The English Lexicogrammar of Violence: lexical resources

Christian M. I. M. Matthiessen
School of Foreign Languages, Hunan University (Changsha, China)
ORCID: https://orcid.org/0000-0003-0247-5723
cmatthie@icloud.com

Christina DeCoursey
Nazarbayev University (Nur-Sultan, Cazaquistão)
ORCID: https://orcid.org/0000-0002-7930-8352
linguistcd@gmail.com

ABSTRACT

This paper is an exploratory description of the lexicogrammar of violence — of the resources provided by the lexicogrammar of English for construing our experience of violence as wordings alongside other domains of experience that are difficult to come to terms with such as pain and emotion. We give particular attention to the lexical resources within the *continuum* of lexicogrammar, but locate them within the grammatical "schemata" they operate in. Our exploratory account is informed by Systemic Functional Linguistics (SFL). It draws centrally on certain aspects of SFL, including the primary given to paradigmatic organization, the stratification of the content plane of language into semantics (meaning) and lexicogrammar (wording), the organization of the content plane into simultaneous metafunctions, the cline or *continuum* between the system of language, the overall meaning potential of language, and instances in the form of texts (operating in context), and the diversification of language into different registers (functional varieties) adapted to different types of context. We present an overview of the lexical resources of verbs and nouns and show how verbs can be classified in their different senses by reference to the grammatical system of transitivity (in particular, process type).

KEYWORDS: Systemic Functional Linguistics; lexicogrammar; violence.

A léxico-gramática da violência no inglês: recursos lexicais

RESUMO

Este artigo é uma descrição exploratória da léxico-gramática da violência — dos recursos fornecidos pela léxico-gramática do inglês para construir, por meio da língua, nossa experiência com a violência, ao lado de outros domínios experienciais tão difíceis de traduzir, como a dor e a emoção. Damos especial atenção aos recursos lexicais no *continuum* da léxico-gramática, mas localizando-os dentro dos "esquemas" gramaticais em que eles operam. Nossa descrição exploratória tem como suporte teórico a Linguística Sistêmico-Funcional (LSF). Toma como base, principalmente, determinados pressupostos da LSF, entre os quais o aspecto fundamental da organização paradigmática da língua, a estratificação do plano do conteúdo da linguagem em semântica (significado) e léxico-gramática (estrutura), a organização do plano de conteúdo em metafunções simultâneas, a noção de *continuum* no sistema da língua, o potencial de significado global da linguagem e instâncias na forma de textos (operando no contexto), e a diversificação da linguagem em diferentes registros (variedades funcionais) adaptados a diferentes tipos de contexto. Apresentamos uma visão geral dos recursos lexicais – verbos e substantivos – e mostramos como os verbos podem ser classificados em seus diferentes significados por referência ao sistema gramatical da Transitividade (em particular, os tipos de processo).

PALAVRAS-CHAVE: Linguística Sistêmico-Funcional; léxico-gramática; violência.

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1. Introduction

The lexicogrammar of violence of a given language can be characterized as the resource which that language provides speakers with to enable them to construe their experience of violence — prototypically in the material realm, involving the intentional use of force to impact beings or objects negatively, damaging or destroying them. We take a broad view of violence, as do Dwyer & Damousi (2020, p. 4) in their introduction to the first volume of the *Cambridge World History of Violence*:

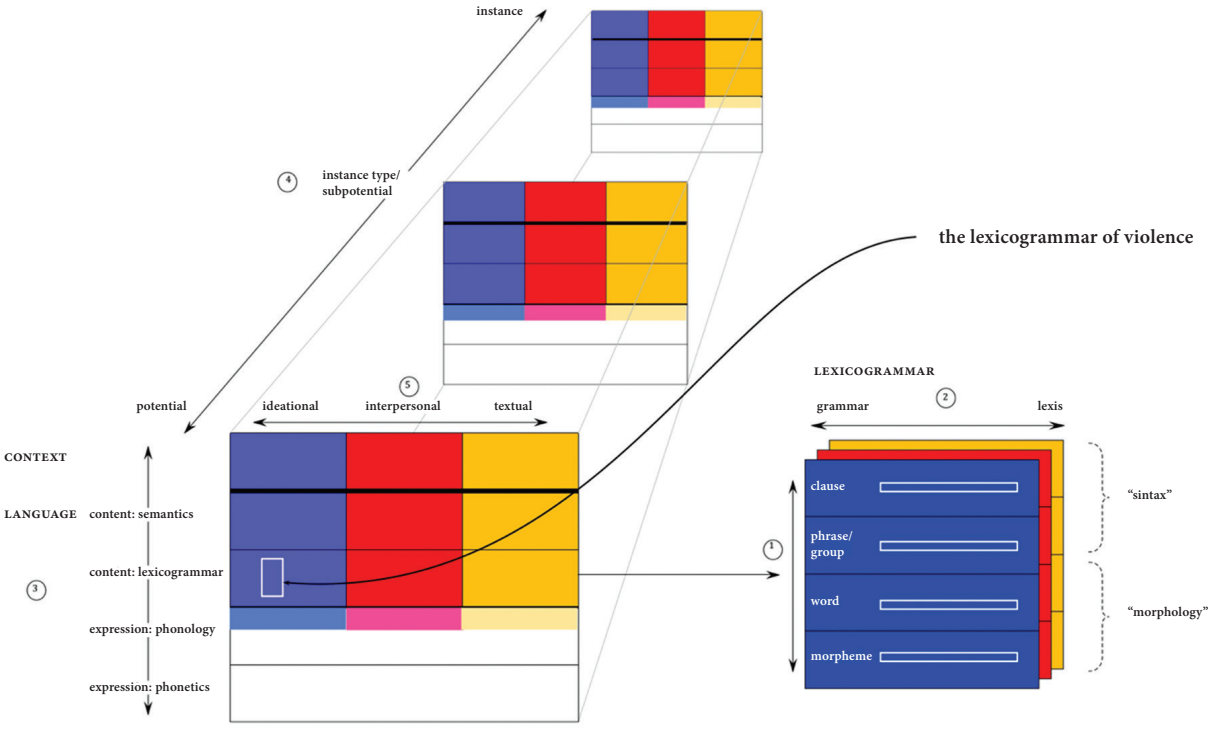
> How people conceive of 'violence' will necessarily vary from period to period and from region to region, but sensitivity to the ways in which contemporaries used the language of violence or, to put it another way, what they understood to be 'violence' is fundamental to our interpretations of it. The difficulty is always balancing what any given society condones as violence, and what we as outsiders condemn. We have, nevertheless, defined it in its broadest possible sense to include not only the use of physical force by a person, a group of people or an institution against one or more other living beings, but also a psychological, social and emotional dimension, to encompass any coercive or exploitative relationship.

Characterizing violence as a phenomenon of experience in such broad terms makes very good sense as starting point of an investigation of the lexicogrammar of violence of English or of any other language since the lexicogrammatical resources can be used to construe many manifestations and aspects of violence. (In our conclusion, we will note that it is helpful to illuminate violence as a phenomenon that is dispersed across the four orders of systems operating in different phenomenal realm in an ordered typology: physical < biological < social < semiotic, where physical and biological can be grouped together as material systems and social and semiotic as immaterial systems. The lexicogrammar of violence is, of course, part of the fourth order of semiotic systems.)

We can locate the lexicogrammar of violence within the overall *architecture* of language according to SFL (e.g. MATTHIESSEN, 2007; HALLIDAY & MATTHIESSEN, 2014). Since we are concerned here with the lexicogrammatical resources for construing violence, this means that we view a *slice* through the lexicogrammar — in terms of the cline of delicacy from grammar to lexis and in terms of the rank scale from clause to morpheme via group/phrase and word. The region between grammar and lexis is important; it is roughly the region that is in focus in approaches characterized as *construction grammars* or *lexical pattern grammars*. We will shed some light on it by showing how the very general systemic options in the transitivity system of the clause can be further elaborated by reference to Levin's (1993) verb classes (cf. MATTHIESSEN, 2014).

We are engaged in a large-scale project with a team of researchers investigating the lexicogrammar of violence in different languages. As noted above, in this paper, we focus on the lexical resources of English, reporting on our compilation of lexical resources based on dictionaries and thesauri, but also with reference to samples of text, locating the lexical resources within the lexicogrammar of English.

FIGURE 1. The location of the lexicogrammar of violence within the overall *architecture* of language in context according to SFL



Source: MATTHIESSEN, 2007.

The notion of the lexicogrammar of some domain of experience such as violence has been developed within systemic functional linguistics, a seminal contribution being Halliday's (1998) *On the grammar of pain*, in reference to English but also to other languages. This was followed up by Hori's (2006) study of pain expressions in Japanese and by Lascaratou's (2007) investigation of the language of pain in Modern Greek. Complementing the investigation of the lexicogrammars of pain, Matthiessen (2007b) explored the lexicogrammar of emotion and attitude in English. At the same time, the notion of the lexicogrammar of some domain is very resonant with other traditions in linguistics emphasizing the relationship between grammar and meaning (e.g., AMEKA, DENCH & EVANS, 2006), showing that patterns of wording are semantically "transparent" and that the grammars of different languages provide their speakers with the resources for construing their experiences of different phenomena as wordings — an insight that of course draws on Whorf's (1956) work. One area that has been studied in many languages is the domain of experience of motion through space, a seminal contribution being Talmy's (1985) study of the patterns of lexicalization of motion through space in different languages (cf. MATTHIESSEN, 2015b).

2. Introductory examples of texts of violence

Texts displaying the lexicogrammar of violence belong to many different registers (functional varieties). Let us start with a text designed to instigate violence, viz. General Patton's infamous speech to his troops, the Third Army, on the 5th of June, 1944, rallying the soldiers around the

task of destroying the enemy[1]. By examining the most frequent lexical items in the text (which is just over 2,000 words)[2], we can begin to get a flavour of the text:

Most *frequent words* in the corpus:

men (26); man (22); hell (14); like (11); want (11); going (10); real (10); time (10); war (10); americans (9); army (9); goddamned (9); fight (8); just (8); shit (7); job (6); son (6); cowards (5); germans (5); great (5); guts (5); home (5); know (5); battle (4); best (4); bitch (4); brave (4); death (4); german (4); let (4); quicker (4); say (4); shoot (4); sir (4); team (4); way (4); we're (4); world (4); american (3); answered (3).

There is an experiential motif of battle and death (the denotations of lexical items), e.g. *fight*, *shoot*; *war*, *battle*, *army*; *deaths*, and people take part, e.g. *men*/*man*, and their nationalities, *American(s)*, *German*. At the same time, there is an interpersonal motif of positive vs. negative values (the connotations of lexical items): *love*, *want*; *great*, *brave* vs. *cowards*; and of course, nationality is value-laden. While civilized readers today would take *fight* as negative, Patton works hard to imbue it with positive nationalistic value, as can be seen in his opening (the macro-Theme of his speech):

> *Be seated. Men, all this stuff you hear about America not wanting to fight, wanting to stay out of the war, is a lot of horse dung. Americans love to fight. All real Americans love the sting and clash of battle. When you were kids, you all admired the champion marble shooter, the fastest runner, the big-league ball layers and the toughest boxers. Americans love a winner and will not tolerate a loser. Americans play to win all the time. That's why Americans have never lost and will never lose a war. The very thought of losing is hateful to Americans. Battle is the most significant competition in which a man can indulge. It brings out all that is best and it removes all that is base.*

He frames his speech partly in terms of what Americans love or hate, using clauses where *love* projects another verb in a complex verbal group, as in (*Americans*) *love to fight*, or as the central verb in its own right (with *tolerate* as an alternative), as in (*All real Americans*) *love* (*the sting and clash of battle*). (What Americans love or hate is obviously not based on a scientific survey; his claims are of course designed to persuade the men he is addressing that this is how they feel. He is, in effect, trying to "rewire" their brains, which is part of the power of language.) These instances are analysed in Table 1 in terms of the grammatical systems presented briefly below in Section 3. (The analyses here are all based on the description of the system of English lexicogrammar developed by Michael Halliday and presented in Halliday & Matthiessen (2014), with further details.) Patton relates fighting to competition, taking the soldiers back to their childhood (probably with implication of innocence). He contrasts winning with losing and assigns negative value to loosing: Table 2. And then he defines battle by reference to competition: Table 3.

[1] This is the original speech, not the cleaned-up version delivered by George C. Scott in his Oscar-winning performance as Patton in the 1970 film *Patton*.

[2] The frequency list is due to VoyantTools.

TABLE 1. Patton's construal of American attitude towards violence

	Americans	*love*	*to fight*
material: transformative	Actor	Process	
	nominal group	verbal group (complex)	
		α:projection: desideration	'β

	All real Americans	*love*	*the sting and clash of battle*
	Americans	*love*	*a winner*
	[*Americans*]	*will not tolerate*	*a loser*
mental: emotive	Senser	Process	Phenomenon
	nominal group	verbal group	nominal group

Source: Produced by the authors

TABLE 2. Patton's characterization of losing

	The very thought [[*of losing*]]	*is*	*hateful*	*to Americans.*
relational: ascriptive & intensive	Carrier	Process	Attribute	Angle: viewpoint
	nominal group	verbal group	nominal group	prepositional phrase

Source: Produced by the authors

TABLE 3. Patton's definition of *battle*

	Battle	*is*	*the most significant competition [[in which a man can indulge]].*
relational: identifying & intensive	Token/ Identified	Process	Value/ Identifier
	nominal group	verbal group	nominal group

Source: Produced by the authors

Having framed his rallying speech in this way to *his men*, he continues the fire them up, and then he goes on to evoke the killing of German soldiers, using the full force of the lexicogrammar of violence, the favoured strategy being high-impact clauses of action – 'material' clauses in the overall system of the grammar (with a high volume of negative connotations): Table 4.

TABLE 4. Patton's forecast of his troops destruction of German soldiers

	We	*'re not just going to shoot*	*the bastards*		
	we	*'re going to rip out*	*their living goddamned guts*		
	We	*'re going to murder*	*those lousy Hun cocksuckers*	*by the bushel-fucking-basket*	
	[*we*]	[*'re going to*] *shoot*	*them*		*in the guts*
	[*we*]	[*'re going to*] *rip open*	*their belly*		
material: transformative	Actor	Process	Goal	Manner	Place
	nominal group	verbal group	nominal group	prepositional phrase	prepositional phrase

Source: Produced by the authors

> *We're not just going to shoot the bastards, we're going to rip out their living goddamned guts and use them to grease the treads of our tanks. We're going to murder those lousy Hun cocksuckers by the bushel-fucking-basket. […] Shoot them in the guts. Rip open their belly.*

Patton's speech is clearly truly revolting and would presumably not be acceptable today (cf. the reference below to Tim Collins' speech to his troops on the eve of the allied invasion of Iraq in 2003 — see BUTT, LUKIN & MATTHIESSEN, 2004), but it does bring out the role that the lexicogrammar of violence can play in registers operating in different contexts — and it should be required reading for politicians who contemplate war in abstract terms at comfortable administrative distance engaging primarily with managerial discourses of violence. Similarly, they should be obliged to contemplate Mark Twain's satirical *War Prayer*, e.g. the clause analysed in Table 5.

TABLE 5. Excerpt from Mark Twain's *War Prayer*

	O Lord our God,	[*you*]	*help*	*us*	*to tear*	*their soldiers*	*to bloody shreds*	*with our shells*
		Initiator	Pro-	Actor	-cess	Goal	Role: product	Manner: means
material: transformative	nominal group	nominal group	verbal group (1)	nominal group	verbal group (2)	nominal group	prepositional phrase	prepositional phrase

Source: Produced by the authors

As these examples illustrate, the lexicogrammar of violence is used in texts concerned with war, although there are many other uses of it, e.g. in the context of domestic violence, gun violence, terrorist attacks, natural disasters. It involves a range of lexicogrammatical units and complexes of units:

- clause complexes: *Americans play → to win all the time.*
- clauses: *you help us to tear their soldiers to bloody shreds with our shells*
- units serving as elements in clauses:
  - (participants) nominal groups: *their soldiers*, *the bastards*, *their living goddamned guts*
  - (process) verbal groups (including complexes): *love to fight*, *help … to tear*, *are going to rip out*, *are going to murder*
  - (circumstances) prepositional phrases: *to bloody shreds*, *with our shells*, *in the guts*

These lexicogrammatical units define the environments of the lexical items of violence that we will present below operate in.

3. Grammatical domains and systems

Our experience of the world around us and inside us is construed in languages as meaning by means of the resources of the ideational metafunction. The ideational systems of a language enable users of the language to model their experience of the world. There are two complementary modes of modelling this experience, (i) the logical mode and (ii) the experiential mode. We will describe and illustrate them first for clauses, and then turn to groups and phrases. Let us locate them within the overall resources of the lexicogrammar of English by means of the simplified function-rank matrix in Table 6. This matrix is a kind of map of the lexicogrammar of English. It shows all the systems that collectively make up the lexicogrammar distributed according to the metafunctions they serve (ideational: logical, experiential; interpersonal; textual) and the rank or compositional level of the unit (or unit complex) they operate in (clause, group/phrase, word).

TABLE 6. Simplified function-rank matrix showing ideational systems of English lexicogrammar together with interpersonal and textual ones

rank	class	ideational			interpersonal	textual
		logical		experiential		
clause	major	*TAXIS & LOGICO-SEMANTIC TYPE*		*TRANSITIVITY (PROCESS TYPE, AGENCY & CIRCUMSTANTIATION)*	MOOD, POLARITY, MODAL ASSESSMENT	THEME, VOICE, CONJUNCTION
group/ phrase	prepositional phrase	TAXIS & LOGICO-SEMANTIC TYPE		minor TRANSITIVITY		
	nominal	TAXIS & LOGICO-SEMANTIC TYPE;	MODIFICATION	THING TYPE, CLASSIFICATION, EPITHESIS, QUALIFICATION	PERSON, NOMINAL MOOD	DETERMINATION
	adverbial	TAXIS & LOGICO-SEMANTIC TYPE;	MODIFICATION	CIRCUMSTANCE TYPE	ASSESSMENT TYPE	CONJUNCTION TYPE
	verbal	TAXIS & LOGICO-SEMANTIC TYPE	TENSE	EVENT TYPE	FINITENESS, MODALITY	
word		TAXIS & LOGICO-SEMANTIC TYPE;	DERIVATION	denotation	connotation	(lexical cohesion)
		complexes	**simplexes**			

Source: Produced by the authors

Having presented the map of the systems of the lexicogrammar of English by means of the function-rank matrix in Table 6, we will now briefly survey the systems of the lexicogrammar involved in the construal of different aspects and manifestations of violence, starting with clauses and then moving on to groups and phrases. The systems are all located within the ideational metafunction.

3.1 Clauses

In the lexicogrammar of violence, clauses are of fundamental importance since they constitute the highest rank of unit of the grammar and serve as the "gateway" to texts as units of meaning operating in context. And within the lexicogrammar, they provide the environment for lower-ranking units — groups/phrases, words and morphemes. In the logical mode of the ideational metafunction, clauses are combined to form clause complexes; in the experiential mode, clauses are organized internally as configurations of groups and phrases serving different functions in clauses.

3.1.1 Logical mode: clause complexing (TAXIS and LOGICO-SEMANTIC TYPE)

In the logical mode, experience is modelled as sequences or chains, as in a chain of clauses forming a clause complex, as in the following example, where one clause complex introduces a sequence of events at the beginning of the Lead in a news report about a school shooting[3]:

> ||| *A gunman killed one student* || *and wounded at least two others inside a hall at Seattle Pacific University Thursday afternoon,* || *unleashing a wave of terror* || *as the school went into lockdown* || *and students scrambled for cover.* |||[4]

This clause complex is analysed grammatically in Table 7 (for the description of systems involved, see HALLIDAY & MATTHIESSEN, 2014: Chapter 7). It serves to *choreograph* the reporting of this horrendous event, linking clauses together by means to logico-semantic relations, which are either marked explicitly (addition: *and*; time: *as*) or left implicit (the non-finite clause *unleashing a wave of terror*, where the relation can be glossed as *thus* or *thereby*). The systems used in forming clauses complexes are those of LOGICO-SEMANTIC TYPE (projection / expansion [elaborating / extending / enhancing]) and of TAXIS (hypotaxis / parataxis). Hypotaxis includes qualification of events by conditional clauses, e.g. *If the rebels take a bus on the grand highway, The government destroys a village miles away* (*El Salvador*, by Peter, Paul and Mary).

Each clause in Table 7 contains lexis of violence (e.g. *killed*, *wounded*, *unleashing … terror*), or reactions violence (*went into lockdown*, *scrambled for cover*). And while clause complexes play an important role in the construal of violence, we will focus on clauses and the units that function as their constituent elements since they constitute the origin and domain of the lexis of violence. (At the same time, we need to note that the logical mode is also deployed in forming complexes of groups and phrases, and of words, and even of morphemes.)

TABLE 7. Clause complex construing sequence of events in a school shooting

A gunman killed one student	*and wounded at least two others inside a hall at Seattle Pacific University Thursday afternoon,*	*unleashing a wave of terror*	*as the school went into lockdown*	*and students scrambled for cover.*
α 1	α +2	×β	×γ1	×γ+2

Source: Produced by the authors

3.1.2 Experiential mode: TRANSITIVITY

In the experiential mode, our experience of the world is modelled as configurations of elements in organic wholes, as already illustrated for clauses, e.g. Table 3, where the configuration is Actor + Process + Goal, on a couple of occasions augmented by a circumstance of Manner or a circumstance of Place.

[3] Available at: http://seattletimes.com/html/localnews/2023778865_spushootingxml.html

[4] The clause complex is annotated for boundaries between clauses: ||| = boundaries between clause complexes, and || = boundaries between (ranking, i.e. non-embedded) clauses forming the clause complex.

The experiential system of the clause for construing quanta of change in our experience of the flow of events as such configurations is the system of TRANSITIVITY. This system is composed of three complementary subsystems (see HALLIDAY & MATTHIESSEN, 2014: Chapter 5), viz. (1) PROCESS TYPE, (2) AGENCY and (3) CIRCUMSTANTIATION.

(1) The system of PROCESS TYPE construes quanta of change — the goings-on that make up our experience of the flow of events — into a small number of types according to the nature of the change, with different numbers and kinds of participants, the nature of their involvement in the process depending on the process type:

'material' process clauses (doings-&-happenings, i.e. actions, activities, events). These clauses do most of the work of construing material violence as acts of violence, e.g. [*the 2007 shooting*] *in which a gunman killed 32 people before taking his own life*; and the examples analysed above in Table 3, Table 4. 'Material' clauses also construe activities in response to acts of violence, e.g. *evacuate* in *An apparent agreement to evacuate 200,000 people from the port city fell apart because of what Kyiv said was continuous Russian shelling*. Most of the verbs of violence that we will present below operate in 'material' clauses.

'behavioural' process clauses (behaving, prototypically human: sensing as activity and physiological processes). 'Behavioural' clauses can represent the impact of violence on the human body, e.g. Process: *coughing* as a result of a gas attack in Wilfred Owen's *Bent double, like old beggars under sacks, Knock-kneed, coughing like hags, we cursed through sludge*, from his ironically titled poem "Dulce et decorum est" or *Some classmates screamed*, *A lot of people were freaking out* in a news report of a school shooting. They can also represent perception of manifestations of violence as activity, e.g. *For the next four to five minutes, Osgood and his classmates … listened to muffled screams and moans emanating from the hallway*.

'mental' process clauses. 'Mental' clauses can be used to construe how people sense manifestations of violence; 'mental' clauses of perception can construe what witnesses see, hear or feel, with the manifestation of violence as Phenomenon, e.g. *We heard a gunshot*; *he heard* [[*gunshots coming from a classroom next door*]]; *We could hear* [[*people yelling about bleeding*]]; *when we saw blood on the carpet*. But 'mental' clauses can also construe the experience of "mental violence", e.g. *terrifies* in *If there is one movie that still deeply terrifies me whenever I watch it, that would be William Friedkin's THE EXORCIST* (1973); and *terrorize* in *This presumably means turning over to federal authorities undocumented people who have committed no crime, a policy most local and state police oppose, since it terrorizes millions of innocent people and threatens to drive them underground where they no longer cooperate with authorities in any way*.

'verbal' process clauses. 'Verbal' clauses can be used to report representations of violence, e.g. *Seattle police Capt. Chris Fowler said a student, who is a building monitor, subdued the gunman as he stopped to reload.* But they can also be used to construe non-material, verbal violence in the sense of verbal brawling, as in *Malaysian Tourism and Culture Minister Nazri Aziz slammed the ruling, calling it "stupid and backward"* (contrast *slam* in an abstract

'material' clause: *Beijing has not rushed to help Russia after its economy was slammed by sanctions from all over the world*.).

'relational' process clauses. 'Relational' clauses can be used to characterize and classify manifestations of violence, including both material and mental violence e.g. *It was super-terrifying*; *It's pretty rattling*; *Carpeting was splattered in blood*; *It is a big step* [[*to take another human life.*]][5]. (Such characterizations may also be achieved by nominal groups, e.g. *the frightened class*; *a bloodied girl*.) They can also be used to construe states of violence, e.g. *under siege* as an Attribute in *Ukraine's second city of Kharkiv, in the north, also remained under siege*.

'existential' process clauses. 'Existential' clauses can be used to represent manifestations of violence as the Existent, as an entity, e.g. *there were blood stains all over the carpet*, but often also as a reified process (a nominalization serving as the Head / Thing of the nominal group functioning as Existent), as in *There's a thump, a rumble, and the buildings sway* (*El Salvador*, by Peter, Paul and Mary) and *There was fierce fighting in Bucha, just north-west of Kyiv, with reports of civilian casualties*.

(2) The system of AGENCY is concerned with the involvement of participants in the process; centrally, the process can be represented as simply unfolding through one participant, the Medium (e.g. *he died*) or as being caused by an external force, the Agent (e.g. *they killed him*). The significant difference between 'middle' and 'effective' clauses is illustrated by the following exchange between a reporter and Bush:

Reporter: Since the inception of the Iraqi war, I'd like to know the approximate total of Iraqis who ***have been killed****. And by Iraqis I include civilians, military, police, insurgents, translators.*

Bush: How many Iraqi citizens ***have died*** *in this war? I would say, 30,000, more or less,* ***have died*** *as a result of the initial incursion and the ongoing violence against Iraqis. We've lost about 2,140 of our own troops.*

The reporter's question is couched in terms of 'effective' agency; even though the clause is 'passive' in voice, it implicates an Actor/Agent; but Bush recasts this as 'middle' clauses, where there are no inherent Actors. He replaces the implied Actor with a circumstance of Cause, *as a result of the initial incursion and the ongoing violence against Iraqis*. By using grammatical metaphor and abstraction (see below), he is able to suppress even the implication that allied troops have killed 30,000 Iraqis.

(3) The system of CIRCUMSTANTIATION provides the resources for augmenting the configuration of process + participant(s) with circumstantial specification of time, place, cause, manner and

[5] From Tim Collins' speech ("pep talk") to his troop on the second day of the allied attack on Iraq in 2003. Available at: http://www.theglobalist.com/DBWeb/StoryId.aspx?StoryId=3023

so on. The resources of different types of circumstance can be used to frame and further specify the configuration of process + participant(s), as illustrated by the example analysed in Table 8, where the configuration of Process + Actor + Goal is augmented circumstantially by Time, Manner and Place.

TABLE 8. Circumstantial framing of an act of violence construed by a 'material' clause

On Saturday, February 11, 2006,	*Whittington*	*was*	*accidentally*	*shot*	*by U.S. Vice President Dick Cheney*	*during a quail hunting trip,*	*at a ranch in south Texas.*
Time	Goal	Process (1)	Manner: quality	Process (2)	Actor	Time	Place
prepositional phrase	nominal group	verbal group (1)	adverbial group	verbal group (2)	prepositional phrase	prepositional phrase	prepositional phrase

Source: Produced by the authors

In terms of the lexis of violence, circumstances of Place may specify some aspect of the "terrain" of violence or the destination of violent action, e.g.

When a man is lying ***in a shell hole*** *(Patton)*
Shoot them ***in the guts*** *(Patton)*
The Corpus Christi Caller-Times reports Whittington, then 78, was part of a quail-hunting party on a South Texas ranch with Cheney and others when the vice president accidentally shot him ***in the face and torso*** *after a covey of game birds took flight.*[6]

and circumstances of Manner: means are often realized by prepositional phrases with a constituent nominal group denoting a weapon, e.g.:

Witnesses in Bahrain say that more than 100 people are injured after police fire tear gas at protesters and attack them ***with batons****.*[7]
it was a stupid idea to attack Iran ***with cyber weapons***[8]

Circumstances may constitute metaphorical versions of clauses, realized by prepositional phrases with constituent nominal groups with process nominalizations as Head / Thing, e.g.:

Allow them dignity ***in death****.*[9]
Amidst explosions and a hail of gunfire *the Americans burst into Baghdad.*[10]

6 Available at: https://apnews.com/article/7f0bb4733ad2462b97368a0604fb8b0d
7 Available at: http://www.washingtonpost.com/wp-srv/special/world/middle-east-protests/
8 Available at: http://security.blogs.cnn.com/2012/10/12/panetta-cyber-threat-is-pre-911-moment/
9 Available at: http://www.theglobalist.com/DBWeb/StoryId.aspx?StoryId=3023
10 Available at: http://news.bbc.co.uk/2/hi/2923357.stm

3.2 Groups and phrases

Groups and phrases serve as elements of the clause in the first instance, although they can alternatively be downranked to serve in groups and phrases. In terms of the transitivity structure of the clause, the major correlations are set out in Table 9[11]. We will briefly discuss verbal groups, nominal groups and adverbial groups, leaving out prepositional phrases since the lexical items in prepositional phrases are found in the nominal group serving as the complement of the prepositions and prepositions are highly generalized items, close to being grammaticalized. Thus structure of a prepositional phrase is in fact like that of a shrunken clause: process: preposition + participant: nominal group, e.g. *in* + *the face*.

TABLE 9. Distribution of groups and phrases according to transitivity roles (major correlations)

group/phrase		process	participant	circumstance
group	verbal	√ *the vice president accidentally* ***shot*** *him in the face and torso*		
	nominal		√ ***the vice president*** *accidentally shot him in the face and torso*	
	adverbial			√ *the vice president* ***accidentally*** *shot him in the face and torso*
phrase	prepositional			√ *the vice president accidentally shot him in* ***the face and torso***

Source: Produced by the authors

3.2.1 Verbal groups

Verbal groups serve as the Process in the transitivity structure of the clause, as illustrated by various examples analysed above, e.g. in Table 3 and Table 7. Verbal groups are highly grammaticalized in English; there is only one element with lexical content, the Event. The Event is realized by a lexical verb, but all the other functions of the verbal group are realized by grammatical verbs, i.e. auxiliaries, as illustrated by the two examples analysed in Table 8. The nature of the Event reflects the process type of the clause in which the verbal group serves (*go* and *murder* in Table 8 both operate in a 'material' process clauses, of happening and doing, respectively), and we shall classify the lexical verbs that we present below in terms of process type, leaving a separate classification based on type of event for another occasion[12]. While the Process is usually realized by a simple verbal group, as in the examples in Table 8, it may alternatively be realized

[11] We have not included minor patterns such as the possible realization of circumstances of Duration, Distance and Frequency by nominal groups and the possible realization of certain participants by prepositional phrase, as in the case of the Actor of a passive material clause (as in Table 7).

[12] This classification involves temporal considerations having to do with how events unfold in time.

by a verbal group complex, e.g. one of temporal phase, verbal group: 'begin' / 'continue' / 'stop' + verbal group: 'doing' / 'to do', as in *That May, white rioters began to attack black citizens in the streets*, where *begin to attack* is a verbal group complex and as with *love to fight* in the first clause in Figure 1 above. In the case of verbal group complexes serving as the Process in the transitivity structure of the clause, it is the lexical verb serving as the Event of the last verbal group in the complex that reflects the process type; the preceding nominal groups reflect other aspects of the clause, like PHASE (as in this case: inceptive phase, *began*) or agency (e.g. *cause to do*, *force to do*).

TABLE 10. Examples of the structure of a verbal group serving as the Process of the transitivity structure of a clause (cf. Table 3)

		By the time this letter arrives, I	*will*	*have*	*been going*	*to go*	*to Acapulco for fourteen days.*
clause	function		Process				
group	class		verbal group				
	function		Finite	Auxiliary	Auxiliary	Event	
	class		grammatical verb	grammatical verb	grammatical verb	lexical verb	

		we	*are*	*going*	*to murder*	*those lousy Hun cocksuckers by the bushel-fucking-basket*
clause	function		Process			
group	class		verbal group			
	function		Finite	Auxiliary	Event	
	class		grammatical verb	grammatical verb	lexical verb	

Source: Produced by the authors

Lexical verbs thus serve as the as the Event of verbal groups realizing the Process of the transitivity structure of clauses. In addition, lexical verbs in their participial forms may serve in the structure of nominal groups, typically as Epithet, as in *murdering thieves* (Epithet: *murdering* Thing: *thieves*) in *the day you allow murdering thieves to take your home and kill your family tell me about it*.

3.2.2 Nominal groups

Nominal groups serve in participant roles in the transitivity structure of the clause, but they may also realize certain circumstances, in particular those of extent in space and time when they are measured — Distance, Duration, Frequency, e.g. Distance (*five miles* in *Phone records showed he drove* ***five miles*** *up the road and called her*) and the participant of a prepositional phrase.

In contrast with verbal groups, nominal groups can embody a great deal of lexical material — in particular the Thing (typically as the Head) of the nominal group, Classifiers, and Epithets, realized by words of different classes, and also Qualifiers, realized by downranked clauses or prepositional phrases. Some examples are analysed in Table 10. The typical correspondences

between functions in the modification structure of the nominal group and classes of words, or phrases and clauses are set out in Table 12. Here we will focus on nouns, suggesting different classes of nouns denoting manifestations of violence in the next section. As can be seen from the examples in Table 10 and the overview in Table 12, nouns typically serve as the Thing of a nominal group (the nominal analogue of the Event of a verbal group), but they can also serve as Classifier; Classifiers are realized either by nouns or by adjectives.

TABLE 11. Examples of nominal groups with lexical items of violence serving in different nominal group functions

to tear their soldiers	*to*	*bloody*	*shreds*	*with our shells*
		Epithet	Thing	Qualifier
		adjective	noun	prepositional phrase

unleashing	*a*	*wave*	*of terror*
	Deictic	Thing	Qualifier
	determiner	noun	prepositional phrase

War is	*a*	*bloody*	*business,*	*a*	*killing*	*business.*
	1			=2		
	Deictic	Epithet	Thing	Deictic	Classifier	Thing
	determiner	adjective	noun	determiner	verb: v-ing	noun

The indiscriminate use of leg irons, restraint poles, restraining chairs and electro-shock weapons — including stun belts, stun shields and stun guns — is widespread. (Amnesty's America: a tale of two nations of punishment)

leg	*irons*
restraint	*poles*
electro-shock	*weapons*
stun	*belts*
stun	*shields*
stun	*guns*
Classifier	Thing
noun	noun

Source: Produced by the authors

TABLE 12. Nominal group functions and typical (word) class realizations

class	function						
	Deictic$_1$	Deictic$_2$	Numerative	Epithet	Classifier	Thing	Qualifier
determiner	√						
numeral			√				
adjective		√		√	√		
verb: v-ing, v-en				√			
noun					√	√	
phrase							√
clause							√
example	*these*	*alleged*	*two*	*gruesome unprovoked*	*navy / naval*	*attacks*	*on the port*

Source: Produced by the authors

3.2.3 Adverbial groups

Adverbial groups serve in circumstantial roles in the transitivity structure of the clause, where they complement prepositional phrases. Adverbial groups most commonly serve as circumstances of Manner, in particular those of quality and degree, whereas prepositional phrases serve to realize other circumstantial roles, although even here adverbial groups can serve as an alternative, e.g. *yesterday* serving as Time and *here* as Place. Adverbial groups most likely to denote aspects of violence serve as circumstances of Manner (e.g. *violently* in *ended up being **violently** attacked and dispersed by riot police*); see Table 13.

TABLE 13. Analysis of adverbial groups denoting aspects of violence

Our embassy	*was attacked*	*violently*
Goal	Process	Manner: quality
nominal group	verbal group	adverbial group

I have a dog	*[[[that*	*was*	*viciously*	*attacked*	*by an unleashed dog,*	*who crossed*	*4 lanes of traffic*	*to get to us]]].*
	Goal	Process (1)	Manner: quality	Process (2)	Actor			
	nominal group	verbal group (1)	adverbial group	verbal group (2)	prepositional phrase			

Source: Produced by the authors

Alternatively, certain adverbs may serve as Modifiers or Sub-Modifiers in groups, e.g.

*Similarly, even the most **violently** conservative societies are now less than comfortable with filial absolutism – the notion that being at the head of a family should involve the power to kill members who "dishonor" or otherwise inconvenience it.*
*Others, ignoring the current sanctions policy, a **cruelly** blunt instrument which has killed hundreds of thousands of innocent Iraqis, argue that assassination would be "immoral".*

3.3 Extension of the construal of violence to immaterial violence

So far, we have focussed mainly on the construal of violence in the material world, i.e. physical and biological manifestations of violence. For example, this is the domain of experience construed by 'material' clauses — unless, as we shall see, they involve lexical metaphor ("conceptual metaphor"). However, violence may also be immaterial — the kind of violence that has been characterized verbal brawling and mental violence. For example:

> *Why- I've got some words from the U.N. Convention Rights of the Child right in front of me. It's to protect children from all forms of* ***physical and mental*** *violence, injury, or abuse.*

Verbal violence may be construed by one type of 'verbal' clause, one where somebody or something is "targeted" in a negative judgement such as *denounce* (contrasting with a positive one such as *praise*). But it may also be construed by a 'material' clause involving a lexical metaphor where the domain of verbal violence is construed as if it was material violence, e.g. *slam sb*, *attack sb*, *launch an attack on sb*. For example:

> *The iconic interviewer said she's not going to* ***slam*** *the 24-year-old "We Found Love" singer for hooking up with her violent ex, Us reports.*

> *Angry Cook* ***lashes out*** *at war*
> *Robin Cook: Warning against Baghdad siege*
> *Former cabinet minister Robin Cook* ***has launched an angry attack on*** *the war in Iraq and called on Tony Blair to bring UK combat units home.*
> *Mr Cook – who resigned as Leader of the House of Commons in protest at the decision to launch hostilities without international agreement –* ***denounced*** *the campaign as "bloody and unnecessary".*[13]

Mental violence may be construed by 'mental' clauses where the Process is realized by a verbal group with a lexical verb as Event that also has a sense of a material act of violence. For example, *torture* with the sense of 'inflict severe pain or suffering on' serves in 'material' clauses, as in:

> *Over the next three weeks, Halimi was held in a basement and* ***tortured*** *to death.*

But it also has the sense of *cause great mental suffering or anxiety to*, and in this sense it serves in 'mental' clauses:

> *It helped solidify, if not invent, many of the ways in which TV viewers conceive of the supernatural — including the vampire* ***tortured*** *by conscience or love that lasts beyond the grave — and it paved the way for the confluence of science fiction / fantasy and drama.*

[13] Available at: http://news.bbc.co.uk/1/hi/uk_politics/2899621.stm

When I marked my X on the ballot paper, I voted for all those who had died, like my sister, in the workhouse; for men like my father who had been broken beyond repair by the Great Depression; and for women like my mum who had been ***tortured*** *by grief over a child lost through unjust poverty.*
The poor people are being ***tortured*** *by the fact that no one wants to talk about this.*

When *torture* serves in a 'mental' clause, the agent of torture can be a fact, as illustrated above (Cf. *it breaks my heart that …*; *it pains me that ….*).

It ***breaks*** *my heart that children have to suffer*
And it ***pains*** *me that so many people suffer in silence because others make them feel ashamed because they don't understand just how bad it is.*

3.4 Lexicogrammatical metaphor and abstraction

As the last set of examples show, the resources of construing violence can be extended to manifestations of immaterial violence, but this often involves models use in construing our experience of manifestations of material violence. Here one domain of experience is construed by being mapped onto another domain; for example, the domain of emotions caused by some phenomenon impinging on our senses may be mapped onto the domain of material damage: *it saddens me that … : it breaks my heart that … .* Metaphor is a relationship between the two strata of the content plane of language, between semantics (meaning) and lexicogrammar (wording); some pattern of meaning is worded as if it was another pattern of meaning, as when negative emotion is worded as if it was material damage. This is an example of lexical metaphor since one lexical field is mapped onto another. But more generally, metaphor is *lexicogrammatical metaphor*: the metaphorical relationship can be located anywhere from the grammatical zone of lexicogrammar to the lexical zone; it can involve grammatical metaphor and/or lexical metaphor. Since lexical metaphors are located within the more delicate zone of lexicogrammar, "downstream" from grammar, they may of course involve grammatical differences as well.

Like lexical metaphor, grammatical metaphor involves mapping one domain of experience onto another so that the first domain can be construed as if it was the second domain. Here since they lie within the grammatical zone of lexicogrammar, the domains are very general; for example, events are construed as if they were entities ("process nominalization"). This opens up the possibility of leaving the participants in a process implicit. For example, when Bush said *the initial incursion* in the example quoted above, this is a reified version of somebody attacking somebody else; but precisely because he reifies this process, he can leave out the agent of the attack. This can be illustrated by reference to a passage from a Pentagon manual analysed and discussed by Halliday & Matthiessen (1999, 2006, p. 274-275):

What we seek is a capability for early initiative of offensive action by air and land forces to bring about the conclusion of the battle on our terms.

This would appear, on first reading, to be at some distance from violence. Here is the whole passage:

> *The Airland Battle Concept outlines an approach to military operations which realizes the full potential of US forces. Two notions — extending the battlefield an integrating conventional nuclear chemical and electronic means — are blended to describe a battlefield where the enemy is attacked to the full depth of his formations. What we seek is a capability for early initiative of offensive action by air and land forces to bring about the conclusion of the battle on our terms.* […] *This concept does not propose new and radical ways to fight. Rather it describes conflict in terms of an environment which considers not only conventional systems, but also chemical, nuclear, and electronic. It also forces consideration of this conflict in terms of reaching the enemy's follow-on echelons. Consideration of such a battlefield is necessary if we are to reinforce the prospect of winning.*

Having analysed the passage in terms of grammatical metaphor and abstraction, Halliday & Matthiessen (1995, 2006, p. 275) comment:

> What the metaphor does is on the one hand to construct an entirely abstract world of virtual objects such as *concept, approach, capability, environment, considerations, prospects,* and *potential,* and on the other hand to set this up in stark contradiction to the highly concrete processes that begin to emerge as the metaphors are unpacked. This in turn is a kind of hyper-metaphor for modern war, in which the only "military" action taken may be the inherently benign one of keying a message into a computer — the outcome of which is that thousands of people, thousands of miles away, die a violent and wholly unmetaphorical death. Granted that this is an extreme and perhaps sensational example; but the point we are trying to make is one that is central to language itself — namely, that it is the potential for (grammatical) metaphor (itself a product of the stratified ideational resource system) that makes it possible to construe experience in terms of such complementarities and contradictions.

Thus the lexicogrammatical resources of English for construing our experience of the world includes not only the lexicogrammar of violence but also the lexicogrammatical resources for keeping this experience at considerable distance through the strategies of metaphor and abstraction. For example, in order to infer that the clause *What we seek is a capability for early initiative of offensive action by air and land forces to bring about the conclusion of the battle on our terms*, which on first reading might seem harmless and free of violence, can actually be interpreted to imply that 'by acting offensively, we try to kill as many of the enemy soldiers as we need to in order for the enemy to capitulate without us incurring casualties' or something along those lines. In a way, the discourse of warfare of the kind General Patton used to motivate his troops, where violence was nauseatingly explicit, has been replaced by a discourse of management and administration where violence can only be revealed through several steps of analysis and interpretations.

4. A dictionary view of the lexicogrammar of violence

In compiling an inventory of lexical items that are part of the lexicogrammar, we focussed first on verbs that can serve as the Event of verbal groups functioning as the Process in the transitivity structure of clauses and on nouns that can function as the Thing (or Classifier) in the structure of nominal groups functioning in participant roles in clauses or, mediated by a preposition, as in circumstantial roles. For example:

verbs serving as the Event of verbal groups functioning as the Process of 'material' clauses: … *strike, struggle, subjugate, suppress, target,* ***tear****, terrorise* … – cf. the clause analysed in Table 4.
nouns serving as the Thing of nominal groups functioning as participants in 'material' clauses:

nouns serving as the Thing of nominal groups functioning within prepositional phrases in 'material' clauses: … *sabre, scourge,* ***shell****, shot, shooter, side arm, slug, spear, sword, tomahawk, torpedo* … — cf. the clause analysed in Table 4 above.

In addition to verbs and nouns, we also take account of adjectives (e.g. *lethal* in *Two men were killed by lethal injection in Texas this year, even though they were 17 when they committed their offences, and another 65 juveniles are on death row across the country.*) and adverbs (e.g. *violently* as in *It was Hulton who, as a magistrate in north-west England, gave the notorious order for troops to violently disperse a peaceful, pro-democracy protest in the centre of the UK's first industrial city.*). However, we don't include them here.

In this section, we will list the verbs and nouns that we have identified by examining dictionaries and thesauri describing the potential of English lexis (vocabulary). These lists are organized under very general lexicogrammatical classes derived from the description of the system of PROCESS TYPE (verbs) and the description of THING TYPE (nouns). Then, in the next section, we will consider ways of further differentiating the classes of verbs in particular to produce a thesaurus view of them.

4.1 Verbs

Verbs with senses representing some aspect of our experience of violence predominantly serve in 'material' clauses; that it, their senses can be interpreted as types of 'doing-&-happening' — actions, activities, events (e.g. *assault*, *attack*, *choke*, *explode*, *injure*, *invade*, *kill*, *massacre*, *murder*, *pound*, *punch*, *ransack*, *shoot*, *slay trample*), as illustrated above by the examples analysed in Table 3, Table 4 and Table 7. This is certainly to be expected since 'material' clauses provide the model for construing quanta of change in the flow of events in the material world, typically involving a change from an initial state to an end state.

There are, as noted above, immaterial analogues, viz. verbs serving in 'mental' clauses with the general meaning of 'cause to suffer mentally' (e.g. *hurt*, *pain*, *torture*) and verbs serving in 'verbal' clauses with the general sense of 'attack verbally' (e.g. *damn*, *slam*, *blast*). Like 'material' clauses of doing (actions), these 'mental' and 'verbal' clauses are 'effective' in agency rather

than 'middle'; the Agents in them are the Phenomenon and the Sayer, respectively, and the Mediums are the Senser and the Target, respectively. Verbs serving in 'middle' clauses tend to represent the outcome of acts of violence; for example, 'material': *collapse*, *disintegrate*, *break*; 'behavioural': *ache*, *hurt*, *suffocate*, *cough*, *cry*, *sob*, *splutter*, *wail*, *weep*; 'mental': *grieve*, *lament*, *mourn*. The mental outcome of acts of violence may alternatively be construed by 'relational: intensive & ascriptive' clauses by means of an adjective serving as Attribute rather than a verb serving as Process, e.g. *be afraid*, *miserable*, *sad*, *upset* or a prepositional phrase with a noun denoting mental anguish, e.g. *be in distress*.

Examples of verbs denoting these different aspects of violence are listed in Table 14. The table is organized in terms of PROCESS TYPE (row headings) and AGENCY (column headings). There are two terms in the system of AGENCY, 'middle' and 'effective'. In 'middle' clauses, a happening is modelled as taking place without the implication of an external cause — an agent, as in *the bomb exploded*; in contrast, in 'effective' clauses, a happening is modelled as being brought about by an external cause — an agent, as in *the police exploded the bomb*. In the construal of our experience of aspects of violence, a manifestation of violence may be construed according to the 'middle' model or the 'effective' one, and many lexical verbs serve in either 'middle' clauses or in 'effective' ones, as indicated by the illustrative lists of verbs under these two column headings. However, a number of verbs can serve in either 'middle' clauses or 'effective' ones, so we have taken account of them by adding a column headed 'middle/ effective'. The lexical verb *explode* is listed here. In the lexicogrammar of violence, all such verbs operate in 'material' clauses.

TABLE 14. Examples of lexical verbs serving as Event in verbal groups functioning as Process in the transitivity structure of clauses (or in participial forms as Epithet in the modification structure of nominal groups)

PROCESS TYPE		AGENCY		
		middle	middle/ effective	effective
material	transformative	*clash, fall, rampage, rebel, retaliate, revolt, scrap, struggle, tussle,*	*battle, blow up, break, crumble, detonate, end, escalate, explode, fight, fire, intensify, ricochet, rocket, shield, slam, slap, smash, tear, wrestle*	*abuse, ambush, arm, assail, assassinate, batter, beat, blast, butcher, choke, conquer, crush, dispatch, dominate, eradicate, gash, harm, hit, hurt, injure, invade, knock, lacerate, lash out at, liberate, maim, murder, mutilate, oppress. pound, pulverize, quash, ransack, raze, rout, sack, scupper, set off, shell, shoot, slay, smack, smash, snipe at, squash, strafe, strike, terrorize, throttle, torment, upset, violate, wallop, whip, wound*
behavioural	physiological	*ache, bleed, choke, cough, cry, die, hurt, pain, pound, quarrel, suffocate, wail, weep*		

(continua)

(continuação)

PROCESS TYPE		AGENCY		
		middle	middle/ effective	effective
mental	emotive	*grieve, lament, mourn, suffer*		*antagonize, grieve, hurt, oppress, pain, slay, terrorize, torment, upset, wound*
verbal	targeting			*abuse, assail, blast, damn, lash out at, malign, slam, snipe at*
relational				
existential				

Source: Produced by the authors

Examining the table, we can note that lexical verbs serving in 'effective' clauses belonging to the 'mental' and 'verbal' process types are almost always verbs that also have senses operating within 'material' clauses. Thus we can suggest that lexically the construal of immaterial violence draws on the resources for the construal of material violence. Here lexical metaphor plays an important role; negative verbal judgement of somebody is mapped onto the domain of material assault.

4.2 Nouns

Nouns with senses representing some aspect of our experience of violence serve as Thing in the structure of nominal groups, or as Classifier, as illustrated in Table 10 above; and nominal groups function as participants in the transitivity structure of clauses, or in the reduced transitivity structure of prepositional phrases.

TABLE 15. Examples of lexical nouns serving as Thing or Classifier in nominal groups functioning as participants in the transitivity structure of clauses (or in that of prepositional phrases)

THING TYPE		examples of nouns
objects	objects: weapons	ammunition, arrow, arsenal, artillery, atom bomb, bayonet, bomb, bullet, canon, catapult, chemical weapons, dagger, dart, firearm, flamethrower, grenade, gun, hammer, hand gun, knife, lance, machete, machine gun, mine, missile, mortar, munition(s), musket, nuclear bomb, nuclear weapons, pellet, piece, pike, pistol, projectile, revolver, rifle, rocket, round, sabre, scourge, shell, shot, shooter, side arm, slug, spear, sword, tomahawk, torpedo, weapon, whip
	objects: equipment, vehicles	cross-hairs, destroyer, detonator, fetter, flack jacket, gunship, gunpowder, launch, shackles, shield, sights, tank, tie, ties, trigger, battery
	objects: other	barricade, breach, flack/flak, impact crater, mass grave, ricochet, shrapnel, target
people	people: fighter or unit	air force, conquistador, crack shot, force, gladiator, goon, gun slinger, kamikaze, marine, marksman, military, paratrooper, protagonist, reinforcements, resistance, rough, sharp shooter, sniper, soldier, special ops, squad, top gun, victor, warrior

(continua)

(continuação)

THING TYPE		examples of nouns
	people: enemies	adversary, aggressor, assailant, belligerent, foe, guerrilla, hoodlum, hostile, insurgent, marauder, mark, militant, nemesis, neutral, opponent, ruffian, scourge, terrorist, thug, vanquished, yob
	people: other	carcass, corpse, masochist, militia, missing-in-action, MIA, warmonger
events	events: hits	battery, blast, blitz, blow, chop, clout, coup-de-grâce, cut, detonation, explosion, hit, knock-out, knock-down, lash, lick, punch, salvo, slap, slug, smack, spank, stroke, strike, thump, volley, wallop
	events: fights	abuse, ambush, assault, attack, barrage, battery, battle, brawl, breach, charge, clash, combat, conflict, confrontation, conquest, contest, counterattack, crusade, dogfight, engagement, eradication, escalation, execution, feud, fight, fire, firefight, fracas, fray, affray, fusillade, gunfight, invasion, launch, mayhem, melee, offense, offence, offensive, onslaught, onset, onrush, parry, pitched battle, quarrel, reprisal, scrap, showdown, skirmish, sortie, trench warfare, tussle, war, warfare, wrangle
	events: injury, death	assassination, bleed, bloodshed, carnage, casualty, decease, death, dispatch, elimination, end, fall, fratricide, genocide, harm, holocaust, homicide, injury, kill, massacre, mass murder, murder, mutilation, rape, self-harm, self-mutilation, slash, slaughter, slay, suicide, tear, thrashing, violate, wound
	events: impacts/outcomes	defeat, demolition, destruction, domination, draw, escalation, gash, hold, impact, intensification, intimidation, laceration, liberate, pillage, ravages, revenge, rout, sabotage, sack, sacrifice, smash, strife, subjugation, win
	events: other	atrocity, attrition, civil war, coercion, cruelty, havoc, holy war, incursion, insurrection, masochism, molestation, occupation, ordeal, plan of attack, prevail, provocation, raid, rampage, retaliation, revolution, sadism, seizure, siege, struggle, suppression, torment, truce, uprising, vendetta
other	other	blood, force, menace, militancy

Source: Produced by the authors

4.3 Lexical items as verbs and nouns

Before leaving this section, we would like to note that many lexical items are manifested both as verbs and as nouns, the nominal version typically being a process nominalization, e.g. verb: *destroy* and noun: *destruction*. They tend to have the same collocational patterns as both verbs and nouns (cf. HALLIDAY, 1966), but they are of course framed either by the transitivity structure of the clause or the modification structure of the nominal group. The similarities and differences can be illustrated by reference to *shell* as verb and *shelling* process nominalization noun and *shell* as noun (weapon):

the verb *shell* in verbal group serving as the Process of a clause:
In 2018, in the eastern Damascus suburb of Ghouta, under siege from the Kremlin-backed Syrian government, the Russians, acting as mediators, brokered a ceasefire with the UN to allow

civilians to escape. Instead ***civilians were shelled*** *as they attempted to escape, prompting a US state department spokesperson to condemn the ceasefire as "a joke".*

the noun *shelling* (process nominalization) as the Thing in nominal group serving as a participant:
On the main road out – eyed as a key escape route – ***heavy Russian shelling continued*** *on Monday, Ukrainian forces said.*

the noun *shell* (weapon: 'an explosive artillery projectile or bomb') as the Thing in nominal group serving as a participant:
Shells rain down *on Ukraine's cities despite 'cynical' offer of safe passage.*

5. Towards a thesaurus view, an "ontology" of violence

The lexical resources of any language for construing aspects of violence can be presented in different ways. The canonical views of the lexical resources of a language are the dictionary view and the thesaurus view (cf. MATTHIESSEN, 1991). The dictionary view will vary according to the conventions of a given language, but basically it provides the view of the lexical resources of a language from the point of view of somebody reading or listening to a text who needs to look up lexical items. A variant of this is the bilingual dictionary translators may consult, or L2 learners. In contrast, a thesaurus view provides a window of the lexical resources of a language adapted to the needs of producers of texts (speakers and writers). Roget clearly had them in mind in his original foreword in the first, 1852, edition of his thesaurus.

In the examples we presented above of lexical verbs and nouns denoting different aspects of the manifestation of our experience of violence, we have already provided a basic thesaurus-informed view of the resources, presenting verbs according to the terms in the system of PROCESS TYPE and nouns according to the system of THING TYPE. However, we will now take one step further towards the thesaurus view in the exploration of the resources for construing our experience of aspects of violence by means of lexical verbs.

As we take this step, there are different lexical descriptions we can consult, including Roget's Thesaurus (the *classic* version with his taxonomic organization of the lexical resources of English, not mere synonym dictionaries), WordNet and, for a thesaurus view of verbs, Levin's (1993) description of *English verb classes and alternations*. Here we will use Levin's description since the *verb classes* she proposes have already been interpreted in terms of the description of the system of process type in English (HALLIDAY & MATTHIESSEN, 2014: Chapter 5): see Matthiessen (2014)[14]. This involves close to 4,500 verbs or really verb senses since different verbs

[14] The verb classes are really verbs serving in particular transitivity configurations, e.g. Process + Medium, Process + Agent + Medium, Process + Medium + Range; and the "alternations" are systemic contrasts, the "causative alternation", as in *Tony broke the window / the window broke*, which is the systemic contrast between 'effective' and 'middle'. And the construal of violence often depends on combinations of Process + Medium, as in *Russian soldiers are killing civilians, who share a Slavic*

are classified according to their senses, e.g. *make* in the sense of 'create' ('material') vs. *make* in the sense of 'constitute' ('relational').

We have checked the roughly 290 verb entries in our *dictionary* of violence according to Levin's classes, differentiating verb senses that belong to different classes. As an illustration, we show how the verb *bleed* in its different senses has been assigned to different terms in the systems of process type and agency and to Levinian verb classes in Table 16[15]. Not surprisingly, there are quite a few verbs that are not included in Levin's (1993) overview or not included in their relevant sense. They can probably all be assigned to verb classes in her description, so for present purposes, we will focus on the verb classes that occur in our assignment of verbs to Levinian verb classes.

TABLE 16. Example of assignment of a lexical verb in different senses to process type, agency and Levinian verb class

verb	gloss	process type						agency		Levin verb class
		material	behavioural	mental	verbal	relational	existential	middle	effective	
bleed	'drain (someone) of money or resources'	1							1	10.5 Verbs of possessional deprivation: cheat verbs
bleed	'(of a liquid substance such as dye or colour) seep into an adjacent colour or area'	1						1		43.4 Verbs of substance emission
bleed	'lose blood from the body as a result of injury or illness'		1					1		40.1 Verbs of bodily process 40.1.2 Breathe verbs

Source: Produced by the authors

identity, and ***flattening cities*** *in land that gave birth to their country's culture* or Process + Range, as in *Ukrainian President Volodymyr Zelensky has said everyone who* ***commits atrocities*** *against Ukraine's civilians will be punished*. Thus the act of 'flattening' is not inherently violent; for example in *collecting and* ***flattening*** *empty food cans for re-cycling*, flattening just represent change shape. But the combination of *flattening* + *cities* evokes a sense of violence — certainly in a news report on war, where we are primed for representations of violence.

[15] To make it easier to refer to Levin (1993), we have retained the names she has given to different classes. They are often based on representative verbs like *admire* and *marvel*; but in our own work we would replace with more descriptive terms — a possibility opened up by the interpretation of them by reference to the system of PROCESS TYPE.

We have arranged the Levinian verb classes that include verbs representing different aspects of violence according to the terms in the system of PROCESS TYPE in Table 17. This table brings out the way in which our experience of different aspects of violence is organized into different domains of processes[16]:

'material' process clauses cover most of the verb classes — 20 primary classes out of 24; and, concomitantly, they show the greatest spread of aspects of processual violence, all within the "material" domain, of course. The other process types are restricted to one or two primary classes. Of the 20 primary classes, all but one belong to 'transformative' 'material' clauses, i.e. clauses that construe the Medium undergoing some kind of transformation like change in shape, composition, possession or location. One primary class, Levin's "55. Aspectual verbs", can be interpreted as belonging to 'creative' 'material' clauses in the sense that they construe the phases of unfolding of a process. (The opposite of creation is destruction, which is construed as 'transformative'.) The 20 primary classes differ in AGENCY (cf. Table 14 above); most are in fact 'effective', which means that they construe an event as evolving an external cause (even if it is left implicit), a number can be either 'middle' or 'effective' (e.g. 45. Verbs of change of state), and some are 'middle' only (e.g. 51. Verbs of motion).

'behavioural' process clauses are all concerned with 'physiological' behaviour (as opposed to sensing or saying construed as activities), corresponding to Levin's primary class 40. Verbs involving the body. These are all 'middle' in AGENCY and construe the bodily experience of acts of violence[17].

'mental' process clauses are all of the 'emotive' type of sensing (contrasting with 'cognitive', 'desiderative' and 'perceptive' 'mental' clauses), Levin's class 31. Psych-verbs. They are either 'effective' (31.1 Amuse verbs) or 'middle' (31.3 Marvel verbs); both variants of agency construe the "mental" experience of violence, with the Senser (/ Medium) as the one who suffers. In both cases, quite a few of the verbs are lexical metaphorical extensions of verbs used in 'material' clauses; in particular, the 'effective' ones are based on a mapping from the domain of 'sensing', specifically of impinging on consciousness, to the domain of 'doing'.

'verbal' process clauses are either 'effective' in AGENCY, or 'middle'. The 'effective' clauses are in a sense the semiotic analogue of acts of material violence, and Levin's class is 33. Judgement verbs (cf. also MARTIN & WHITE, 2005, on the judgment type of appraisal).

[16] There is no space here to comment on the interesting range of micro-models of violence brought out by our classification of the relevant Levinian verb classes in terms of process types; but these micro-models — which can be interpreted as different construction types — are actually quite significant when we try to understand how the lexicogrammar of English theorizes our experience of violence. There are fascinating details, like the differences between *battle, fight* and *clash, combat, feud, quarrel* etc. against the background of similarities in this category of resources for construing potentially joint actions (even if antagonistic).

[17] We need to allow for explicitly causative constructions such as *cause someone to suffocate*, and some of the verbs listed under 40. Verbs involving the body also function in 'effective' clauses, but we have taken them to function in 'effective' 'material' clauses, belonging to different classes. For example, in an 'effective' clause, *suffocate* belongs to 42. Verbs of killing, more specifically 42.2 Poison verbs, with e.g. *crucify*, *knife*, *shoot*, *strangle* as systemic neighbours. Thus assignment to verb class and process subtype depends centrally on the set of related verbs. Here *suffocate* is part of a set of verbs denoting other forms of killing that, unlike *suffocate*, are not directly related to physiological processes.

And, in fact, a number of the verbs used in this clause type draw on 'material' lexis by means of lexical metaphor (e.g. *blast*, *hammer*, *lash out at*, *slam*); this is verbal brawling. In contrast, the 'middle' clauses are like 'middle' clauses of the 'mental: emotive' type; they construe the reaction to violence (*cry*, *wail*; *howl*, *whimper*, *whine*) and shade into 'behavioural' process clauses.

We haven't included *relational* and *existential* clauses in Table 17. This is not because they play no role in the construal of our experience of aspects of violence — they certainly do. However, they tend to construe this experience participantally rather than processual, so it's not reflected in the range of lexical verbs; the lexical content is embodied in nominal groups serving as Carrier, Attribute; Token, Value; or Existent. This will in fact often involve grammatical metaphor, i.e. a metaphorical construal of an experience that would congruently have been construed by a *material* clause, e.g.

*"There was **an explosion** and some people fell into the water from the vessel," a police spokesman said.*

*There was **a certain cogency in Trilling's attack**, at least with regard to Anderson's inferior work, most of which he wrote after Winesburg, Ohio.*

TABLE 17. Common Levinian verb classes in the verbal lexis of violence classified according to PROCESS TYPE

PROCESS TYPE		Levin's (1993) classes			examples of verbs representing manifestations of violence
		primary	secondary	tertiary	
material	transformative	9. Verbs of putting	9.3 Funnel verbs		squash,
		10. Verbs of removing	10.1 Remove verbs		draw ('disembowel'), eradicate,
			10.5 Verbs of possessional deprivation: cheat verbs		bleed, capture, liberate, ransack, seize,
		12. Verbs of exerting force: push/ pull verbs			push,
		13. Verbs of change of possession	13.2 Contribute verbs		sacrifice,
			13.4 Verbs of providing	13.4.2 Equip verbs	arm,
			13.5 Verbs of obtaining	13.5.1 Get verbs	win
				13.5.2 Obtain verbs	seize,
		15. Hold and keep verbs	15.1 Hold verbs		hold ('detain'),

(continua)

(continuação)

PROCESS TYPE		Levin's (1993) classes			examples of verbs representing manifestations of violence
		primary	secondary	tertiary	
		17. Verbs of throwing	17.1 Throw verbs		bash, catapult, fire, hit, knock, slam, slap, smash,
		18. Verbs of contact by impact	18.1 Hit verbs		batter, beat, hammer, hit, knock, pound, slap, smack, smash, strike, thump,
			18.2 Swat verbs		punch, slam, slug,
			18.3 Spank verbs		clobber, knife, spank, thrash, wallop, whip
			18.4 Non-agentive verbs of impact by contact		slam, smash,
		21. Verbs of cutting	21.1 Cut verbs		cut, slash,
			21.2 Carve verbs		chop, gash, mangle, pulverize, punch, squash,
		22. Verbs of combining and attaching	22.4 Tape verbs		shackle,
		23. Verbs of separating and disassembling	23.2 Split verbs		break, cut, tear,
		29. Verbs with predicative complements	29.8 Captain verbs ('act as a …')		bully, butcher,
		35. Verbs of searching	35.4 Investigate verbs		raid,
		36. Verbs of social interaction	36.1 Correspond verbs		clash, combat, feud, quarrel, struggle, tussle, wrangle, wrestle,
			36.3 Meet verbs		battle, fight,
		42. Verbs of killing	42.1 Murder verbs		assassinate, butcher, dispatch, eliminate, execute, kill, massacre, murder, slay,
			42.2 Poison verbs		knife [also 18.3], shoot, suffocate
		43. Verbs of emission	43.4 Verbs of substance emission		bleed,
		44. Destroy verbs			annihilate, blitz, demolish, raze,

(continua)

(continuação)

PROCESS TYPE		Levin's (1993) classes			examples of verbs representing manifestations of violence
		primary	secondary	tertiary	
		45. Verbs of change of state	45.1 Break verbs		break, crush, smash, tear
			45.4 Other alternating verbs of change		blast, collapse, crumble, detonate, disintegrate, escalate, explode, intensify, neutralize,
		51. Verbs of motion	51.3 Manner of motion	51.3.2 Run verbs	charge,
			51.4 Verbs of motion using a vehicle	51.4.1 Verbs that are vehicle names	rocket,
		52. Avoid verbs			dodge (e.g. a bullet),
	creative	55. Aspectual verbs	55.1 Begin verbs		end,
behavioural	physiological	40. Verbs involving the body	40.1 Verbs of bodily process	40.1.2 Breathe verbs	bleed, cry,
			40.2 Verbs of nonverbal expression		cry, sob, weep,
			40.7 Suffocate verbs		choke, suffocate
			40.8 Verbs of bodily state and damage to the body:	40.8.1 Pain verbs	ache, break, pain,
				40.8.2 Tingle verbs	pound
				40.8.3 Hurt verbs	cut, hurt, injure,
mental	lower order: emotive	31. Psych-verbs	31.1 Amuse verbs		antagonize, crush, cut, grieve, hurt, intimidate, pacify, pain, revolt, strike, terrorize, torment, upset, wound,
			31.3 Marvel verbs (verb + prep.)		bleed for, grieve for, hurt, lament, mourn,
verbal	activity: targeting	33. Judgement verbs			abuse, blast, criticize, malign, vilify
	semiosis	37. Verbs of communication	37.3 Verbs of manner of speaking		cry, wail,

Source: Produced by the authors

5. Conclusion

In this paper, we have investigated the lexicogrammar of violence in English, giving particular attention to the lexical resources but locating them within the overall system of the lexicogrammar. We have concentrated on the resources for construing our experience of different aspects and manifestations of violence — the ideational lexicogrammar of violence (cf. Figure 1). Naturally, this can be complemented by a study of the interpersonal lexicogrammar of violence — the resources for enacting violence in dialogic exchanges, for example as an exercise of domination in terms of the tenor dimension of power or as an exercise debasing some person or group of people in terms of the tenor dimensions of affect and valuation (a classic insightful contribution being Klemperer [1947]), as illustrated by the excerpt from General Patton's speech. The ideational and the interpersonal form a nexus in a great deal of lexis, of course — the ideational denotation and interpersonal connotation of lexical items. Thus when Colonel Tim Collins said in his (in)famous speech on the eve of the invasion of Iraq in 2003 (see BUTT, LUKIN & MATTHIESSEN, 2004):

> *We go to liberate not to conquer. We will not fly our flags in their country. We are entering Iraq to free a people — and the only flag which will be flown in that ancient land is their own. Show respect for them.*[18]

he chose to construe the purpose of the invasion as being *to liberate* and *to free*, both with very positive connotations, the former being contrasted with the negative (by that period of history) *to conquer*. Such rhetorical moves need to be identified and exposed, as Peter Matthiessen had done earlier that year in an article entitled *Lighting the fuse: freeing the Iraqi people to death*, where his wording *freeing the Iraqi people to death* invites (or forces!) a re-evaluation of what *freeing* means in the discourses of warmongers. And compare *And kill the people to set them free* in Peter, Paul and Mary's protest song *El Salvador*.

The lexicogrammar of violence is a significant part of the *language* of violence, but we also need to take account of and describe the semantics of violence (cf. Figure 1). While lexicogrammatical wordings are semantically natural and transparent, as systemic functional analysis and description can show, there are semantic strategies beyond the units of meanings realized directly by lexicogrammar — by clause complexes, clauses, groups and so on. The basic unit of semantics is *text*, which is defined as language functioning in context. Text is thus directly sensitive to contexts: different contexts are associated with different text types or *registers* (functional varieties of language). Therefore, the semantics of violence includes the strategies for organizing texts belonging to different registers, e.g., the semantics of a war report and the semantics of a speech inciting a group of people to violence. And the semantics of violence can as a strategy reconstrue violence in the case of war in managerial terms. For example, the 5th edition of the *UK Defence Doctrine* identifies three levels of warfare, *strategic*, *operational* and *tactical* (p. 19), and introduces the tactical level as follows (p. 21):

[18] Available at: http://www.theglobalist.com/DBWeb/StoryId.aspx?StoryId=3023

> The tactical level of warfare is the level at which formations, units and individuals ultimately confront an opponent or situation within the joint operations area. The tactical level employs maritime; land; air and space; and special operations forces to deliver a range of effects that together contribute to success on operations. This is the level at which engagements are fought in direct contact with an opponent.

This is similar to the pentagon manual discussed earlier; the *material* clauses here include the verbs *confront*, *employs*, *deliver* and *fight*. The closest it gets to soldiers attacking enemy soldiers is *engagements are fought in direct contact with an opponent*. This is at a considerable (metaphoric) distance from the horrors of war evoked by Mark Twain's ironic *War Prayer* or Peter Matthiessen's impassioned arguments against the attack on and invasion of Iraq in 2003:

> In our name, a half million human beings are being threatened with death in the next few weeks — dreadful deaths not unlike those of the victims of 9/11, except that far greater numbers will be burned and crushed and suffocated, and the horror will be painfully intensified by the shrieking of maimed and dying children. Nobody in this closed government, and almost nobody in the compliant mainstream media, is dealing squarely and honestly with this subject.

Here Matthiessen is evoking what the *UK Defence Doctrine* refers to as the *delivery* of *a range of effects that together contribute to success on operations*. This is clearly much closer to what a lived experience of material violence is like.

Prototypically, violence is material violence: it is manifested within material systems, i.e. physical systems and biological systems. But if it is intentional, it begins within the immaterial systems, i.e. social systems and semiotics systems. To physical events of violence and biological acts of violence, we need to add social behaviours of violence and semiotic meanings of violence. Violent meanings (as in *hate speech*) can lead to violent behaviours (as in fights between urban gangs and wars between nations); and these immaterial levels of violence are embodied biologically and manifested physically. But violence may begin within physical systems, and ripple upwards, as in the case of natural disasters such as flooding and volcanic eruptions, or within biological systems, as in the case of outbreaks of communicable diseases.

Here we have focussed on the lexicogrammar of violence in English, paying more attention to the lexical zone of the lexicogrammar. As we noted at the beginning, the work we have reported on here is part of a large-scale project. Areas within this project we have not touched on here, or only alluded to, include the description of the lexicogrammars of violence in other languages, the semantics of violence and the registers of violence.

CREDIT (CONTRIBUTOR ROLES TAXONOMY)

Matthiessen - Conceptualization, Writing, Supervision
DeCoursey - Conceptualization, Writing

CONFLICT OF INTERESTS

None.

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