# The role of CLARIN and linguistic annotation in the digital transformation in research



## **Martin Wynne**

martin.wynne@bodleian.ox.ac.uk



Bodleian Libraries &
Faculty of Linguistics, Philology and Phonetics,
University of Oxford

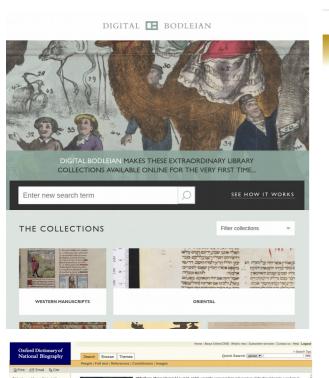
National Coordinator, CLARIN-UK

KB \rightarrow national library of the netherlands

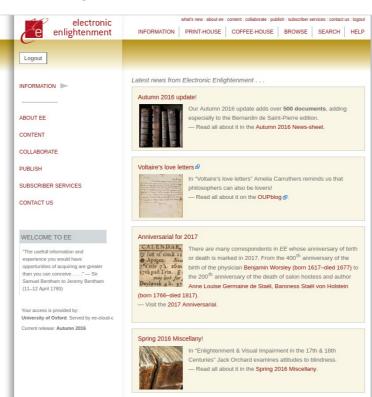
# Libraries as Research Partners in Digital Humanities

DH2019 Pre-conference, The Hague Monday 8<sup>th</sup> July 2019

## Oxford Text Archive, 43 years on and in a new home



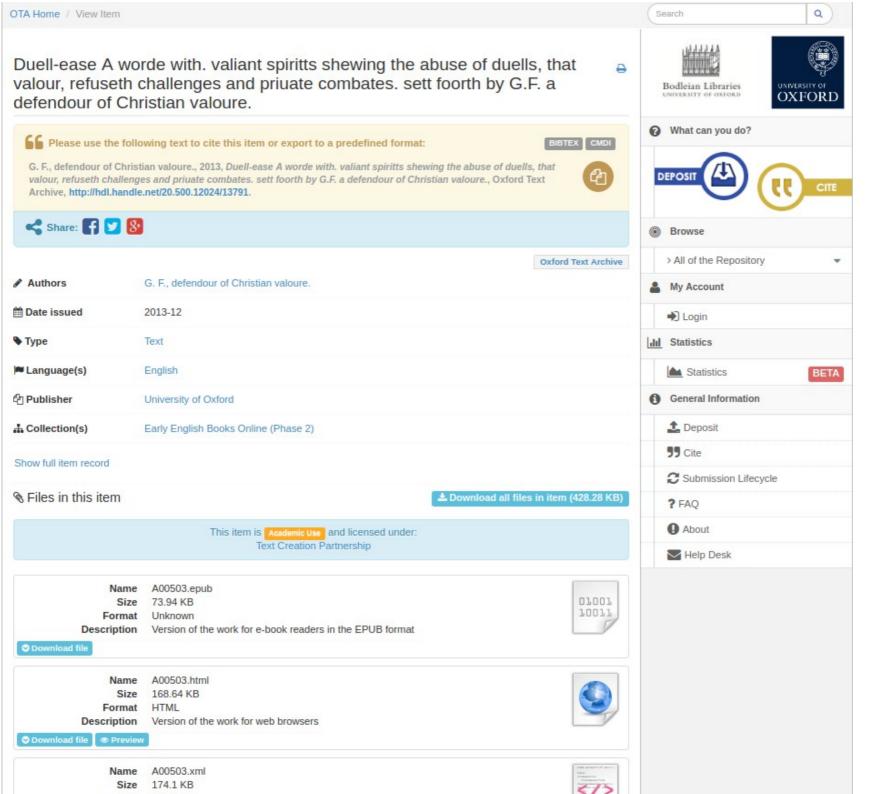














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2017 Anniversarial CLOSS A disting of some of those correspondents whose birth or death is marked in 2017.

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Current release: Autumn 2016

### Electronic Enlightenment — letters & lives online

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Now over 70,000 items of edited correspondence! Our latest update adds over **500 documents**, adding especially to the Bernardin de Saint-Pierre edition.

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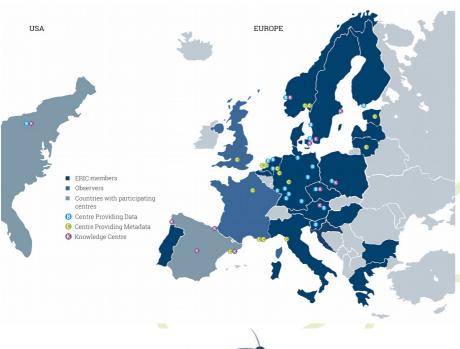
Not sure where to start? Then why not:

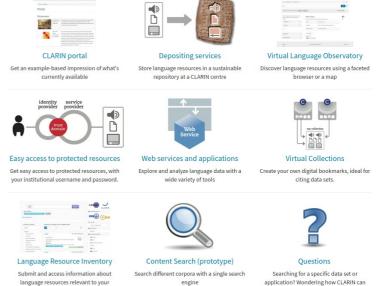
- · take a Guided tour;
- Browse the list of correspondents;
- · read our latest News-sheet;
- brush up on our Fact sheet.



### **CLARIN** in a nutshell

- CLARIN is the Common Language Resources and Technology Infrastructure;
- it provides easy and sustainable access for scholars in the humanities and social sciences and beyond
- to digital language data (in written, spoken, video or multimodal form),
- and advanced tools to discover, explore, exploit, annotate, analyse or combine them, wherever they are located
- through a single sign-on online environment.





## What's it all about?

- Discovery
- Support
- Sustainability
- Interoperability
- Cross-border collaboration



Knowledge centres

assist your research? Feel free to contact us!

# The datasets

**Electronic Enlightenment**: a collection of scholarly digital editions of correspondence.

Collection started with Voltaire & Rousseau, expanded into other Enlightenment thinkers and writers, and has expanded into other eras, languages and domains. Now 80 000+ letters, 15 000+ people

A project in the University of Oxford, initially part of the Voltaire Foundation, moved to the Bodleian Libraries in 2008. Access is via institutional subscription managed by Oxford University Press.

**Oxford Text Archive**: 63000+ historical texts, language corpora, and other outputs of digital humanities research project; mostly open access, but some resources restricted to authenticated academic users.





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showing letter 1 of 19604

next > last >>

what's new : about ee : content : collaborate : publish : subscriber services : contact us : logout

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**META** 



## EE Correspondence (critical edition)

general editor: R. V. McNamee

### **Editorial project**

Digital correspondence of Voltaire

general editor: N. Cronk

letter editor: T. D. N. Besterman

published online: 2008

letter no: D1

### crossref DOI

https://doi.org/10.13051/ee: doc/voltfrVF0850001a1c

### Writer(s)

### Armand Arouet

writer's age: 19

Voltaire [François Marie Arouet]

writer's age: 10

### Recipient(s)

### Françoise Aimée Baillif Du Pont

recipient's age: [unknown]

#### Dates

18 December 1704 (Julian)

29 December 1704 (Gregorian)

Revolutionary not applicable

### Electronic Enlightenment Scholarly Edition of Correspondence

Armand Arouet and Voltaire [François Marie Arouet] to Françoise Aimée Baillif Du Pont<sup>a</sup> 1

Monday, 29 December 1704

DOCUMENT

**ICLOSURES** 

RELATED

VERSIONS

PARENT

Paris, le 29 décembre 1704

Madame et très honorée cousine,

Mon papa m'a fait cette grâce de me comander d'estre son secrettaire ce premier d'année, et vous tesmoigner les humbles respects de nostre maison, avec les veux et prières que nous faisons pour vostre prospérité, santé, bonheur et satisfacion, qui ne sont en doutte de vostre costé eu égard à nous. Il vous suplie, madame ma cousine, le croire toujours bon parent et ne vous despartir de l'affecion que vous devez à sa famille, et moy, le secrettaire, je finiray en me disant, et Zozo,

Vos très humbles et respectueux cousins,

Zozo

Arouet

«first < previous

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# Challenges and opportunities with historical texts and historical language varieties

Mon papa m'a fait cette grâce de me comander d'estre son secrettaire ce premier d'année, et vous tesmoigner les humbles respects de nostre maison, avec les veux et prières que nous faisons pour vostre prospérité, santé, bonheur et satisfacion, qui ne sont en doutte de vostre costé eu égard à nous. Il vous suplie, madame ma cousine, le croire toujours bon parent et ne vous despartir de l'affecion que vous devez à sa famille, et moy, le secrettaire, je finiray en me disant, et Zozo,

Vos très humbles et respectueux cousins,

Zozo

Arouet

https://doi.org/10.13051/ee:doc/voltfrVF0850001a1c





# The opportunity...and the problem

We want to make new forms of research possible by offering freely available online search and exploration of our text collections ...

... but in order to search historical texts effectively, users need to be able to find inflected forms and variant spellings. How can we make that search possible?





# What are we ultimately aiming for?

Ways to combine *close reading* with *big data* approaches.





	voltfrVF085	50001a1c">							
Paris , le 29	Paris , le 29 e décembre 1704  Madame et très	NAM PUN DET:ART NUM	Paris , le @card@ décembre @card@ Madame et très		estre son secrettaire ce premier d' année , et vous tesmoigne	ce premier d' année , et vous	VER:infi DET:POS secrettaire PRO:DEM NOM PRP NOM PUN KON PRO:PER témoigner	NOM sectore ce premier de année , et vous VER:infi	rettaire témoigner
honorée cousine	honorée cousine	ADJ NOM	honoré cousin		les humbles	les humbles	DET:ART ADJ NOM	humble	
,	,	PUN	,		respects de nostre	respects de nostre	PRP DET:POS	respect de notre	
Mon	Mon	DET:POS	mon		maison	maison	NOM ma		
papa m'	papa m'	NOM PRO:PER	papa						
a	a	VER:pres							
fait	fait	VER:pper	faire						
cette grâce	cette grâce	PRO:DEM NOM	ce grâce						
de	de	PRP	de						
me	me r oommond	PRO:PER		oomme:	ndor				
d'	r command d'	er PRP	VER:infi de	commar	iuei				





## Which allows us to search by lemma, pos, original form, or modernized form

Your query "{pouvoir}\_V\*" returned 63,927 matches in 23,424 different texts (in 18,072,242 words [37,655 texts]; frequency: 3,537.30 instances per million words)

Show in random order

I<	<< <u>&gt;&gt;</u> <u>&gt;</u> <u>&gt;</u>   Snow	Trage: Snow in random order	Nev	viquery ¥ Go!
No	Text	Solution 1 t	to 50 Pa	ge 1 / 1279
1	addijoEE0050442a1c	d' hommes , qui est une des plus considerables pertes , que	<u>puisse</u>	faire une Colonie naissante , le do
2	addijoEE0050442a1c	en leur envoyant trois ou quatre cents hommes , afin qu' ils	<u>puissent</u>	avec ce secors finir la guerre dans
3	addijoEE0060487a1c	Copie de leur accusation , afin que sa defence et sa response	<u>puissent</u>	arriver ici et être considerées ense
4	addijoEE0060487a1c	publique prescrite par les dites instructions de Vôtre Majesté , ils ne	<u>pouvoient</u>	pas esperer aucun succès . Afin de
5	$\underline{addijoEE0060514a1c}$	St . James , et à Madame la Princesse , qu' elle	<u>pouvoit</u>	rester dans la Palais , autant qu' el
6	<u>baylpiVF0010001a1c</u>	ne doit avoir aucunement accreu votre deplaisir , parce qu' il se	<u>peut</u>	faire que lors que l' on leur a êcrit
7	<u>baylpiVF0010005a1c</u>	pas aussi celle qu' il faut faire pour si ménager qu' on	<u>puisse</u>	être . Ce qui vous a un peu surpris
8	<u>baylpiVF0010005a1c</u>	pour payer l' habit , parce que vous vous attendiés que je	<u>pourrois</u>	passer cet été avec l' habit d' hive
9	baylpiVF0010005a1c	vois que c' est un grand frais , mais pourtant on ne	<u>pût</u>	pas s' empêcher en aucune façon
10	<u>baylpiVF0010008a1c</u>	argent que dans les choses necessaires, et dont on ne se	<u>peut</u>	pas passer . Vous pourrés ajouter
11	<u>baylpiVF0010008a1c</u>	cheval pour le 6 ou 7 de septembre et afin que je	<u>puisse</u>	être au Carla pour le second dima
12	bavlniVF0010011a1c	suis denuis long tems , avant énuisé tout le credit que ie	nouvois	avoir par 10 ou 12 livres que i' en



Ic << >> >| Show Page: 1



# Rhetoric in EE

Sermocinatio: the speaker answers the remarks or questions of a pretended interlocutor; or hypophora: asking questions and answering them

"Now you might say — Why are you against it?" and "Were I to say as much Mr White might be in a rage, and Mr Long might say — Mr B. why will you propose such things? — You see it can not be done. The consequence would be, that between Mr White, and Mr Harrison, and Mr Long, possession never would be obtained."

Jeremy Bentham to Sir Evan Nepean, Monday, 9 June 1800 https://doi.org/10.13051/ee:doc/bentjeOU0060303b1c

"Je meurs d'envie de savoir de leurs nouvelles et en quels regimens, et sous quels generaux ils ont servi. Vous me direz que cela s'en va sans dire, qu'ils ont servi en Hollande dans l'armée meme du Roy puis que le Roy se trouvoit alternativement dans toutes les armées, et que ce qu'on appelloit armée de Mr le prince, de Mr de Turenne, etc. n'etoit proprement parlant que des detachemens de la royale."

Pierre Bayle to Jacob Bayle Monday, 31 July 1673 http://www.e-enlightenment.com/item/baylpiVF0010218a1c

### **Proverbs and similes**

"You must excuse me for giving you a Line of Latin now and then since I find my self in some danger of Losing the Tongue, for I perceive **a new Language, like a New Mistress**, is apt to make a man forget all his old ones."

Joseph Addison to William Congreve, December 1699 http://www.e-enlightenment.com/item/addijoOU0010010a1c

"Mais une femme est un furieux remora; c'est encor pis qu'un prieur"

Claude Adrien Helvétius to Léger Marie Deschamps Sunday, 7 October 1764 https://doi.org/10.13051/ee:doc/helvclUT0030145a1c







# Rhetoric in EE

## Repetition

"Voilà ce que fera votre despote, **ambitieux**, **prodigue**, **avare**, **amoureux**, **vindicatif**, **jaloux**, **foible**: car c' est ainsi qu' ils font tous, et que nous faisons tous. Messieurs, permettez-moi de vous le dire; vous donnez trop de force à vos calculs, et pas assez aux penchans du coeur humain, et au jeu des passions. Votre système est très bon pour les gens de l'Utopie, il ne vaut rien pour les enfans d' Adam."

Jean Jacques Rousseau to Victor Riqueti, marquis de Mirabeau Sunday, 26 July 1767 https://doi.org/10.13051/ee:doc/rousjeVF0330238a

## **Proverbs and similes**

"Mais un royaume est un grand corps isolé, plus séparé de ses voisins par la diversité d'intérèts, que par la mer, les citadelles, et les barrieres qui le renferment."

Beaumarchais to Louis XIV 1717 https://doi.org/10.13051/ee:doc/beaupiVF2730014 a1cun "Tu n'as pas deviné la-dessus, mais bien sur l'humeur de Blaise. Il etoit comme un dogue ; il est comme un tigre. Tu as eu bien du pouvoir de faire parler la machine."

Françoise Huguet de Graffigny to François Antoine Devaux Thursday, 23 July 1744 https://doi.org/10.13051/ee:doc/graffrVF0050722a1c

"grasse comme une abbesse"

Voltaire(twice)





## New opportunities

"It is not easy to justify assertions about the alleged frequency of infrequency of some particular belief or attitude in the past. How many examples does one need to cite in order to prove the point? Lacking any satisfactory method of quantifying these matters, all I can do is to record my impressions after long immersion in the period."

Keith Thomas, The Ends of Life, Oxford University Press, 2009.

"But the sad truth is that much of what it has taken me a lifetime to build up by painful accumulation can now be achieved by a moderately diligent student in the course of a morning."

Keith Thomas, Diary, London Review of Books, 10 June 2010.





	Your qu	uery "less *_	NN2" retur	ned 50 matche	es in 43 d	ifferent texts (	in 11,422,617	' words [1,251 te	xts]; frequency: 4.38	instances per million wo	ords) [0.304 seconds]
<	<<	>> >	Show Page:	1			Line View		Show in random order	Choose action	▼ Go!
No	Text						Solution 1	l to 50 Page 1	/ 1		
1	<u>S2DD</u> 490		(.	) yolo <b>S0688:</b> what	can you do ?	S0689: what can yo	ou do ? <b>S0687:</b> eat	less carbohydrates	and starch I 'm good thank yo	ou I 've got a mouthful	
2	<u>S2QU</u> 527			S0522: >> v	ho is n't nice	e <b>S0520:</b> we do n't lil	ke him he more or	<u>less rapes</u>	her in the office and then is ju	ust a bit self-absorbed and	
3	<u>S2XV</u> 425			that the	y can get on	with it (.) but that jus	st engenders more	(.) less students	taking responsibility for their	own learning (.) and oh it was jus	st crazy
4	<u>S376</u> 168				thing about	t next year there 's go	on na be less of us	<u>less devices</u>	S0187: yeah still get the same	e kind of deal or a similar deal	
5	<u>S4CU</u> 56		have som	ehow very cheaply	managed to 1	make the engines do	this S0521: much	<u>less emissions</u>	S0519: much less emissions l	how did you do it? S0521: yeah S	60519: erm and
6	<u>S4CU</u> 57	c	heaply managed	to make the engine	s do this S05	21: much less emissi	ions S0519: much	<u>less emissions</u>	how did you do it? S0521: yo	eah S0519: erm and they did n't	
7	<u>S57J</u> 420	he had less musi	cal instruments	80510: >> onstage	stuff yeah So	509: >> yeah definit	ely S0510: in fact	<u>less visuals</u>	as well was n't there? 80509:	:>> well he did n't have any	
8	<u>S5AA</u> 39			n't trust it S0	202: yeah S0	<b>0208:</b> so that 's why t	there 's been loads	less accidents	because there 's loads less peo	ople climbing it S0202: yeah (.) w	rell it says
9	<u>S5SC</u> 340			drunk but S0	493: and also	o you 've got ta reme	mber then there 's	<u>less cubes</u>	in those petri-dishes there to J	put on the boa- so you can	
10	<u>S69V</u> 219		do	one is (.) everythin	g you can to	reduce the revenue s	tream S0268: mm	S0269: less turbines	less solar panels S0268: mm	S0269: blah blah blah S0268: >>	yeah yeah S0269: er the second
11	<u>S6JL</u> 478			У	ou kind of fa	ce the fear and the m	nore you go (.) the	<u>less (,) barriers</u>	it seems between you and (.)	learning like (.) like u- for me it	
12	<u>S784</u> 1310			Hispanic na	ne (.) got ho-	erm got ha- erm go	t (.) way way way	<u>less responses</u>	there is a reason that happens	S0402: >> yeah loads of people	change their
13	<u>S7JG</u> 1054		prepared ()	S0084: kick it S00	<b>41:</b> spit at it	() <b>S0041:</b> like the v	women have to do	<u>less press-ups</u>	and stuff do n't they than men	n? He 's saying she	
14	<u>S8CV</u> 82			we arrived that	it was what ?	five-ish ? <b>S0687:</b> ye	eah but there were	less cars	than there were there then I th	hink () S0688: well S0687: can	you sit your
15	<u>S8J6</u> 365			drama S0115: well	in some way	s that 's good actuall	y (.) cos then with	less dramas	you can focus on you know p	progression and your work S0037:	>> yeah I
16	<u>S8K9</u> 264			're not	so many (.)	everybody has their o	own car so there 's	<u>less taxis</u>	(.) unless people drink (.) you	know in Tunisia they still drank	quite a
17	<u>SB9K</u> 217		S0192: wha	t we have to come t	p with S019	8: yeah S0192: and t	therefore we write	<u>less words</u>	S0198: I 'm er concerned as v	well I thinkANONnameM slight	tly touched on
18	SBDD 140			mean S011	5: uh the S00	37: so that 's there 's	s less ma- less and	<u>less matches</u>	are n't there ? Obviously (.) o	byiously S0115: I think it 's is n't	
19	<u>SBG4</u> 318			really	? what about	t better medicine? n	utrition? shelter?	<u>less wars</u>	? less S0417: yeah but I woul	ld have thought some Palaeolithic	people might
20	<u>SFM7</u> 216		alcohol which w	ould take alcohol n	oney away f	from the uh <b>S0037:</b> >	> yeah (.) exactly	<u>less (,) pubs</u>	and clubs S0115: take alcoho	l money (.) but you 'd have to lool	k at
21	<u>SH8K</u> 177				there so the	y get loads of tourist	s and there 's a lot	<u>less tourists</u>	going soUNCLEARWORE	O cos it 's pricier <b>S0422</b> : you do n'	t understand I
22	<u>SHLT</u> 279			-		the toothbrush neare		less bacteria	-	took outside of the bathroom and	
23	<u>SJN6</u> 421			's S042	6: the difficu	lty next year is that v	ve 're gon na have	<u>less members</u>	of staff S0425: mm (.) yeah S	60426: and with one of us going o	n sabbatical
24	<u>SLSS</u> 2476	what that mean	ns though do you	? <b>S0584:</b> UNCLI	EARWORD S	80583: >> look nine	ty-nine calories or	<u>less Squares</u>	French Fries Whatsits and Qu	uavers (.) then it says a hundred ar	nd seven
25	SMW8 4035			r	narmalade an	nd yes it 's got this an	d it 's actually got	less ingredients	in than the one she was havin	g so we knew that would	

# Corpus of Historical American English (i) 🖹 🕹 🕜











CONTEXT **SEARCH FREQUENCY OVERVIEW** 

(SHUFFLE)

CLICK FOR MORE CONTEXT							□ [?] SHOW DUPLICATES
1	1835	NF	EssayOnRateWages	Α	В	С	a greater expense?" Yes; though they have their hands for much less wages than in England.' " The average annual wages of labour in England
2	1848	MAG	AmWhigRev	Α	В	C	farther. The duty on bread stuffs will be lowered to content the operatives with less wages; the duty on raw materials for manufacture, to content the owners c
3	1849	MAG	AmWhigRev	Α	В	C	our country as cheaply as possible, and if Hessian mercenaries can be had for less wages than free citizens, we should employ them in preference. But here the
4	1852	NF	ElementsPolitical	Α	В	С	or diminish, just in proportion as a laborer is able to procure greater or less wages for a day's labor; that is, as every thing is cheaper
5	1862	MAG	NewEngYaleRev	Α	В	С	his services for a definite time, works with more indifference and though he receives less wages, he becomes in the end less profitable to his employer. " //
6	1863	FIC	FaithGartneysGirlhood	Α	В	С	then we can't afford to pay extravagantly. Mahala has been content to take less wages, and I think she means to be faithful. Perhaps if I make
7	1869	NF	HarrietMosesHer	Α	В	C	on the plantation was chosen to go with her. Harriet, who could command less wages than any other child of her age on the plantation, was therefore put
8	1870	MAG	Atlantic	Α	В	С	no difficulty but such as patience and firmness can overcome. It will work for less wages than we now pay whites, and its expense for food 478 April,
9	1871	FIC	MillibankRoger	Α	В	С	Irving. We will go where you go. We will work for you for less wages than for anybody else, " was what the house servants said to him
10	1876	FIC	WychHazel	Α	В	C	' They will make a combination with other mill-owners and undersell him; and paying less wages they can afford to do it, for a time. And a certain
11	1879	NEWS	NYT-Reg	Α	В	С	Blaine. Because the Chinese could eat rice and rats, and could work for less wages than the American laborer, was not sufficient cause for abrogating the treaty
12	1887	MAG	NewEngYaleRev	Α	В	С	majority of the great capitalists of to-day were twenty and twenty-five years ago working for less wages per diem than the common day laborer is earning to-day
13	1890	MAG	NorthAmRev	Α	В	С	either have more markets and more consumers, or less product, less employment, less wages, and less profits to capital. Situated as we are to-day, we
14	1892	NF	WhiteSlavesOppression	Α	В	C	. The incoming of the sweater has not resulted in more work, but in less wages. If my critic will take the trouble to examine the testimony given before
15	1892	NF	WhiteSlavesOppression	Α	В	С	side by side with men in the same shops and stores, are paid far less wages for the same work. This is an aristocracy of sex that shames and
16	1894	MAG	NorthAmRev	Α	В	C	that it showed the needs of labor and enabled the employers to obtain men for less wages than would otherwise be paid. The same complaint, it may be noted
17	1895	FIC	JCole	Α	В	С	" who was a " verry good hite, " and the offer to take less wages if " I would do his washin, " I found myself wondering what
18	1896	FIC	FameFortune	Α	В	С	of the most prosperous merchants in the city began in that way, only on less wages. One who wants to climb the ladder of success must, except in
19	1906	FIC	RandyRiver	Α	В	С	won't try, so I have the work, an' the girrul gits less wages, " answered the Irishwoman. When Randy returned home he found supper almost
20	1909	FIC	WhatDianthaDid	Α	В	С	am willing to undertake these intricate and responsible duties for a seven day week at less wages than are given the street-digger, for \$1.50 a day. " " Good
21	1912	MAG	Atlantic	Α	В	С	some of them have already gone, and where they now work fifty-seven hours for less wages than the Lawrence mills pay for fifty-four hours? This is not meant
22	1913	MAG	Atlantic	Α	В	С	as is reported, against the white unions, so that they may pay them less wages, it is likewise true that some white unions take advantage of the existing
23	1913	NEWS	NYT-Reg	Α	В	С	conductors. The railroads asked that extra men made necessary by full crew laws get less wages, but the board says that it is " not its function to correct
24	1922	NEWS	WallStJrnl	Α	В	С	the teeth of the competition of other manufacturing nations she must work longer hours for less wages, she must cut profits, she must reduce her imports to t
25	1925	NF	LeadingConstitutional	Α	В	С	in the particular occupations under normal conditions. Provision is made for special licenses at less wages in the case of women who are incapable of full servi-
26	1958	NEWS	WallStJrnl	Α	В	С	national product (total value of goods and services produced by the entire economy, less wages paid to all government employes) in terms of 1947 dollars divid





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**Corpus Search** 

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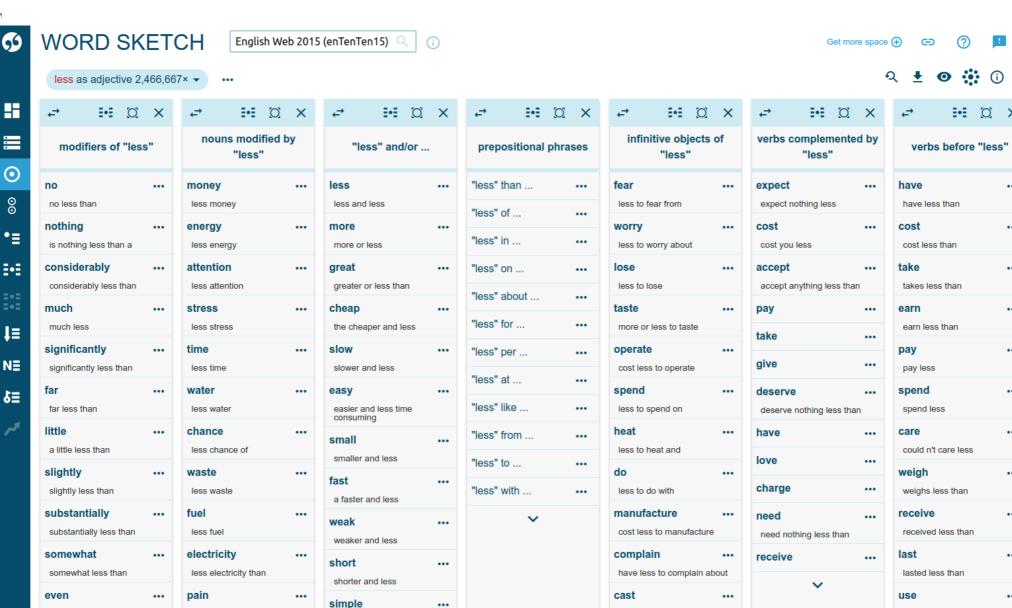


Query Corpora Save Concordance Filter Frequency Collocations View Help

Corpus: EU DGT-UD: English | Query: less (66,677 hits) ▶ Shuffle: ✓

	Text types overview
	Usage tips 💡
In case your COL query r	produces nested matches r more adjectives

Hits:	66,677   <u>i.p.m.</u> : 440.63 (rel	lated to the whole corpus)   ARF: 21,577.16   Result is shuffled		1 / 1,667
Line	selection: simple •			
	32015R1754 + 2015	€ 107 ,1 Not less than € 102 ,8 but	less	than € 105 Not less than € 100 , 7
	32016R1969 + 2016	± 100 Hz of a final specified output frequency of	less	than 1 GHz ; or b. ± 0,1 part per
	32017R0543 + 2016	1,5 — less than 2,0 rooms per occupant 2,0 —	less	than 2,5 rooms per occupant 2 ,5 — less than
	32008R0008 + 2008	with a maximum approved passenger seating configuration of 9 or	less	, and a maximum take - off mass of 5700
	32008R1031 + 2008	€ 84 ,6 Not less than € 81 ,2 but	less	than € 82,9 Not less than € 79 ,5 but
	42012X0508(01) + 2012	100 mm diameter shall be rounded with a radius not	less	than 2,5 mm ; those protruding less than 5 mm
	32004R1810 + 2004	or more ( not exceeding 12 metric number ) Measuring	less	than 833,3 decitex but not less than 277,8 decitex
	32006D0599 + 2006	the borrower can obtain lower rates and / or offer	less	security . In some cases , the borrower would not
	42011X0909(01) + 2011	in the test referred to in paragraph 6.3.2 and not	less	than 1470 daN . The Technical Service conducting the t
	31992L0116 + -2003	: 1 litre per carcase weighing 2 ,5 kg or	less	, 1,5 litres per carcase weighing between 2 ,5 kg
	32008R1031 + 2008	per litre With an octane number ( RON ) of	less	than 98 Spirit type jet fuel Other light oils Medium
	31988R0222 + -2003	of a free - at - frontier value of not	less	than365,76 ( 2 ) Glarus herb cheese ( known as
	32005R1719 + 2005	vanadium , more than 1,2 % of carbon and not	less	than 11 % but not more than 15 % of
	32004R1810 + 2004	fermentation of wine and having a total acidity of not	less	than 60 g/l , expressed as acetic acid . Waters
	32012R0388 + 2012	" system angular beam steering errors of equal to or	less	than 10 µrad ; Optical equipment and components , spe
	32005L0078 + 2005	process of an emission control device that occurs periodically in	less	than 100 hours of normal engine operation . During cyc
	32016R1821 + 2016	€ 66 ,2 but less than € 67 ,6 Not	less	than € 64,9 but less than € 66 ,2 Not
	32015R2420 + 2015	time resolution ; Framing cameras capable of 50 ns or	less	frame exposure time ; 3 . Framing tubes and solid
	32007R1184 + 2007	the Community consumption ( less than 4 $\%$ ) and	less	than 8 % of the sales of the Community producer
	31994L0055 + -2003	organic peroxide and which have a boiling point of not	less	than 150 °C . Type A diluents may be used
	32013R1001 + 2013	+ 4,6 € /100 kg /net [ 10 ] Not	less	than € 40 , 7 but less than € 41
	32007R1183 + 2007	. scatterometers having a measurement accuracy of 10 ppm or	less	( better ) ; profilometers having a measurement accurac
_				the same of the sa



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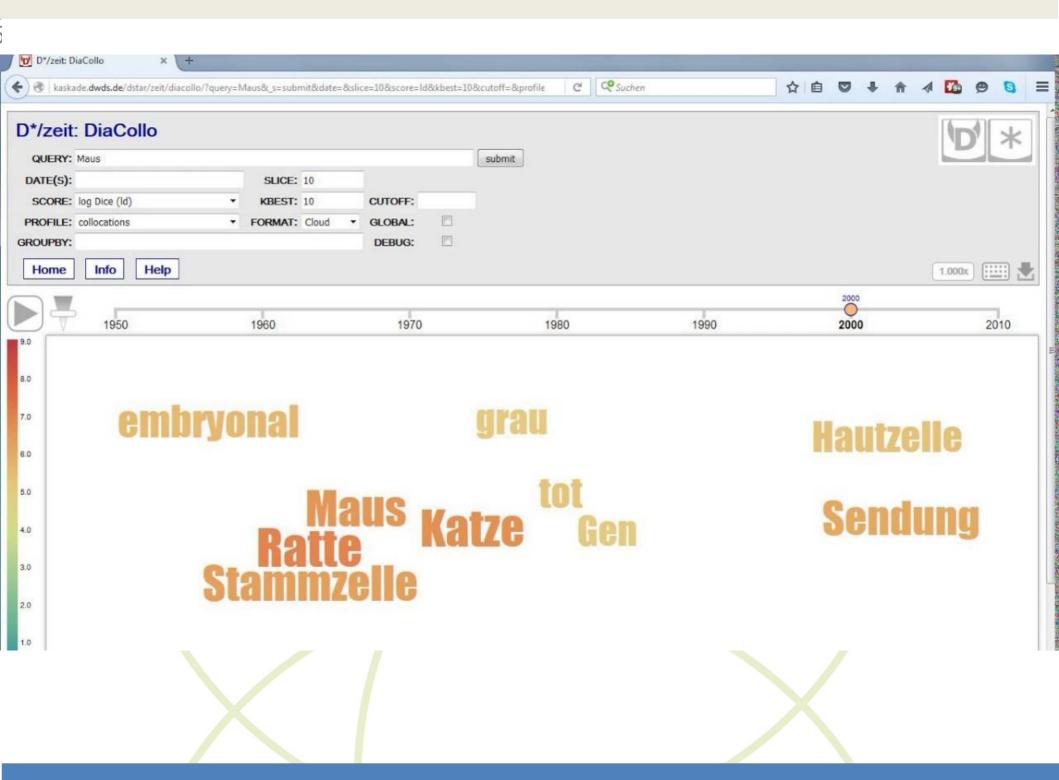
less pain

risk



repr

Back to the original interface



# Corpus analysis functions

- Searching
  - words
  - lemmas
  - wildcards
  - regular expressions
  - annotations
- Concordancing
- Collocations

- Expanding co-text
- Displaying annotations
- Using metadata
- Wordlists
- Keywords
- Identifying multi-word units
- Parallel text alignment
- Beyond text: audio, video and images...

https://ota.ox.ac.uk/documents/searching/handbook.html

## **Annotation**

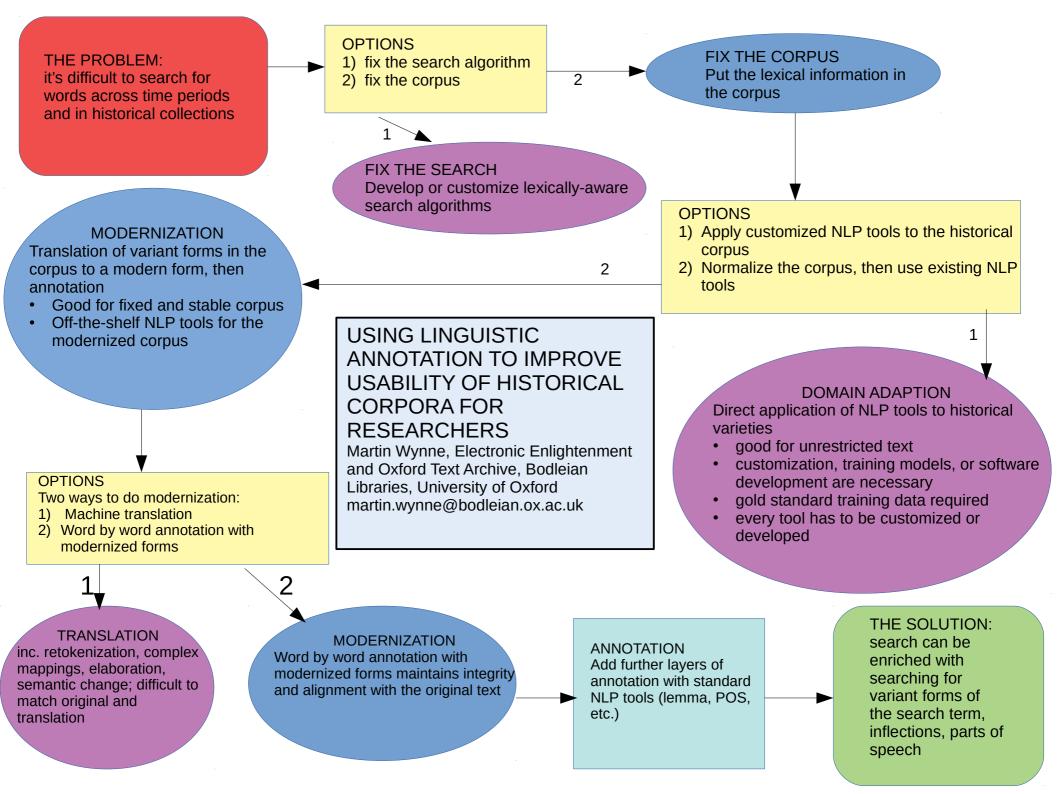
Annotation of texts should include structural markup, metadata, and linguistic annotation, including:

- Standardized metadata for basic categories such as language, relevant dates, author, title and text type;
- Part-of-speech tagging;
- Lemmatization; and
- Modernized (or otherwise normalized) forms

## **Enhanced search**

When these annotations are made searchable, it can enable the following:

- Enhanced search, for inflected and variant forms of words;
- Cross-searching the content of numerous texts, with results refined on the basis of content and metadata values;
- Visualization of results;
- 'Distant reading', data mining and extraction of results across large numbers of texts;
- Limited access via search and exploration interfaces to restricted texts, which would otherwise not be available to readers;
- Application of further levels of annotation and analysis by users based on the basic levels of annotation;
- Linking to resources held in other repositories, allowing cross-repository resource discovery and content search.



## Links

http://ota.ox.ac.uk/

http://www.e-enlightenment.com/

http://digital.bodleian.ox.ac.uk/

http://www.clarin.eu/

https://cqpweb.lancs.ac.uk/

http://kaskade.dwds.de/dstar/dta/diacollo/

https://www.sketchengine.eu/

https://lindat.mff.cuni.cz/services/kontext/corpora/corplist

https://www.english-corpora.org/



