATIONS/PUBLIC GATHERINGS: encounter (14), game (13), convention (7), visit (6), meeting (5), summit (5), session (5)	formal or symbolic public events	neutral to contextually negative

^a Note that the table presents the observed frequencies of nouns in the construction (not in the semantic fields), with singular and plural forms treated as a single lexeme.

The most prominent semantic field is WAR, MILITARY CONFLICT, and POLITICAL VIOLENCE, including nouns such as *war*, *attack*, *battle*, *revolution*, *bombing*, *genocide*, *massacre*, and *violence*. This semantic set points to a strong association of the construction with nouns denoting large-scale trauma, human suffering, geopolitical instability, and traumatic sociopolitical upheavals. Their frequent co-occurrence with *aftermath* underscores the

construction's strong negative semantic prosody, since it is predominantly used to describe the enduring consequences of violent or destabilizing events, as in (1) and (2).

- (1) I grew up in the Netherlands *in the aftermath of World War II*. (NEWS: Oregon-Live.com)
- (2) This was easier *in the immediate aftermath of the 9/11 attacks*, when world opinion supported a military response. (ACAD: Hemisphere)

The construction is also prevalent in the context of NATURAL DISASTERS, WEATHER, and ENVIRONMENTAL EVENTS, such as *hurricane, storm, earthquake, disaster, and flood*, as can be shown in (3) and (4). Here, the construction captures the material and emotional toll following sudden natural catastrophes, again reinforcing a negative evaluative stance.

- (3) *In the aftermath of the earthquake*, money has been pledged for the restoration effort from UNESCO. (NEWS: Christian Science Monitor)
- (4) Online, we look at a documentary about *the aftermath of Hurricane Katrina*. (SPOK: PBS NEWSHOUR)

Other significant semantic fields include POLITICAL EVENTS, CRISES, FINANCIAL FAILURES, ACCIDENTS, CRIME, and TRAGEDY. Across these categories, nouns such as *scandal, collapse, accident, murder, and trauma* highlight a recurring association of this construction with disruption, failure, or loss. Even when referring to institutional processes (e.g., *trial, verdict*) or public gatherings (e.g., *summit, meeting*), the construction tends to frame them retrospectively, often emphasizing tension, controversy, or negative consequence, as in (5) and (6).

- (5) The case originated *in the aftermath of the first murder trial of Neulander*, who was accused of hiring hitmen to kill his wife. (NEWS: Associated Press)
- (6) In fact, over the past decade deficits have risen in the years following a tax hike, most recently *in the aftermath of the 1987 budget summit*. (MAG: National Review)

Interestingly, positive or neutral nouns, such as *victory or agreement*, occur far less frequently and often appear in contexts that still imply uncertainty or conflict in their aftermath. Hence, even in such cases, they reveal an ambivalent or subtly negative prosody, as shown in (7) and (8):

- (7) A Cold War with sometime allies had suddenly quickened *in the aftermath of the military victory over Germany*. (ACAD: World Affairs)
- (8) White House authorization of the operation followed *in the aftermath of a UN agreement with General Aidid*, the USC militia leader [...] (ACAD: Africa Today)

Exceptions to this rule are the uses of the nouns *success, visit, or meeting*, as shown in (9) to (11). In such cases, the positive prosody of these nouns neutralises the usual negative connotations of *in the aftermath of*; thus, the

expression's negative prosody weakens or disappears entirely. For example, in (9), the phrase is used to indicate the (positive) consequences of the team's achievement. In (10), *in the aftermath of this visit* refers to the period following a neutral or possibly positive event (*visit*). The phrase does not carry its usual negative prosody: rather, it simply indicates temporal succession. The evaluative phrase (*great success*) reinforces a positive discourse prosody and neutralises the phrase's typical negativity. In (11), the prosodic clash is also evident: the phrase with a default negative prosody is associated with an explicitly positive situation (*a very nice-sounding meeting*) and is applied to the consequences of a favourable event. The result is a prosodic shift, where *in the aftermath of* adopts a more neutral, chronological meaning ('after/following').

- (9) But *in the aftermath of the U.S. team's success* at the Olympics, two women's professional basketball leagues were formed (NEWS: Washington Post)
- (10) If those four things could be accomplished *in the aftermath of this visit*, I think it will be considered a great success. (SPOK: Fox_Crier)
- (11) But the Republican House offer that *came in the aftermath of that very nice sounding meeting* with words of encouragement and moderation and flexibility on both side [...] (SPOK: THIS WEEK)

4. Concluding remarks

The results of this analysis indicate that the 'aftermath of N' pattern strongly prefers nouns with pejorative connotations, thus displaying a semantic prosody of negative consequence, impact, disruption, disaster, and often suffering. The phrase *in the aftermath of* tends to connote an element of reflection, assessment, or examination of the effects that follow a major event. This prosody is presumably derived from both the meaning of *aftermath*, which is motivated by the metaphor THE CONSEQUENCES OF AN EVENT ARE THE REGROWTH AFTER A HARVEST, and the conventional discourse contexts in which the construction is used, i.e., those involving reflection, analysis, or mourning in the wake of significant events.

As mentioned in Section 3.1, the metaphor motivating this construction highlights that the consequences of events result in disturbance in the same way that the second growth of grass emerges following the initial cut. In agriculture, *an aftermath* is described as the regrowth that takes place after harvesting. Figuratively, the phrase *in the aftermath of* is used to signal that events, especially significant, sad, and traumatic ones, lead to negative consequences that follow the initial events. These repercussions

often imply a sense of damage, change, disruption, or recovery; thus, they contribute to the negative semantic overtone of this expression.

Although *aftermath* mainly carries negative connotations, corpus evidence also shows that when it appears with neutral or positive nouns (e.g., *visit*, *meeting*, or *success*), especially in discourse where sequential structure is more important than an evaluative stance, its usual negative semantic prosody becomes weakened or neutralised. The expression no longer evokes its prototypical associations with disasters or crises. Instead, it functions primarily as a temporal and causal connector, meaning simply 'after/following'.

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