

Audio description of states of mind in feature films: Identification and translation

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Outline

- Audio description
- TADS project
- States of mind: Definition and classification
- Corpus tool TXM
- Identification of states of mind
- German versus French ways to audio describe states of mind

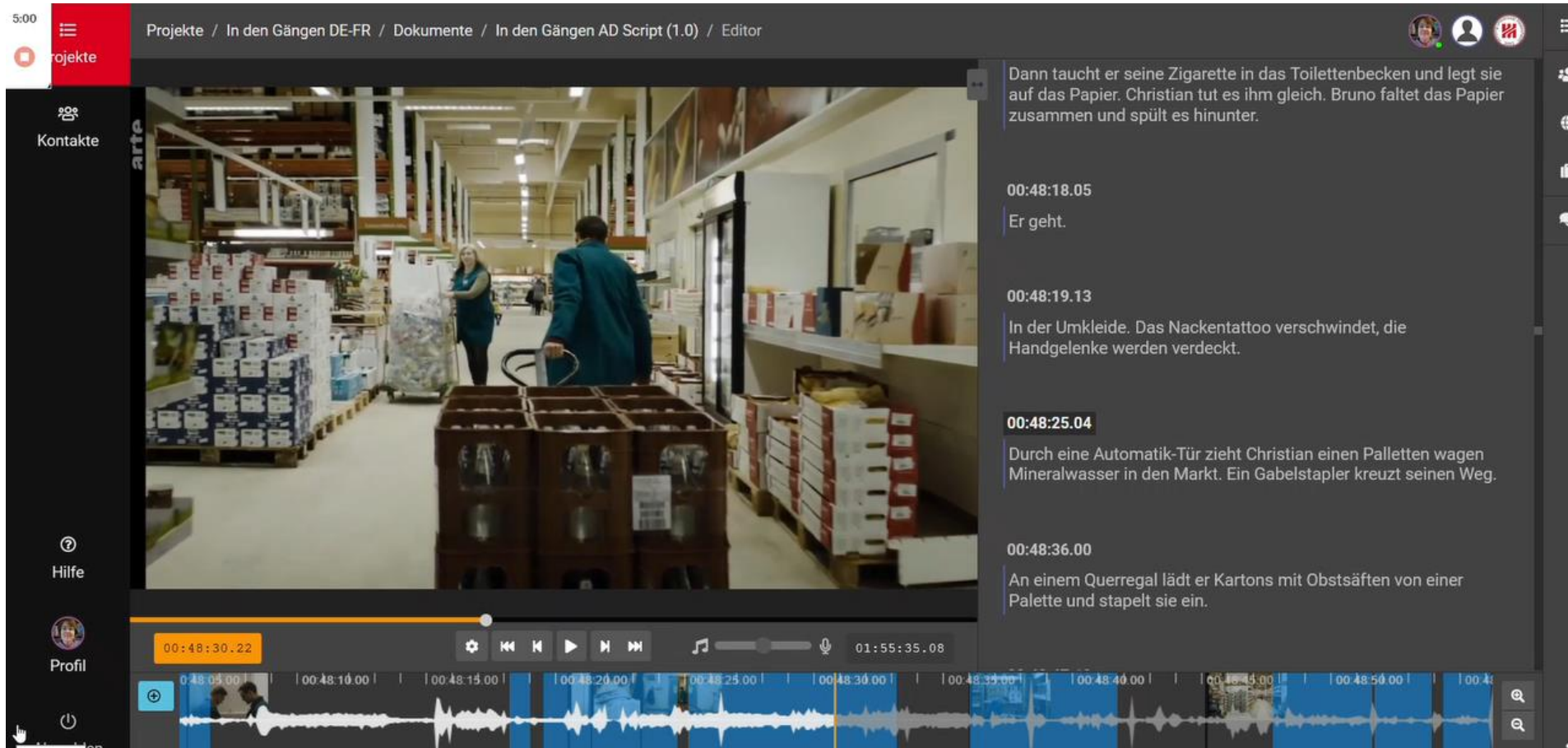


In den Gängen *[In the Aisles]*

There is a gentle, fable-like aura in [Thomas Stuber's](#) “In The Aisles,” which finds beauty and glimmers of hope in the drab and mind-numbingly symmetrical corridors of a German wholesale supermarket. (...) Throughout “In The Aisles”, we feel like we know the blue-collar people the film follows and somehow walked among the towering crates of foods and beverages they are in charge of before. But what we don't know or haven't necessarily experienced formerly is the level of kindness that sweetly flows through the layers and layers of familiar-looking shelves. (...)

Source: [Tomris Laffly, June 14, 2019](#)

Audio description sample



5:00 Projekte / In den Gängen DE-FR / Dokumente / In den Gängen AD Script (1.0) / Editor

Projekte

Kontakte

arte

Hilfe

Profil

00:48:30.22

01:55:35.08

00:48:05.00 | 00:48:10.00 | 00:48:15.00 | 00:48:20.00 | 00:48:25.00 | 00:48:30.00 | 00:48:35.00 | 00:48:40.00 | 00:48:45.00 | 00:48:50.00 | 00:48:55.00

Dann taucht er seine Zigarette in das Toilettenbecken und legt sie auf das Papier. Christian tut es ihm gleich. Bruno faltet das Papier zusammen und spült es hinunter.

00:48:18.05
Er geht.

00:48:19.13
In der Umkleide. Das Nackentattoo verschwindet, die Handgelenke werden verdeckt.

00:48:25.04
Durch eine Automatik-Tür zieht Christian einen Palletten wagen Mineralwasser in den Markt. Ein Gabelstapler kreuzt seinen Weg.

00:48:36.00
An einem Querregal lädt er Kartons mit Obstsäften von einer Palette und stapelt sie ein.

Audio description script

10:50:53

s Der Tätowierte hält zwei Schnapsflaschen. Sein Einkaufswagen ist voller Getränke.

10:51:01

„Arbeitest du hier? - Nee!“

(bisschen Lachen übersprechen)

Christian schaut sich verlegen um und geht auf die beiden zu.

s (schnell)

10:50:53

f The tattooed man is holding two liquor bottles. His shopping cart is full of drinks.

10:51:01

„You are working here? - Nah!“

(crosstalk a bit of laughter)

Christian looks around sheepishly and walks up to the two.

f (fast)

Schaeffer-Lacroix, Eva, and Kirsten Berland. to appear 2021. 'Dealing with Variation in Audio Description Scripts'. *JAT (Journal of Audiovisual Translation)*, 17 pages.

The TADS project

Origin:

Initiated by a French-German research team (Sorbonne Université & Universität Hildesheim)

Research question:

How to best produce AD scripts for the dubbed version of movies, TV shows, and documentaries?

Working assumption:

For some target languages, translating AD manuscripts seems to be a good alternative to direct AD manuscript production (Jankowska et al. 2015; Jankowska et al. 2017), called "author ADs".

Role of AD script corpora:

Corpora can be used for linguistic analysis and as training data for machine translation.

States of mind in audio descriptions

- Part of episodic film events which may be audio described or not (Vercauteren, 2016; Mazur, 2020).
- Represented by feelings such as joy, fear, or despair (Oosterwijk *et al.*, 2012), mainly derived from body language, and attitudes such as hope or approval.
- Excluded from this study: stable emotional features of film characters.

Method applied to the AD script of *In den Gängen*

1. Close reading

- Search the AD script for samples of states of mind
- Classify them into relevant categories

2. Distant reading

- Implement the data into TXM // annotate them on the part of speech level (TreeTagger)
- Search for adverbs and adverbial adjectives (quantification, visualisation)

3. Comparison of German-French ways to audio describe states of mind

- Implement an AD script sample into EXMARaLDA

Ways to classify states of mind

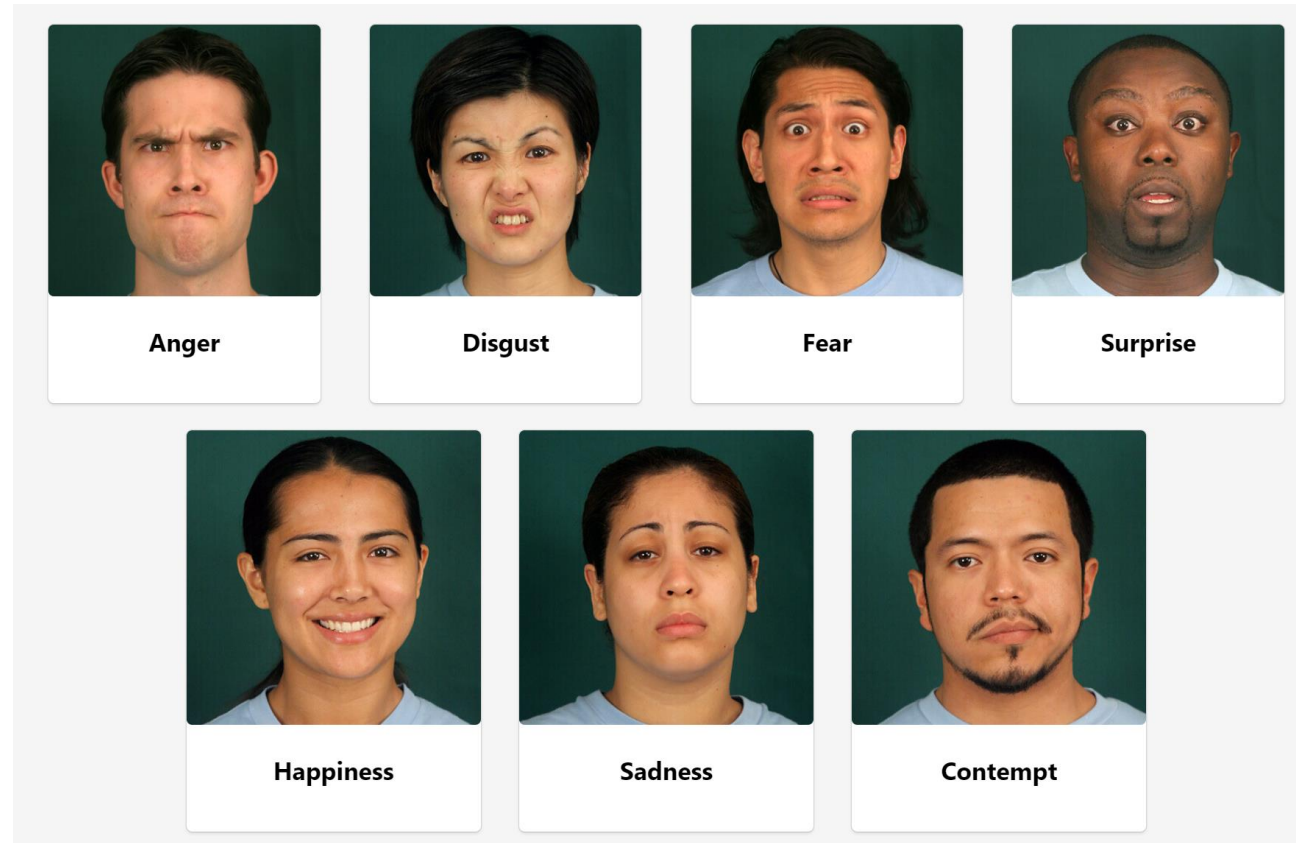
Linguistic categories

- Parts of speech
- Phrases or chunks
- Semantic frames

Psychological categories

- Basic emotions
- Valence
- Arousal

Psychological categories (1)



Universal facial expressions used as a basis for seven basic emotions (Ekman)

Source: <https://www.paulekman.com/resources/universal-facial-expressions/>

Psychological categories (2)

- Arousal:

level of activities associated with the emotional response from very excited to very calm or sleepy

- Valence:

degree of the response from positive to negative (or “pleasant” to “unpleasant”)

Source: Zhang, Wen, & Whang (2020). Recognition of Emotion According to the Physical Elements of the Video.

Semantic frames



- [About](#)
- [PMB Explorer](#)
- [Shared Tasks](#)
- [Manual](#)
- Phenomena
- [Data](#)
- [Software](#)
- [Publications](#)
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Phenomena

Adjectives

Adjectives like happy or unhappy introduce, like events, variables denoting states. Typical roles for adjectives are Attribute, Value, and Degree. Adjectives that say something about mental or physical states of person have the roles Experiencer and Stimulus. There are various modifiers of adjectives that say something about the degree an adjective is applied to an individual. The following scale exemplifies these modifications in the meaning of adjectives:

happy		not happy
very happy	rather happy	unhappy
extremely happy	slightly happy	
happiest	least happy	

- Adjectives & meaning "mental state of a person"
- Modifiers & degree of application of this meaning to an adjective

Source: <https://pmb.let.rug.nl/phenomena.php>

Sampling

time	sample	smiling	empathy	shame	dispair	high tension
10:12:23	den jungen Kollegen, der verzweifelt mit dem Hubwagen kämpft. the young colleague who is desperately struggling with the pallet truck.				1	
10:38:15	Die Blonde hält inne und sieht ihn freundlich an. The blond woman stops and looks at him in a friendly way.		1			
10:38:32	Verlegen tritt Christian von einem Fuß auf den anderen. Embarrassed, Christian steps from one foot to the other.			1		
10:38:38	Schmunzelnd nimmt die Blonde einen Karton. Grinning, the blonde takes a cardboard box.	1				
10:39:11	Christian versucht zu lächeln. Christian tries to smile.	1				
10:39:31	Christian presst die Lippen zusammen. Christian presses his lips together.				?	1
10:56:39	Resigniert senkt Christian den Kopf. Christian lowers his head in resignation.			1	1	

	anger	disgust	fear	surprise	happiness	sadness	contempt	arousal (positive...negative)	valence (level)
astonishment				x				0	0
curiosity								0	0
surprise				x				0	3
joy, smile					x			1	2
hope								1	0
inwardness								0	1
seriousness								0	1
empathy & gentleness								1	1
shame								-1	3
shyness								-1	0
uncertainty								-1	0
mistrust								-1	0
boredom								-1	0
depression, despair						x		-1	3
worry								-1	2
anger	x							-1	3
fear			x					-1	2
shock			x					-1	3
excitement, nervousness								-1	3
aggressiveness								-1	3
low tension								0	1
high tension								0	3
low speed								0	1
high speed								0	3
high intensity								0	3

Qualitative analysis (1)

Basic emotion code:

x = "matches with..."

Arousal code:

0 = not measured

1 = low level

2 = intermediate level

3 = high level

Valence code:

-1 = negative emotion

0 = neutral emotion

1 = positive emotion

Qualitative analysis (2)

Basic emotion code:

x = "matches with..."

Arousal code:

0 = not measured

1 = low level

2 = intermediate level

3 = high level

Valence code:

-1 = negative emotion

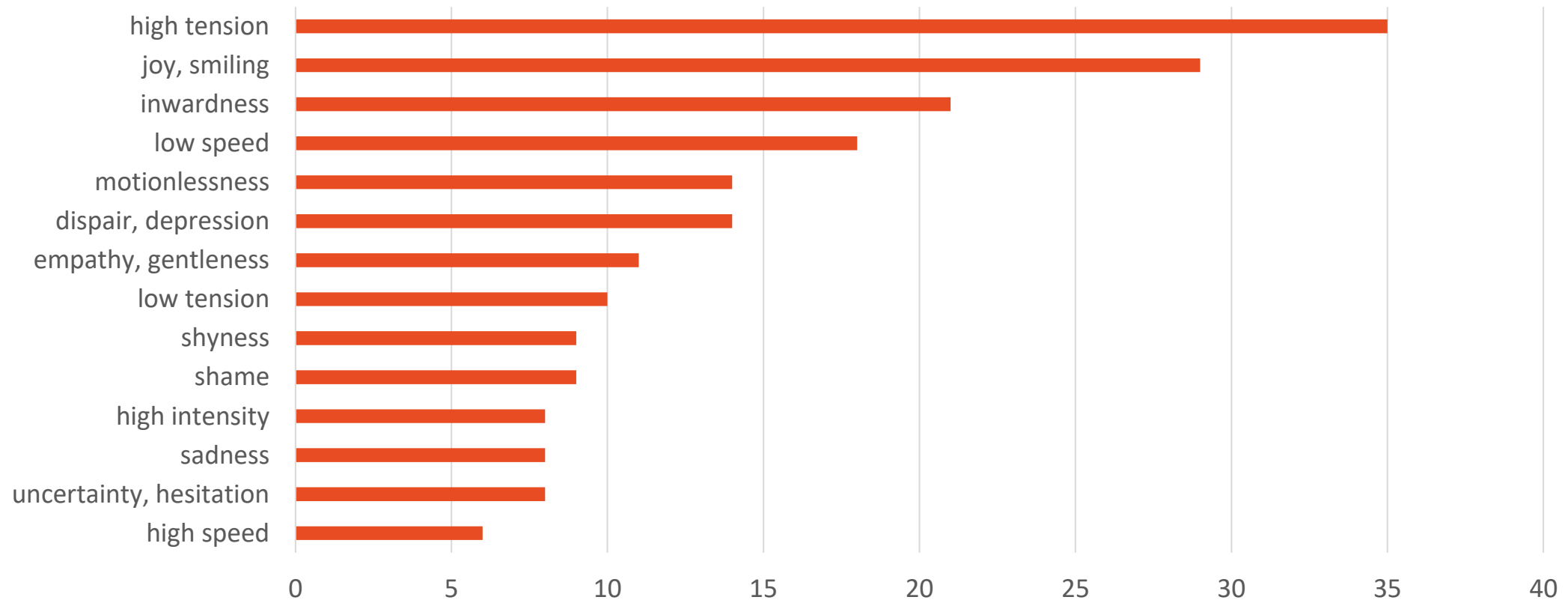
0 = neutral emotion

1 = positive emotion

	anger	fear	surprise	happiness	sadness	arousal (positive...negative)	valence (level)
astonishment			x			0	0
curiosity						0	0
surprise			x			0	3
joy, smile				x		1	2
hope						1	0
inwardness						0	1
seriousness						0	1
empathy & gentleness						1	1
shame						-1	3
shyness						-1	0
uncertainty						-1	0
mistrust						-1	0
boredom						-1	0
depression, despair					x	-1	3
worry						-1	2
anger	x					-1	3
fear		x				-1	2
shock		x				-1	3
excitement, nervousness						-1	3
aggressiveness						-1	3
low tension						0	1
high tension						0	3
low speed						0	1
high speed						0	3
high intensity						0	3

Frequency list of states of mind

Absolute frequency of states of mind



Building on previous results

Semantic categories for German adverbial adjectives in the speaker section of the AD scripts of the TV show *Neues aus Büttenwarder* (Eberlein 1997-2017)

form class	local, directional	durative, temporal, frequentative	modificative		total
			degree, judgment, evaluation	mimic, emotion	
present participle	29	1	0	91	118
rest	118	99	83	305	608
total	147	100	83	396	726

Features and functionalities of TXM

TXM is an open-source textual analysis software compatible with the TEI encoding scheme (Heiden et al. 2010).

Features and functionalities

- Import, annotate, and analyse your own corpus
- Divide the corpus into several parts
- Display the size of the sub-corpora
- Calculate the frequency of a form or pattern
- Calculate the co-occurrence between two forms or patterns
- Calculate the specificity of the vocabulary of a text
- Calculate the lexical distance between four texts or more
- Localise one or more forms or patterns in the corpus
- Watch the video segment corresponding to a word or pattern

Some details

formats txt, csv, xml, etc.

functions: *sous-corpus*, *partition*

function: *dimensions*

absolute frequency

"the company words keep"

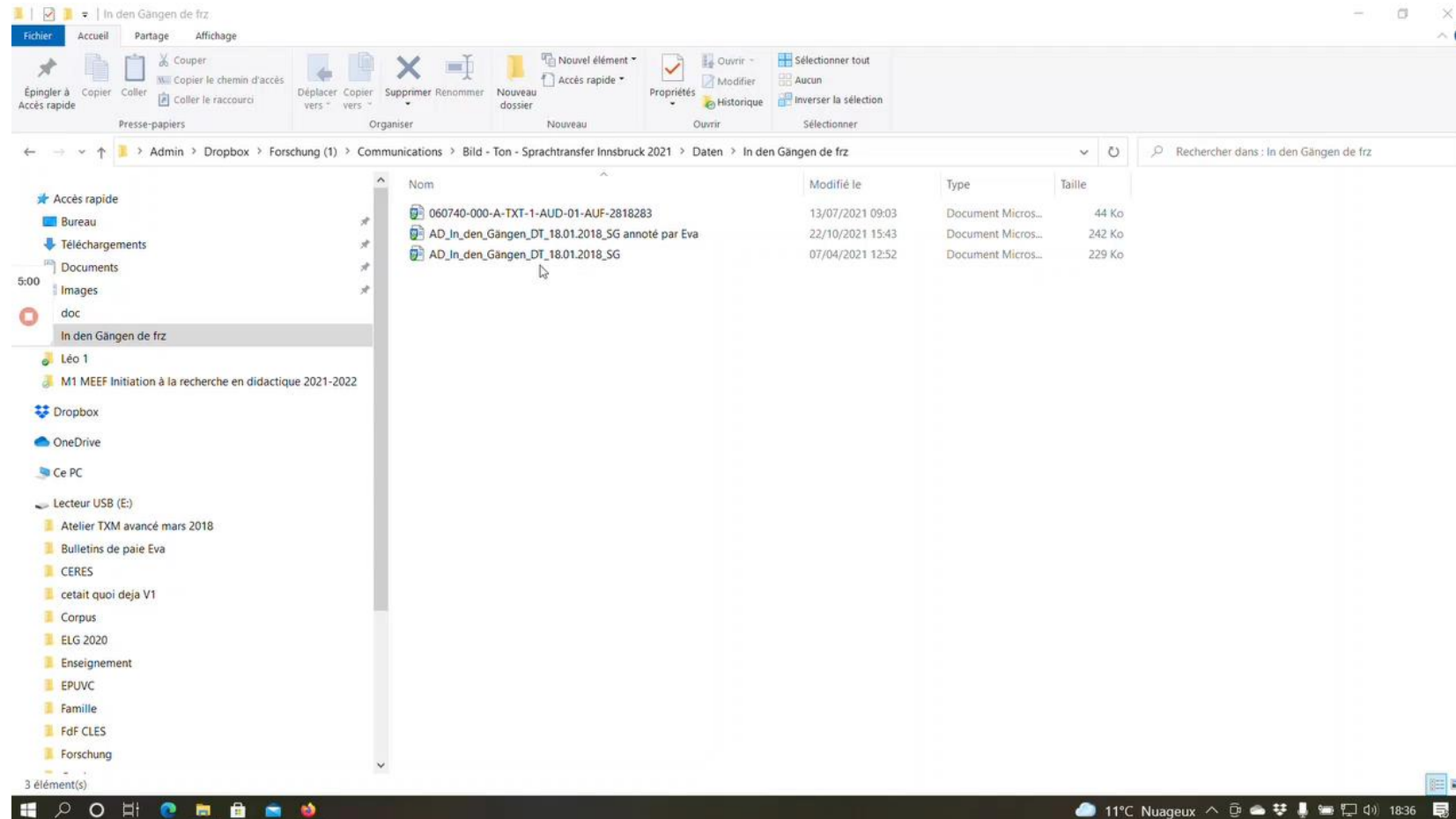
the (un)typical vocabulary of a text

function: AFC (*analyse factorielle de correspondances*)

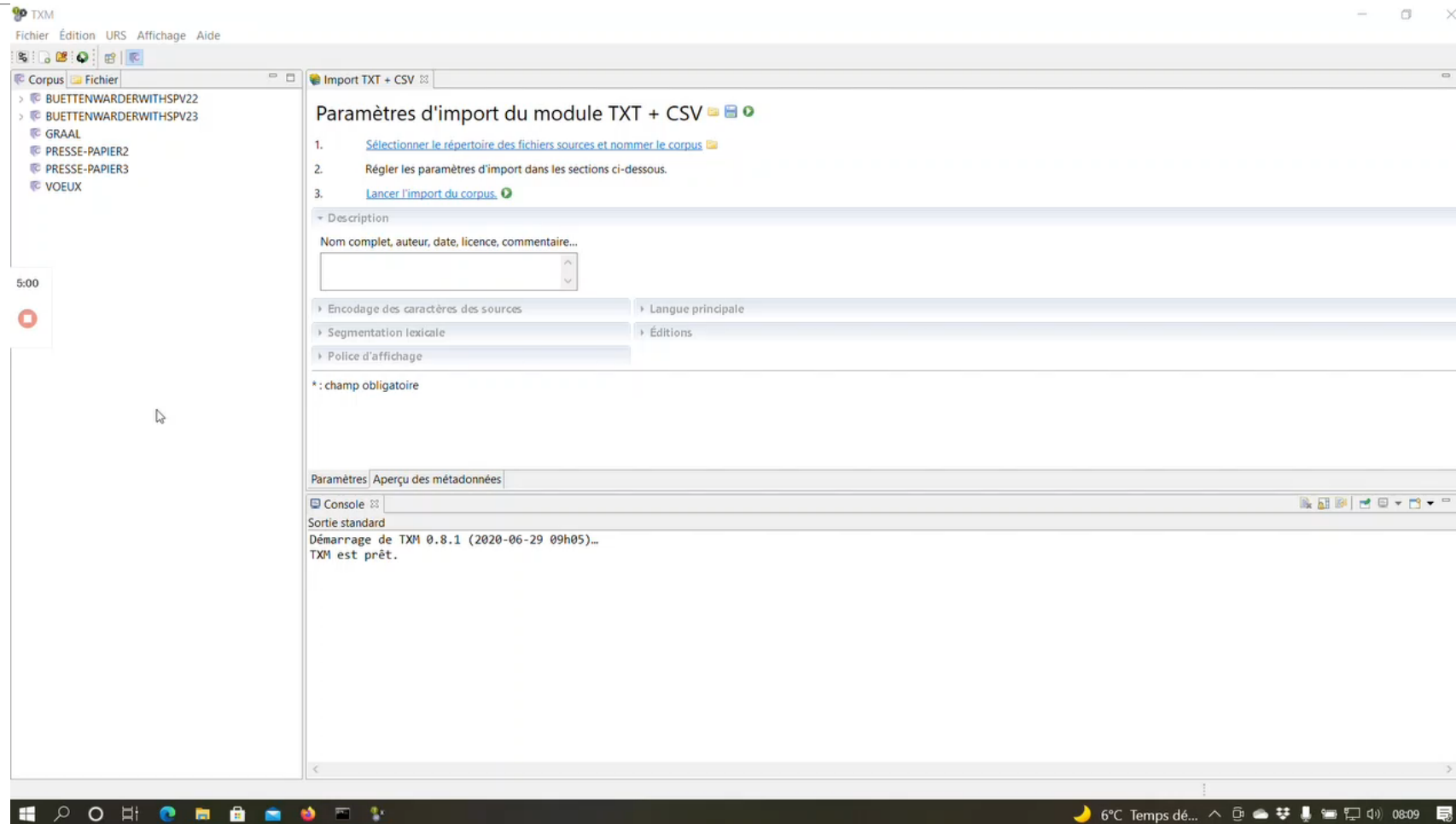
function: *progression*

cf. Pincemin et al. 2020

Prepare the AD script file for import into TXM

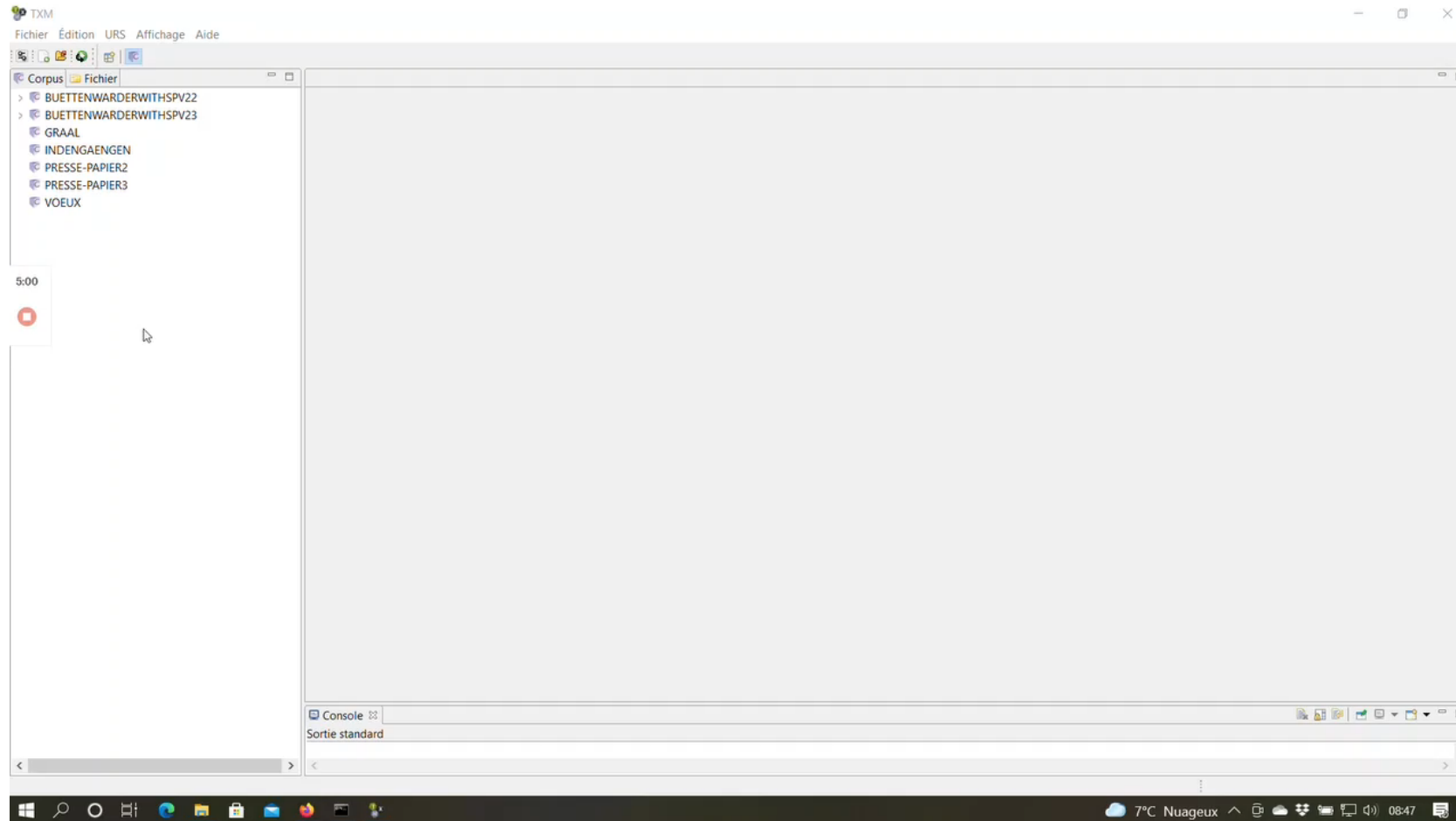


Import of the AD script into TXM

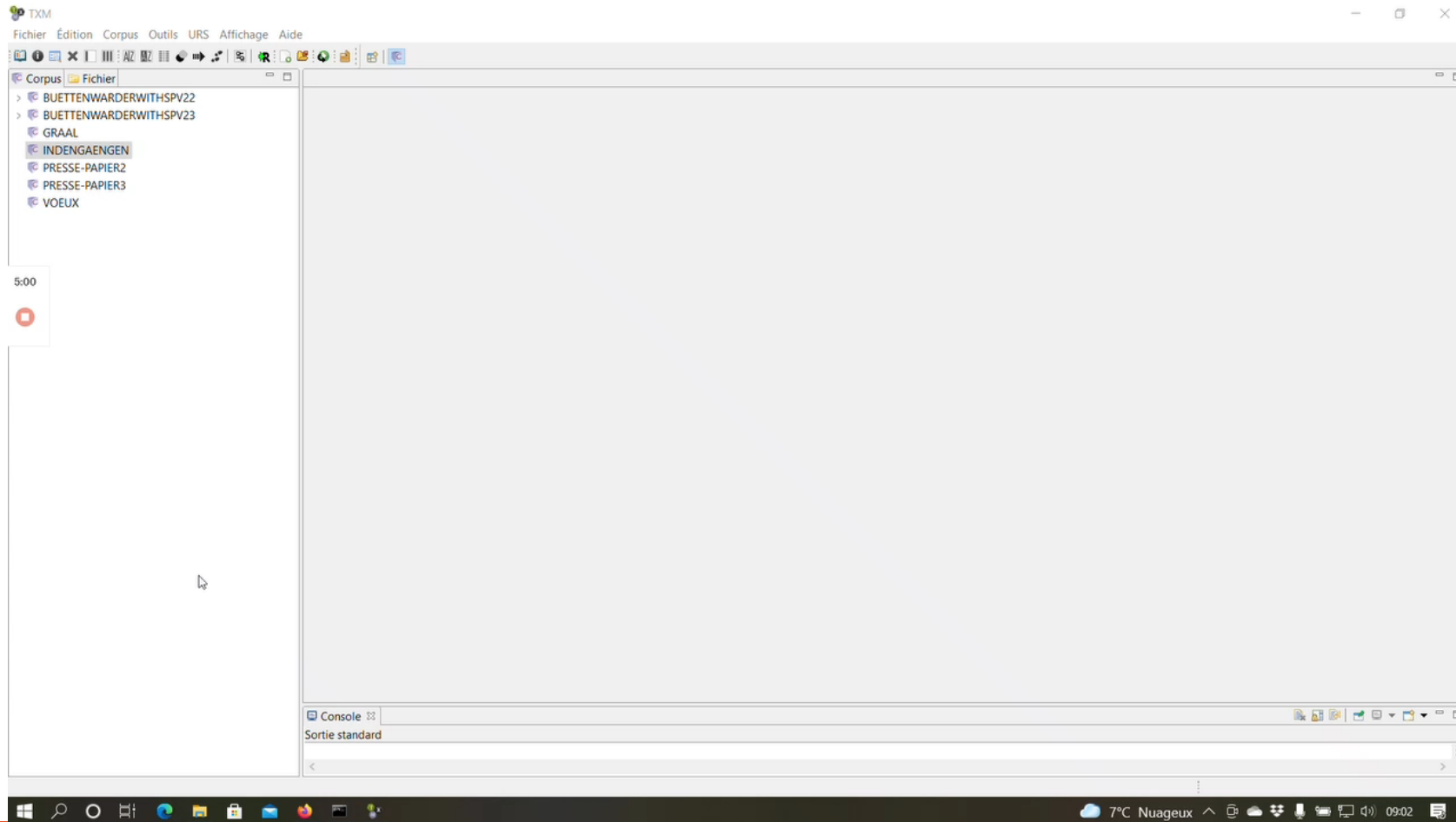


How to install
TreeTagger:
[Initxm](https://github.com/InitxM/initxm)

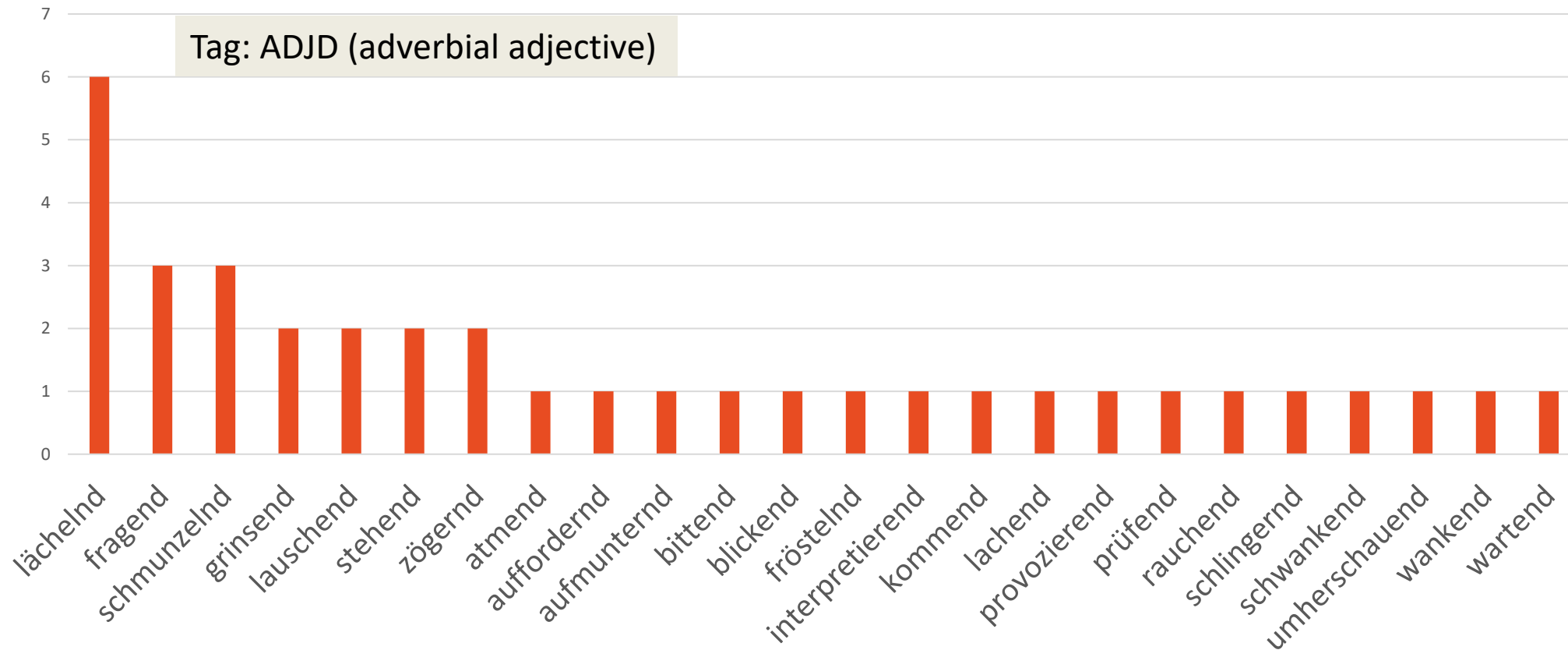
Identification of adverbs (ADV) and adverbial adjectives (ADJD) in the corpus



Search for present participle forms functioning as adverbial adjectives



Frequency of present participle forms



- smiling
- questioning
- grinning
- smirking
- listening
- standing
- hesitating
- breathing
- inviting
- encouraging
- asking
- glancing
- shivering
- interpreting
- coming
- laughing
- provoking
- examining
- smoking
- swaying
- gazing
- around
- swaying
- waiting

Present participles in *Une valse dans les allées*

form	frequency	translated form
représentant	3	representing
dodelinant	1	yodelling
donnant	1	giving
faisant	1	making
longeant	1	following
passant	1	going
poussant	1	pushing
riant	1	laughing
soufflant	1	blowing
souriant	1	smiling
surplombant	1	overhanging
vacillant	1	flickering
total	14 (1,97%) versus 37 (1,82%) in <i>In den Gängen</i>	

Tags:

- ADJ (adjective)
- VER:ppre (verb present participle)

	French	German
wpm (words per million)	1840,65	1828,87

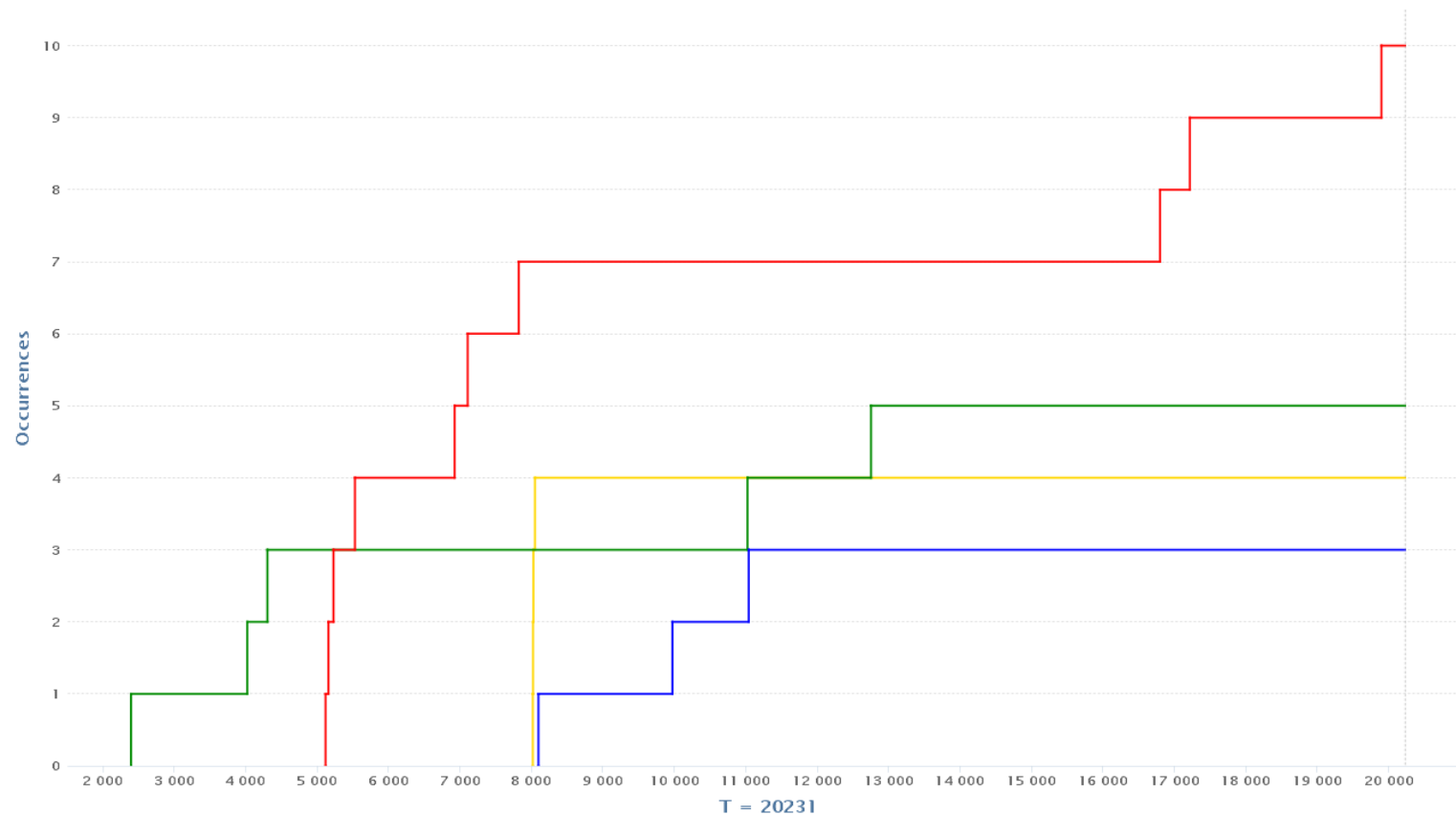
Functions of ".*ant"-forms

[(word=".*ant")&(word!="devant|avant|maintenant|instant|volant|fainéant")]

Contexte gauche	Pivot	Contexte droit
22 un exemplaire Le professeur est un quadragénaire	bedonnant_ADJ	. 33. 36 pourquoi donc ? Il se penche sur un
, mal rasé se plante devant Christian en	dodelinant_VER:ppre	de la tête. 15. 10 Il lui donne une tape
// Il est derrière une porte fenêtre	donnant_VER:ppre	sur le salon désert : les restes d'un petit déjeuner traînent
/ Il remonte l'allée des surgelés en	faisant_VER:ppre	glisser sa main le long des congélateurs. 32. 50 Il
24. 05 il marche sur un sentier	longeant_VER:ppre	une autoroute en contrebas. 1. 24. 20 //
de surveillance. Christian lui fait signe en	passant_VER:ppre	. (ah bonne journée). // Au vestiaire,
45 caisse numéro six Il observe les clients	poussant_VER:ppre	leurs caddies Il salue quelqu'un d'un hochement de tête
un café. 25. 28 Un poster	représentant_VER:ppre	des palmiers sous un coucher de soleil prend tout un mur.
. 1. 14. 59 Une affiche	représentant_VER:ppre	des poissons sur un plat surplombe un aquarium crasseux installé au fond
s'assoit devant un puzzle en cours,	représentant_VER:ppre	un coucher de soleil sous les palmiers. Il choisit une pièce
lui rend timidement. Elle le fixe en	riant_VER:ppre	37. 06 le nouveau Christian se dandine.. 37.
. (pfff) Marion le fixe en	soufflant_VER:ppre	sur son gobelet. (pfff) Le regard de Christian se
un conducteur de chariot lève le pouce en	souriant_VER:ppre	. A ses pieds, son collègue lève deux bras sectionnés d'
à tour. 22. 55 le jour	suivant_VER:ppre	// Christian attend sous un abribus. 23. 17 (
55 // Il grimpe une colline herbeuse	surplombant_VER:ppre	le quartier pavillonnaire. 1. 24. 05 il marche sur
accuse le coup 1. 25. 27	vacillant_ADJ	, il fouille sa poche ... et trouve un billet, il

Progression

Progression de [delemma="lächeln"], [delemma="schmunzeln"], [delemma="grinsen"], [delemma="lachen"] dans INDENGAENGEN



grinsen – to smirk
lächeln – to smile
lachen – to laugh
schmunzeln – to grin

- [delemma="lächeln"] 10
- [delemma="schmunzeln"] 3
- [delemma="grinsen"] 5
- [delemma="lachen"] 4

Cooccurrences

Requête ✎ "Christian"					
	Cooccurrent	Fréquence	CoFréquence	Indice	Distance moyenne
.		1634	489	3	4,1
sieht		41	22	3	1,0
und		356	123	3	4,2
Mit		39	20	3	4,2
starrt		18	11	2	,6
zu		91	36	2	3,0
leer		4	4	2	1,5
blickt		20	11	2	2,1
weitere		6	5	2	3,0
schaut		28	14	2	1,4
Miene		15	9	2	2,0

- sees
- stares
- void [gaze, grab of the toy machine]

Requête ✎ "Marion"					
	Cooccurrent	Fréquence	CoFréquence	Indice	Distance moyenne
schüttelt		8	4	3	,0
Lächelnd		4	3	3	,7
Von		12	4	2	4,2
11		324	28	2	5,1
bin		2	2	2	1,5
Lachen		8	3	2	3,0
sie		69	9	2	3,8
ihren		16	4	2	2,2
Beide		3	2	2	3,5
zuckt		3	2	2	,0

- shakes [her head]
- smiling
- laughter [stage direction]

Comparison of the German and the French AD script

Original German AD script: *In den Gängen*

- 20,231 tokens

French author AD script: *Une valse dans les allées*

- 7,606 tokens

Different linguistic means to refer to states of mind

German	Sample	Translation
present participle	Fragend blickt Christian zu Bruno.	Questionly, Christian looks at Bruno.
adverbial adjective	Der inhaliert tief.	He inhales deeply.
adverb	leider	regretfully

French	Sample	Translation
present participle (phrase)	Il lève le pouce en souriant.	He gives a thumbs up with a smile.
prepositional phrase	Bruno l'observe d'un air circonspect.	Bruno looks at him warily.
apposition (nominal group)	bras ballants	with hanging arms
apposition (nominal group)	(la) tête basse	with his head down
apposition (adjective)	Réfléchit un moment (...) ... pensif.	He thinks for a moment (...) ... pensive.
adverb	Il le lui rend timidement.	He shyly returns it.

Next tasks

Classification of states of mind:

- Explore the benefits of semantic frames

Annotation of states of mind in AD scripts:

- Select categories: shame, shyness, low speed, high speed, low tension, high tension
- Annotate them with XML

Corpus analysis with TXM:

- Search for adverbs and adverbials & the selected categories
- Search for other linguistic means to represent valence or arousal

Comparison of German-French ways to audio describe states of mind:

- Implement the AD script of *In den Gängen* and the one of *Une valse dans les allées* into EXMARaLDA

Our warmest thanks go to...

- Sommerhaus Produktion & permission to use the video *In den Gängen* for research purposes,
- ARTE & permission to use the French and German AD scripts of this movie,
- Christian David and Lukas Pajonczek, Video to voice & permission to use of *Frazier* for the needs of the TADS project,
- Saskia Schulz & creation of the Frazier sample,
- ...and to you, who listened to my talk!

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