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Qualitative and Quantitative Comments on Peace and War from a Eurolinguistic Perspective

Abstract

The article studies the prominence and effect of “violence” vocabulary in non-militant contexts, in militant/peace-absent contexts and in violence-provoking/peace-threatening contexts in European languages. First, European languages display many examples of the conceptual metaphors HIGH QUALITY IS A LOUD WEAPON, GAME IS WAR, SPORTS IS WAR, BUSINESS IS WAR, and POLITICS IS WAR. Second, a news magazine analysis reveals the frequency of violence-shaped main headlines: 8% of the 2016 covers of the Polish *Polityka*, 10% of the German *Der Spiegel*, 19% of the French *L’Obs*, 19% of the British *The Economist*, and 22% of the Spanish *El Tiempo*. Third, statistical analyses show better results in a number of parameters of the Social Progress Index (a) when there is less lexical gender discrimination, (b) when the word for ‘power’ is not derived from a word for ‘able’, (c) when the words for ‘employer’ and ‘employee’ are expressed as “word-giver” and “word-taker” (on the expense of other countries, though). Fourth, the military expenditures as percentage of the gross domestic product from 2006 to 2015 (calculated by SIPRI) are taken as a basis: The military expenditure is (a) lower in countries in which ‘peaceful’ is also a regular word for ‘calm’, (b) higher in countries where the words for ‘loud’ and ‘strong, powerful’ are the same, (c) positively correlated with the prominence of violence in the national anthems.

Sommaire

L’article étudie la prominence et l’effet de “violence” dans des contextes non-militants, des contextes militants/non-pacifiques et des contextes qui provoquent la violence et menacent la paix. Premièrement, les langues européennes comprennent beaucoup d’exemples des métaphores conceptuelles HAUTE QUALITÉ EST ARME À HAUTE VOIX, JEU EST GUERRE, SPORT EST GUERRE, ÉCONOMIE EST GUERRE et POLITIQUE EST GUERRE. Deuxièmement, une analyse révèle la fréquence de violence dans les gros titres de magazines politiques: 8% des couvertures de 2016 de *Polityka* (Pologne), 10% de celles de *Der Spiegel* (Allemagne), 19% de celles de *L’Obs* (France), 19% de celles de *The Economist* (Royaume-Uni), et 22% de celles de *El Tiempo* (Espagne). Troisièmement, des analyses statistique montrent des meilleurs résultats dans un nombre de paramètres du Social Progress Index (a) quand il y a moins de discrimination lexicale quant aux sexes, (b) quand le mot pour ‘pouvoir’ ne vient pas d’un mot pour ‘capable’, (c) quand les mots pour ‘employant’ and ‘employé’ sont exprimé comme “donneur de travail” et “preneur de travail” (pourtant, aux dépens d’autres pays). Quatrièmement, les dépenses militaires en tant que pourcentage du produit intérieur brut de 2006 à 2015 (calculé par SIPRI) sont prises comme base: Les dépenses militaires sont (a) moins élevées dans des pays où ‘pacifique’ est aussi le mots régulier pour ‘calme’, (b) plus élevées dans des pays où mots pour ‘bruyant’ et ‘puissant’ sont les mêmes, (c) positivement corrélées à la prominence de violence dans les hymnes nationaux.

Zusammenfassung

Der Artikel beleuchtet Prominenz und Effekt von “Gewalt-Vokabular” in nicht-militanten, militanten/friedensfernen und gewaltprovozierenden/friedensbedrohenden Kontexten. Erstens findet man in den europäischen Sprachen viele Beispiele für die konzeptuellen Metaphern HOHE QUALITÄT IST EINE LAUTE WAFFE, SPIEL IST KRIEG, SPORT IST KRIEG, WIRTSCHATZ IST KRIEG und POLITIK IST KRIEG. Zweitens zeigt eine Nachrichtenmagazin-Analyse die Häufigkeit von gewaltgeprägten Hauptschlagzeilen: 8% der Coverseiten aus 2016 beim polnischen *Polityka*, 10% beim deutschen *Der Spiegel*, 19% beim französischen *L’Obs*, 19% beim britischen *The Economist* und 22% beim spanischen *El Tiempo*. Drittens zeigen statistische Analysen ein besseres Abschneiden bei etlichen Parameters des Social Progress Index, (a) wenn es weniger lexikalische Geschlechterdiskriminierung gibt, (b) wenn das Wort für ‘Macht’ nicht von einem Wort für ‘fähig’ stammt, (c) wenn die Wörter für ‘Arbeitgeber’ und ‘Arbeitnehmer’ als “Arbeit-Geber” und “Arbeit-Nehmer” ausgedrückt warden (dies allerdings zu Lasten anderer Nationen). Viertens wurden die militärischen Ausgaben in US-Dollars als prozentualer Anteil des Bruttoinlandsprodukts von 2006 bis 2015 herangezogen (gemäß SIPRI): Die Militärausgaben sind (a) niedriger in Ländern, wo ‘friedlich’ auch das reguläre Wort für ‘ruhig’ ist, (b) höher in Ländern, wo ‚laut‘ und ‚stark‘ gleich sind, (c) positiv korreliert mit der Prominenz von Gewalt in den Nationalhymnen.

1. Introductory Remarks

125 years ago, in 1892, the first German peace society was established: the Deutsche Friedensgesellschaft. Last year, we celebrated 200 years of the first European peace society, the London Peace Society. As we can see, special organizations to promote peace are quite young. That people can get famous and popular for actively promoting peace is quite young in history, Nobel Peace Prize has only existed since 1901. For a much longer time, people have been fond and proud of fighting. No sovereign was disliked for cultural achievements, but for military success he could later receive the title “the Great”, such as the Anglo-Saxon Alfred (848/9-899), Kaiser Otto I. (912-973), England’s conqueror and Nordic emperer leader Knut (ca. 995-1035), Casimir of Poland (1310-1370), Louis of Hungary (1326-1382), Iwan III. of Russia (1440-1505) as well as Frederic I. of Prussia (1712-1786) and Peter I. of Russia (1672-1725), who received those titles already during their life-times.

In this presentation, I would like to shed light on how “violence” and “non-violence” vocabulary are used in non-militant contexts, in militant/peace-absent contexts and in militant-provoking/peace-threatening contexts. The overall goal is to see how language can promote peace today.

2. Violence Vocabulary in Non-Militant Contexts

As already said, the time of admiration for war-makers is much longer than the time of admiration for peace-makers. This is even reflected in our daily vocabulary when violence words are used in a positively humorous way. For example, we try to “conquer” a person that we find attractive. Virtually all over Europe, an attractive curvy woman can be called a “bomb” or “sex bomb” (e.g. G. *Sexbombe*, Du. *sexbom*, Fr. *bombe (sexuelle)*, Sp. *bomba sexual*, It. *bomba sessuale*, Hu. *szexbomba*, Sw. *sexbomb*, E. *sexbomb*). In French she can even be called a “canon”: *elle est (une) canon* “she is (a) canon”. In Swedish everything that is great is “canon”. And when Italian skier Alberto Tomba was at its height, the press often dubbed him “Tomba la bomba”.

The word for “battle” and “fight” can be found in non-militant contexts, including playful forms such as E. *pillow fight*, G. *Kissenschlacht*, Du. *kussengevecht*, Fr. *bataille de polochons ~ bataille d’oreillers*, Hung. *párnacsata*, Pol. *walka na poduszki*. In Swedish it is even a “pillow war” (*kuddkrig*).

3. Violence Vocabulary in Militant-Like Contexts

With sports, business and politics we find perfect examples of war-related conceptual metaphors in George Lakoff’s sense. They are so much entrenched in people’s mind that they hardly realize this. In the Lakoffian way, the metaphors can simply be formulated as SPORTS IS WAR, BUSINESS IS WAR, POLITICS IS WAR.

In all three contexts, we use the lexical type *strategy*, which originally (i.e. in French, itself in turn from Latin-Greek) meant ‘art of war’. In most contries the word for “opponent in sport” and “opponent in war” is the same (exceptions are Hung. *ellenfél:rivalis*, Czech *protivník:soupeř*, Swed. *motståndare:motspelare*). And even if “winner in a sport match” and “winner in a war” may be expressed with different words, the word for “loser in a sport match” and “loser in a war” can always be denoted with same word (G. *Verlierer*, Du. *verliezer*, Fr. *perdant*, Es. *perdedor*, It. *perdente*, Hung. *vesztes*, Cz. *poražený*, Swed. *förlorare*, E. *loser*). In many European languages, many sports events are battles, such as decathlon, heptathlon and pentathlon (cf., e.g., for decathlon Cz. *desetiboj*, Pol. *dziesięciobój*, Swed. *tiokamp*); in German even every sport is a fight or battle

(*Wettkampf*). If companies are about to fire people, then many European, in allusion to guillotining say that heads will roll (E. *Heads will roll*, G. *Köpfe werden rollen*), fall (Fr. *des têtes vont tomber*, It. *cadranno delle teste*) or fly (Pol. *polecą głowy*, Ru. *poletjat golowy*). As to politics, many European countries could see, over the past year, something that some call “election fight, election battle” (e.g. G. *Wahlkampf*, It. *lotta*, Hung. *harc*). In Sweden it is only an “election movement” (Swed. *valrörelse*). But most countries say “campaign”, using an internationalism that goes back to 17th-century French *campagne*, itself from the military domain, meaning ‘art of war’. Furthermore, there are TV “duels” in the UK, Germany, Italy and Croatia.

All these metaphorical examples are well entrenched in the languages mentioned. And they are also used in the media. More interestingly, though, are those cases that represent a use of violence vocabulary that cannot be termed lexicalized yet, especially if used on the covers of news magazines.

4. Violence Vocabulary on News Magazine Covers

For the following section I have analyzed the 2016 covers of news magazines of five countries, from five different areas of Europe, each representing the news magazine with the highest national distribution: *The Economist* (UK, representing the north), *L’Obs* (France, representing the west), *El tiempo* (Spain, representing the south), *Polityka* (Poland, representing the east), *Der Spiegel* (Germany, representing the center).

4.1. Violence Vocabulary in Non-Militant Contexts (Metaphorical Use)

Violence Vocabulary in Non-Militant Contexts occurs only once in our corpus. Obs 2678 presents “La fusée Macron” ‘The rocket Macron’.

4.2. Violence Vocabulary in Militant-Like Contexts (Metaphorical Use)

Figurative uses of violence vocabulary in militant-like contexts (especially) politics abound in *El tiempo*:

- Tiempo 1730: “El nuevo **terminator** catalán” ‘The new Catalan terminator’
- Tiempo 1739: “**Guerra civil** en Podemos” ‘Civil war in [the political party] Podemos’
- Tiempo 1752: “La **guerra** por el último escaño” ‘The war for the last seat [in parliament]’
- Tiempo 1755: “Todas las **guerras** de / Podemos” ‘All the wars of / Podemos’
- Tiempo 1762: “Podemos / La **batalla** de las mujeres” ‘Podemos / The battle of the women’
- Tiempo 1764: “PSOE / La madre de todas las **batallas**” ‘[The political party] PSOE / The mother of all battles’
- Tiempo 1767: “**Guerra** respalda la abstención” ‘War supports [vote] abstention’
- Tiempo 1768: “El PSOE prepara un **calvario** para Rajoy / Operación infierno” ‘The PSOE prepares a torture for Rajoy / Operation Hell’
- Tiempo 1772: “El gran **desafío** de / Soraya” ‘The big / challenge of / Soraya’
- Tiempo 1774: “El ejercito **rebelde** de Errejón” ‘[Politician Íñigo] Errejón’s rebellion army’

In *Polityka* and *Der Spiegel* they are absent. They are comparatively few in *The Economist* and *L’Obs*:

- Economist 5/2016. “The **brawl** begins” [on the US elections]
- Economist 8/2016: “The world economy / Out of ammo”

- Economist 10/2016: “**Battle** lines” [on the US elections]
- Economist 32/2016: “The **ruining** of Egypt”
- Economist 15/2016: “**Imperial** ambitions” [with a picture of Mark Zuckerberg]
- Obs 2680: “Qui va **tuer** l’autre” [with pictures of François Hollande and Manuel Valls] ‘Who will kill the other’
- Obs 2691: “Le vrai **pouvoir** de Google en France” ‘The real power of Google in France’
- Obs 2718: “Le **duel**” [with pictures of Manuel Valls and Arnaud Montebourg] ‘The duel’

Single people that sporadically occur in collocations with violence vocabulary are the Turkish president Recep Erdoğan and the Russian president Vladimir Putin, both on covers of *The Economist*.

- Economist 30/2016: “Erdoğan’s **revenge**” (Erdoğan illustrated in a way that makes think of Hitler)
- Economist 51/2016: “The fall of Aleppo / Putin’s **victory**, the West’s failure”

4.3. Violence Vocabulary in Militant Contexts (Non-Metaphorical Use)

There are a number of cases of violence vocabulary in non-metaphorical use:

- Economist 20/2016: “The **war** within / A special report on the Arab world”
- Economist 23/2016: “Free speech under attack” (note, though, that the militant context becomes not apparent through the cover, only when you read the main article)
- Obs 2682: “L’**armée** souterraine de Daech” ‘ISIS’s subterranean army’
- Obs 2684: “Boris Cyrulnik / Le **terrorisme**, le mal, les héros, les victimes” ‘[Psychiatrist] Boris Cyrulnik / Terrorism, the evil, the heroes, the victims’
- Obs 2693: “Les nouvelles **cibles** de Daech” ‘ISIS new target’
- Obs 2698: “Attentat de Nice / Penser l’après” ‘Assassination of Nice / Thinking the after’
- Tiempo 1757: “Teléfono rojo / contra el yihadismo” ‘Red telephone / against jihadism’
- Polityka 12/2016: “Konstytucyjny / zamach stanu / Będzie kompromis czy **rewolucja**?” ‘Constitutionary / coup d’état / Will there be compromise or revolution?’
- Polityka 21/2016: “Władza / buduje / opozycja / **rujnuje** / Jak propaganda PiS sięga po metody z PRL” ‘Power will remain, opposition is ruined: How [the ruling party] PiS propaganda reaches for the method from the People’s Republic of Poland’
- Polityka 36/2016: “**Bastion** się sypie / Czy PiS **przejmie** stolicę?” ‘The bastion falls / Does PiS take over the capital city?’
- Polityka 45/2012: “Przepis na dyktatora” ‘Recipe for a dictator’ [referring to the book by Mikal Hem]

With respect to the war in Syria, my student Nina Hippler (2016) already analyzed headlines of *The Guardian*, *The Daily Mail*, *Frankfurter Rundschau*, *Die Welt*, *Le Monde*, *Le Figaro*, *El País*, *El Mundo*, *Gazeta Wyborcza*, and *Gazeta Prawna*. She found that all these media create an opposition between the west, Qatar and Saudi-Arabia on the one side and Syria, Russia and Iran on the other side. It was typical of the papers that headlines feature the term “war” much more often than “peace”. This is noteworthy because it risks to make readers perceive war as a normal state. Regarding the lexical field of fleeing, the German and British papers clearly prefer evaluative terms over neutral terms.

4.4. Violence-Provoking Vocabulary

My student Nora Hanusch (2014) studied metaphorical language (in George Lakoff's sense) with respect to the Iraq War in headlines of the journals *Süddeutsche Zeitung*, *Il Corriere della Sera*, *The Guardian*, *Gazeta Wyborcza* and *The New York Times* in the period from 15 to 20 March 2003 (directly before the Iraq War): All, but especially the American, British and Italian press framed the approaching war as a powerful natural phenomenon and/or theater performance and/or a game. Especially the metaphors of theater performance and game make war sound acceptable, normal, harmless.

It is common knowledge by now that the US illegally caused revolts in the Ukraine that led to the War in Donbass; it is also common knowledge that the US illegally entered Syria, while Russia legally entered Syria on request of the Syrian president Assad (cf., e.g., Ganser 2016). It is less commonly known that Russia invited the western world several times, in vain, to elaborate a security area from Vladivostok to Vancouver (cf., e.g., Bröckers/Schreyer 2014, Krone-Schmalz 2014). It also less commonly known that Nobel Peace Prize Winner US President Obama led war longer than any other president before him (cf. Landler 2016). He not only continued George W. Bush's wars, but he also started new wars, new nuclear weapons were developed and military sales were higher than under Bush (Rötzner 2016). Despite all this, violence-provoking language can only be found against Putin, nothing on Obama.

- Economist 12/2016: “Hollow superpower / Putin, Syria and the propaganda machine”
- Economist 37/2016: “Art of the lie” [with a silhouette that looks like Putin]
- Economist 43/2016: “Putinism” [with a caricature of Putin looking like an evil being, with blue face and red eyes’]
- Economist 51/2016: “The fall of Aleppo / Putin's victory, the West's failure”

And with unclear illocutionary, probably ironic force:

- Polityka 5/2016: “Kaczyński, maładiec! Ku radości Putina PiS przesuwa Polskę z Zachodu na Wschód” ‘Kaczyński, molodyets [Russian for ‘good boy’]! For the joy of Putin PiS moves Poland from West to East’ [with the picture of a happy Putin]

There is nothing against Putin on the cover pages of *L'Obs*, *El tiempo* and *Der Spiegel* on the 2016 covers. In preceding years, however, we do find a provocative headline against Putin. The cover of *Der Spiegel* 42/2015 shows Putin in a plane saying “Putin greift an” ‘Putin attacks’. There had been no similar cover when western countries had entered the war in Syria before Russia; there was also no similar cover when Germany entered the war.

Throughout the US election campaign 2016, it was clear that Hillary Clinton wanted to keep up the confrontation with Russia, while Donald Trump (how aggressive his actions may be now) at that time declared that he wanted to be on good terms with Putin. This concept of reestablishing an atmosphere of peace with Russia, however, was not valued in our magazine covers. As a matter of fact, we find just the opposite, particularly in *Der Spiegel*:

- Spiegel 5/2016: “Wahnsinn / Amerikas Hetzer Donald Trump” ‘Madness / America's Agitator Donald Trump’
- Spiegel 25/2016: “Die Mission / Hillary Clinton muss die Welt vor Donald Trump bewahren” ‘The Mission / Hillary Clinton must save the world from Donald Trump’

- Spiegel 38/2016: “Fünf Minuten vor Trump / Hillary Clintons Schwäche wird zur Gefahr für die Welt” ‘5 minutes to Trump / Hillary Clinton’s weakness becomes the danger for the world’
- Spiegel 45/2016: “The next president / Drehbuch einer Tragödie” ‘Script of a tragedy’
- Spiegel 48/2016: “Die Trumps / Eine schrecklich mächtige Familie” ‘The Trumps / A terribly powerful family’
- Obs 2674: “L’Amérique de Trump” ‘Trump’s America’ [with caricature of a furious Trump]
- Obs 2703: “Les prédictions de / Salman Rushdie / sur Trump, Daech, la crise européenne...” ‘Salman Rushdie’s predictions on Trump, ISIS, the European crisis...’
- Obs 2715: “Pourquoi l’Amérique est devenue folle” ‘Why America went mad’ [with the picture of a furious Trump]
- Economist 19/2016: “Trump’s triumph / America’s tragedy”

There are also two examples of unclear illocutionary force:

- Economist 46/2016: “The Trump era” [with a black silhouette of Trump holding a speech]
- Polityka 47/2016: “Kim będzie Donald Trump? Co zrobi Ameryce, światu, Polsce?” ‘Who will Donald Trump be? What will America, the world, Poland do?’ [with a caricature of Trump with his hair shaped like the hat of general of early modern times]

4.5. Summary

In retrospect, it can be said that all five magazines have at least one cover characterized by violence, that means 8% for *Polityka* and 10% for *Der Spiegel*, and about the double number of covers of *L’Obs* (19%), *The Economist* (19%), and *El Tiempo* (22%).

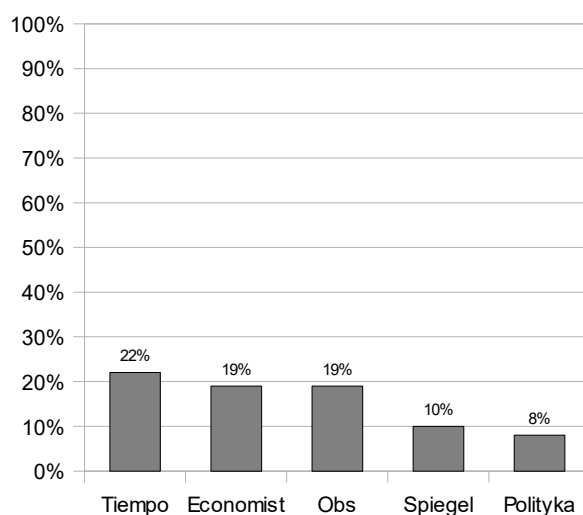


Fig. 1

Of course, it is hard to find to what degree such wording style triggers negative feelings in the national readers and/or negative reactions or tension in the target of the addressee (Putin, Trump). One way to find out would be an experimental design that would make wordings and countries comparable. Another approach is presented in the next section.

5. Violence Vocabulary and Violence Behavior

I recently published a book entitled *Wohlstand durch Wortschatz?* (Grzega 2017). It is the result of several dozens of mini-studies in which I analysed the relation between lexis and socioeconomic performance in Europe (which can be seen as relatively uniform area of culture and legislation). For these analyses it had to be granted that a certain lexical phenomenon is valid for the entire country. This is the case if the country is linguistically homogeneous. “Linguistically homogenous” shall mean that at least 90 percent share the same native language according to the CIA World Factbook¹ EU countries in which less than 90% have a common mother tongue are:

- Bulgaria
- Belgium
- Estonia
- Lettland
- Luxemburg
- Rumania
- Slovak Republic
- Slovenia
- Spain

These countries can only be respected when the two or more languages that make up 90 percent of the population show the same lexical features. In addition, Malta is a problematic case in methodological respects. Maltese children usually first acquire Maltese as their mother-tongue; but nearly all of them get into contact with English at such an early period of their life (and also have to acquire English as official language and the language of secondary schools) that Malta can be considered at least bilingual. Italian is also spoken by many citizens, but is given more and more the role of a foreign language. In Ireland, Irish is official language apart from English, but most Irish citizens know Irish neither as mother-tongue nor as secondary language. For this analysis, Ireland can therefore be considered linguistically homogeneous. This means that the following countries are included in the analyses:

- Belgium if Dutch and French show the same structure
- Estonia if Estonian and Russian show the same structure
- Latvia if Latvian and Russian show the same structure
- Luxemburg if Luxemburgish, French and German show the same structure
- Malta if Maltese and English show the same structure
- Rumania if Rumanian and Hungarian show the same structure
- Slovakia if Slovak and Hungarian Slowakei show the same structure
- Slovenia if Slovene and Croatian show the same structure
- Spain if Castilian/Spanish and Catalan show the same structure

Bulgaria, in contrast, is linguistically too heterogeneous.

What is taken into account are the standard versions of the respective languages since this is the variety that reaches most speakers of the country. If the standard variety has more than one variant for a certain variable or if a variant is not clearly classifiable, then the corresponding country is not included in the respective variable analysis.

¹ Vgl. Webseite 01.

5.1. State of the Art: Analyses with the Social Progress Index

Some of the results in my first analysis can also be linked to the question of violence and peace. These are the following:

5.1.1. In all European languages except for Esperanto, the words for ‘father’ and ‘mother’ are built through suppletion. With ‘brother/sister’, ‘son/daughter’, ‘grand-father/grand-mother’, ‘grand-son/grand-daughter’, the European languages proceed differently so that it is possible to set up a lexical discrimination or inequality index. For the lexical formation with each pair the following points are given: 0 points for suppletion, 0.5 points for an irregular motion pattern, 1.0 points for a regular motion pattern, 1.5 points for an irregular suffixation pattern and 2.0 points for a regular suffixation pattern. The maximal number of 8 points would then mean that a language is highly discriminating making the female element always dependent on the male element. German can not be taken into account here because there are two variants for “grand-son/grand-daughter” (*Enkel/Enkelin* with suffixation) and *Enkelsohn/Enkeltochter* (with suppletion). We can then discover the following: The higher the lexical kinship gender discrimination,

- the lower the chances for a self-determined life
- the higher the degree of modern slavery including human trafficking and child marriages
- the lower the respectful treatment of women
- the lower the tolerance for immigrants
- the lower the tolerance for homosexuals

The effect size of the lexical structure is medium-strong. It is strongest with “respect for women” (see Fig. 1²).

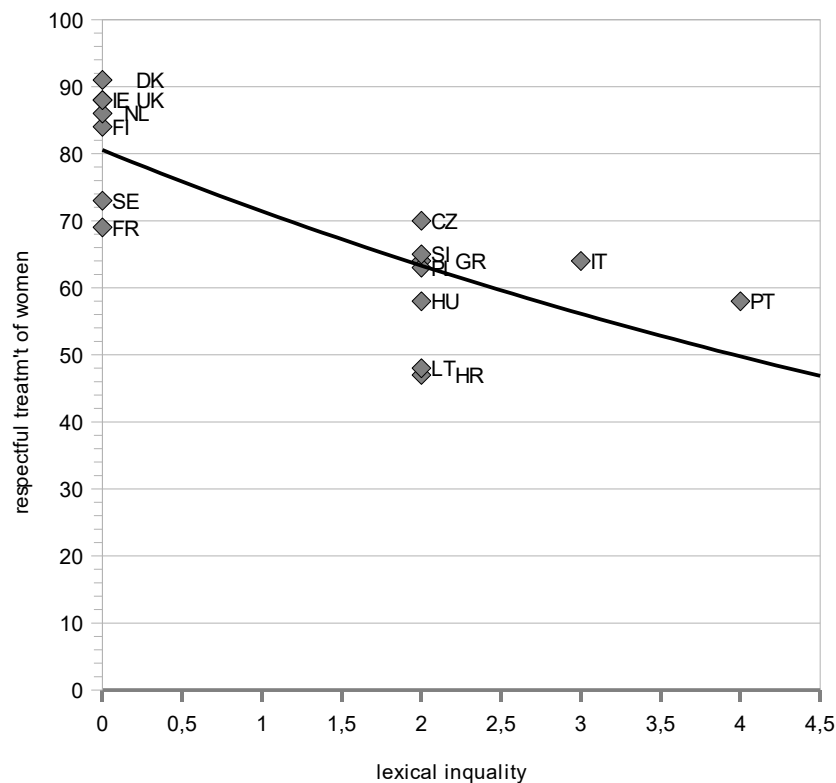


Fig. 2

² The graph shows the exponential regression curve: $f(x) = 80.55 \cdot 0.89^x$.

5.1.2. In countries in which the word for ‘power’ is derived from ‘able’, the respectful treatment of is lower (median: 59.5 points in contrast to 78 points on a 100-point scale according to the Social Progress Index). The etymological effect size is approximately 30 percent.

5.1.3. Next we shed light on the lexical pattern “work-giver vs. work-taker” for ‘employer vs. employee’. As a socioeconomic source with refer to the Social Progress Index. The analysis yields the following statistically significant features for the lexical group “work-giver vs. work-taker” , even if the effect size may only be consider striking in the first case (about 40 percent for the first entry vs. 20 percent with the other two):

- There is less political terror. (median: 1 of 5 points in the “work-taker/work-giver” group in contrast to 2 of 5 points in the other group)
- There are fewer violent crimes. (median: 1 of 5 points in contrast to 1.5 of 5 points)
- People have more chances of determining their lives (values of satisfaction: 90% of the interviewees against 71%).

One might argue that the lexical pattern “work-giver/work-taker” lacks in southern Europe so geographical conditions may explain these differences. However, if only the non-Southern countries are analyzed, some differences are still statically significant. In countries with the word-pair “work-giver”/“work-taker” there are

- fewer violent crimes
- fewer acts of political terror

The effect size of the linguistic parameter is about one third, i.e. about one third of the differences can be explained due to the difference in vocabulary structure. An explanation for this unexpected result may be that the irony or inappropriateness of the vocabulary is so obvious that the ruling groups pay attention that it becomes not part of justified criticism. However, further studies show that is frequently done at the expense of other nations.

5.2. New Results: Analyses with SIPRI figures

Thanks to SIPRI (Stockholm International Peace Research Institute) we have access to figures related to military activities. One of the objective figures are the military expenditures in US dollars as percentage of the gross domestic product. This can be seen as an expression of the value that a state attaches to the military context.

5.2.1. If we have a look at the word for ‘peace’, we note that there are two languages in which the word for ‘peace’ is also the regular word for ‘calmness’, namely Polish (*pokój*) and Croatian (*mir*). This would match a cognitive metaphor PEACE IS CALMNESS, WAR IS LOUDNESS. Of course, two languages are not enough to get relevant results, but the number of languages in which the adjective notion ‘peaceful’ is also a regular word for ‘calm’ is larger. In the countries shaped by this polysemy, military expenditure as percentage of the gross domestic product is statistically significant lower in most years from 2006 to 2015.

Country	peaceful =calm	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	av06-15
CY	n	0.021	0.019	0.017	0.018	0.019	0.018	0.017	0.016	0.015	0.018	0.018
CZ	n	0.016	0.014	0.012	0.013	0.012	0.011	0.010	0.010	0.010	0.010	0.012
ES	n	0.014	0.014	0.014	0.013	0.014	0.013	0.014	0.012	0.012	0.012	0.013
ET	n	0.019	0.021	0.021	0.023	0.018	0.017	0.019	0.019	0.020	0.020	0.020
FR	n	0.023	0.023	0.023	0.025	0.023	0.023	0.022	0.022	0.022	0.021	0.023
GR	n	0.028	0.027	0.030	0.032	0.027	0.025	0.024	0.023	0.023	0.026	0.027
HR	n	0.017	0.016	0.018	0.018	0.017	0.018	0.017	0.017	0.016	0.016	0.017
IT	n	0.017	0.016	0.017	0.018	0.017	0.017	0.016	0.016	0.015	0.013	0.016
PT	n	0.019	0.018	0.018	0.020	0.020	0.020	0.019	0.021	0.018	0.019	0.019
RO	n	0.018	0.015	0.015	0.014	0.013	0.013	0.012	0.013	0.014	0.014	0.014
SI	n	0.015	0.014	0.015	0.016	0.016	0.013	0.012	0.011	0.010	0.010	0.013
AT	y	0.008	0.009	0.009	0.008	0.008	0.008	0.008	0.008	0.008	0.007	0.008
DE	y	0.013	0.012	0.013	0.014	0.014	0.013	0.013	0.012	0.012	0.012	0.013
DK	y	0.014	0.013	0.014	0.014	0.014	0.013	0.014	0.013	0.012	0.012	0.013
FI	y	0.013	0.012	0.013	0.014	0.014	0.014	0.014	0.014	0.013	0.013	0.013
HU	y	0.012	0.013	0.012	0.011	0.010	0.011	0.010	0.010	0.009	0.008	0.011
IE	y	0.005	0.005	0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.004	0.005
NL	y	0.014	0.014	0.013	0.014	0.013	0.013	0.013	0.012	0.012	0.012	0.013
PL	y	0.019	0.020	0.018	0.018	0.019	0.018	0.018	0.018	0.019	0.022	0.019
SE	y	0.013	0.013	0.012	0.012	0.012	0.011	0.011	0.011	0.011	0.011	0.012
SK	y	0.016	0.015	0.015	0.015	0.013	0.011	0.011	0.010	0.010	0.011	0.013
UK	y	0.022	0.022	0.024	0.025	0.024	0.023	0.022	0.021	0.020	0.020	0.022
median	n	0.018	0.016	0.017	0.018	0.017	0.017	0.017	0.016	0.015	0.016	0.017
median	y	0.013	0.013	0.013	0.014	0.013	0.013	0.013	0.012	0.012	0.012	0.013
mean	n	0.019	0.018	0.018	0.019	0.018	0.017	0.017	0.016	0.016	0.016	0.017
mean	y	0.014	0.013	0.013	0.014	0.013	0.013	0.013	0.012	0.012	0.012	0.013
N	n	11	11	11	11	11	11	11	11	11	11	11
N	y	11	11	11	11	11	11	11	11	11	11	11
p		0.0120	0.0164		0.0426	0.0218		0.0488	0.0488	0.0488		
df		19	19		19	19		19	19	19		
t		2.78	2.63		2.17	2.5		2.11	2.11	2.11		
ω^2		0.23	0.21		0.14	0.19		0.13	0.14	0.13		

Fig. 3

5.2.2. Another cognitive metaphor that we can formulate in connection with volume is POWER IS LOUDNESS or STRENGTH IS LOUDNESS. In countries in whose dominant official language the words for 'loud' and 'strong, powerful' are the same, military expenditure as percentage of the gross domestic product is statistically significant higher in all years from 2006 to 2015.

Country	loud=strong	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006-15
AT	n	0.008	0.009	0.009	0.008	0.008	0.008	0.008	0.008	0.008	0.007	0.008
CZ	n	0.016	0.014	0.012	0.013	0.012	0.011	0.010	0.010	0.010	0.010	0.012
DE	n	0.013	0.012	0.013	0.014	0.014	0.013	0.013	0.012	0.012	0.012	0.013
DK	n	0.014	0.013	0.014	0.014	0.014	0.013	0.014	0.013	0.012	0.012	0.013
ET	n	0.019	0.021	0.021	0.023	0.018	0.017	0.019	0.019	0.020	0.020	0.020
FI	n	0.013	0.012	0.013	0.014	0.014	0.014	0.014	0.014	0.013	0.013	0.013
HR	n	0.017	0.016	0.018	0.018	0.017	0.018	0.017	0.017	0.016	0.016	0.017
HU	n	0.012	0.013	0.012	0.011	0.010	0.011	0.010	0.010	0.009	0.008	0.011
IE	n	0.005	0.005	0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.004	0.005
LT	n	0.012	0.011	0.011	0.011	0.009	0.008	0.008	0.008	0.009	0.011	0.010
LV	n	0.017	0.016	0.016	0.014	0.011	0.010	0.009	0.009	0.009	0.010	0.012
NL	n	0.014	0.014	0.013	0.014	0.013	0.013	0.013	0.012	0.012	0.012	0.013
PL	n	0.019	0.020	0.018	0.018	0.019	0.018	0.018	0.018	0.019	0.022	0.019
SE	n	0.013	0.013	0.012	0.012	0.012	0.011	0.011	0.011	0.011	0.011	0.012
SI	n	0.015	0.014	0.015	0.016	0.016	0.013	0.012	0.011	0.010	0.010	0.013
SK	n	0.016	0.015	0.015	0.015	0.013	0.011	0.011	0.010	0.010	0.011	0.013
UK	n	0.022	0.022	0.024	0.025	0.024	0.023	0.022	0.021	0.020	0.020	0.022
CY	y	0.021	0.019	0.017	0.018	0.019	0.018	0.017	0.016	0.015	0.018	0.018
ES	y	0.014	0.014	0.014	0.013	0.014	0.013	0.014	0.012	0.012	0.012	0.013
FR	y	0.023	0.023	0.023	0.025	0.023	0.023	0.022	0.022	0.022	0.021	0.023
GR	y	0.028	0.027	0.030	0.032	0.027	0.025	0.024	0.023	0.023	0.026	0.027
IT	y	0.017	0.016	0.017	0.018	0.017	0.017	0.016	0.016	0.015	0.013	0.016
PT	y	0.019	0.018	0.018	0.020	0.020	0.020	0.019	0.021	0.018	0.019	0.019
median	n	0.014	0.014	0.013	0.014	0.013	0.013	0.012	0.011	0.011	0.011	0.013
median	y	0.020	0.019	0.018	0.019	0.019	0.019	0.018	0.019	0.017	0.019	0.019
mean	n	0.014	0.014	0.014	0.015	0.013	0.013	0.013	0.012	0.012	0.012	0.013
mean	y	0.020	0.019	0.020	0.021	0.020	0.019	0.019	0.018	0.018	0.018	0.019
N	n	17	17	17	17	17	17	17	17	17	17	17
N	y	6	6	6	6	6	6	6	6	6	6	6
p		0.0294	0.0294			0.0260	0.0260	0.0102	0.0170	0.0170	0.0370	0.0350
df		7	7			8	8	10	8	8	8	7
t		-2.73	-2.73			2.73	2.86	3.16	-3.00	-3.00	-2.50	-2.61
ω^2		0.22	0.22			0.22	0.24	0.28	0.26	0.26	0.19	0.20

Fig. 4

5.2.3. A highly symbolic text for each nation is the national anthem. Surprisingly, a number of countries express great value to warfare in their national anthems, some of them even at the beginning like the Italian anthem: “Fratelli d’Italia, Italia s’è desta, dell’elmo di Scipio s’è cinta la testa” ‘Brothers of Italy, Italy has awoken, with Scipio’s helmet the head is decorated’. Other anthems glorify war later in the song, for example, the French anthem, whose chorus runs “Aux armes, citoyens!” ‘To the weapons, citizens!’. Some only describe the peaceful, beautiful nature of their country. The Slovene anthem is very special, however, as it is the only national anthem that pleads for peace with other nations. The end of it can be translated as follows: ‘Free may be everyone, not foe, just neighbor, from now on.’ Spain must be excluded from the analysis, because

its anthem is only instrumental. The UK, too, is excluded, since apart from “God save the Queen” both “Rule, Britannia” and “Land of Hope and Glory” can be seen as unofficial national anthems.

Based on this we can set up a violence degree of national anthems, with 0 points for glorification of peace for all nations, 1 point for glorification of peace and/or beauty in own nation or at least no glorification of war/fight, 2 points for glorification of war/fight not in first line, 3 points for glorification of war/fight already in the first two lines or the first melodic theme. Compared to military expenditure as percentage of gross domestic product, we can state for the majority of years from 2006 to 2015 (and also the average of these 10 years): The higher the violence degree, the higher the military expenditures. The impact of the vocabulary is from 32 to 40 percent.

Country	nat'l anth. viol.	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Ø06-15
Austria	1	0.008	0.009	0.009	0.008	0.008	0.008	0.008	0.008	0.008	0.007	0.008
Belgium	1	0.010	0.011	0.012	0.012	0.011	0.010	0.010	0.010	0.010	0.009	0.011
Bulgaria	1	0.023	0.025	0.020	0.020	0.019	0.015	0.016	0.017	0.015	0.014	0.018
Croatia	1	0.017	0.016	0.018	0.018	0.017	0.018	0.017	0.017	0.016	0.016	0.017
Cyprus	3	0.021	0.019	0.017	0.018	0.019	0.018	0.017	0.016	0.015	0.018	0.018
Czech Rep.	1	0.016	0.014	0.012	0.013	0.012	0.011	0.010	0.010	0.010	0.010	0.012
Denmark	1	0.014	0.013	0.014	0.014	0.014	0.013	0.014	0.013	0.012	0.012	0.013
Estonia	1	0.019	0.021	0.021	0.023	0.018	0.017	0.019	0.019	0.020	0.020	0.020
Finland	1	0.013	0.012	0.013	0.014	0.014	0.014	0.014	0.014	0.013	0.013	0.013
France	2	0.023	0.023	0.023	0.025	0.023	0.023	0.022	0.022	0.022	0.021	0.023
Germany	1	0.013	0.012	0.013	0.014	0.014	0.013	0.013	0.012	0.012	0.012	0.013
Greece	3	0.028	0.027	0.030	0.032	0.027	0.025	0.024	0.023	0.023	0.026	0.027
Hungary	2	0.012	0.013	0.012	0.011	0.010	0.011	0.010	0.010	0.009	0.008	0.011
Ireland	3	0.005	0.005	0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.004	0.005
Italy	3	0.017	0.016	0.017	0.018	0.017	0.017	0.016	0.016	0.015	0.013	0.016
Latvia	1	0.017	0.016	0.016	0.014	0.011	0.010	0.009	0.009	0.009	0.010	0.012
Lithuania	1	0.012	0.011	0.011	0.011	0.009	0.008	0.008	0.008	0.009	0.011	0.010
Luxembourg	1	0.006	0.006	0.004	0.004	0.005	0.004	0.004	0.004	0.004	0.005	0.005
Malta	1	0.007	0.007	0.006	0.007	0.007	0.006	0.005	0.005	0.005	0.006	0.006
Netherlands	1	0.014	0.014	0.013	0.014	0.013	0.013	0.013	0.012	0.012	0.012	0.013
Poland	2	0.019	0.020	0.018	0.018	0.019	0.018	0.018	0.018	0.019	0.022	0.019
Portugal	3	0.019	0.018	0.018	0.020	0.020	0.020	0.019	0.021	0.018	0.019	0.019
Romania	2	0.018	0.015	0.015	0.014	0.013	0.013	0.012	0.013	0.014	0.014	0.014
Slovak Rep.	1	0.016	0.015	0.015	0.015	0.013	0.011	0.011	0.010	0.010	0.011	0.013
Slovenia	0	0.015	0.014	0.015	0.016	0.016	0.013	0.012	0.011	0.010	0.010	0.013
Sweden	1	0.013	0.013	0.012	0.012	0.012	0.011	0.011	0.011	0.011	0.011	0.012
tau		0.3203					0.4022	0.3477	0.3643	0.3701	0.3671	0.3372
p		0.0488					0.0141	0.0320	0.0247	0.0230	0.0233	0.0398

Fig. 5

The correlation between the national anthems' violence degrees and the average annual military expenditures is illustrated in the following figure³:

³ The graph shows the exponential regression curve: $f(x) = 0.01 \cdot 1.14^x$.

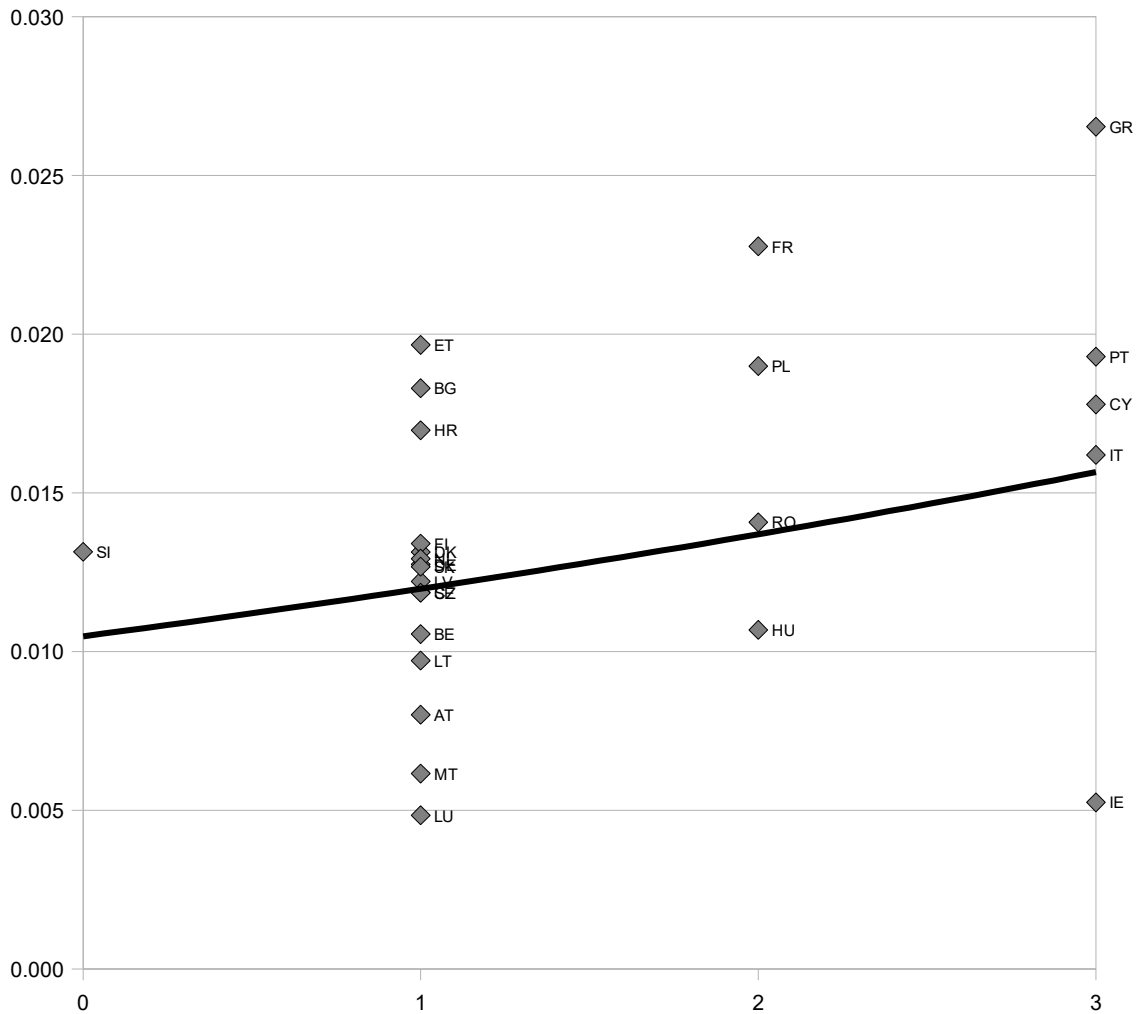


Fig. 6

6. Conclusion

As we could see there are several instances in which violence language and violent action are correlated. And there are instances where peaceful language and violent action are correlated. Based on this, I would finally like to point out three ideas. Francisco Gomes de Matos (1984) was not only prominent in promoting a Declaration of Linguistic Rights, but he was maybe the first in underlining that the conscious use of language can be peace-promoting—Patricia Friedrich, one of his followers, has called this *non-killing language*. David Crystal (1999) called this approach peace linguistics. Gomes de Matos offers some didactic poems as rules for one's general behavior, but it would be nice to see some more concrete ideas and empirical results for communicative behavior from Gomes de Matos and his group. A well worked out system for communicative behavior that is based on a variety of different social contexts is Marshall B. Rosenberg's non-violent communication (e.g. 2005). The most important elements of this system are these: First, there is a clear distinction of strategies vs. needs, in other words: individual ways of behavior vs. goals of each human beings. Second, the description of an interlocutor's strategy has to be neutral, without blame directed toward the other person. If we take into account Charles Osgood's cross-cultural studies on connotation (e.g. Osgood/Suci/Tannenbaum 1957, Osgood 1964) and George Lakoff's studies on conceptual metaphors (e.g. 2002, 2004), then we could also say that my observations

suggest that we should create and promote metaphors, even larger conceptual metaphors, that make peace sound good, active and strong.

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