

# MeThAL : Towards a macroanalysis of theater in Alsatian

Pablo Ruiz, LiLPa Lab, Université de Strasbourg

Plotting Poetry 5, Tartu



# Outline

- **Alsatian theater**
- Project goals
- Corpus selection and encoding
  - Encoding automation
  - Social variable annotation
- Resource sharing: Repositories and interface
- Conclusion and outlook

# Alsatian theater

- **Alsatian** : Germanic varieties spoken in Alsace (Eastern France)
  - Main language of oral communication in the area until last third of the 20th century
  - Standard orthographies have been proposed recently (e.g. *Orthal*), but practices vary
- Continuous theatrical production since the early 19th century (Gall, 1974)
  - “Golden Age” around 1900 (dialect theater venues founded in main cities)
  - Tradition continues to our days
- **Genres**
  - Comedy predominates, with several subgenres (from refined satire to farce)
  - Other genres: popular drama (*Volksspiele*), tales (*Märel*)

# Alsatian theater

- Interest of this tradition
  - Computational literary studies (**CLS**)
    - Previously unexplored using computational means
    - Comparison with hegemonic traditions surrounding it (German and French)
    - Sufficient volume of public-domain material
  - Natural Language Processing (**NLP**): Challenges inherent to low-resource language varieties
    - Little electronic text available
    - Non-standardized orthography
    - Code-switching
  - **Societal** impact
    - Promoting the vitality of Alsatian varieties

# Outline

- Alsatian theater
- **Project goals**
- Corpus selection and encoding
  - Encoding automation
  - Social variable annotation
- Resource sharing: Repositories and interface
- Conclusion and outlook

# MeThAL project : Towards a macroanalysis of theater in Alsatian Goals

- Creating the first large public TEI-encoded Alsatian theater corpus (1870-1940)
- 50 TEI plays (500,000 tokens) for which no previous electronic text existed
- Developing the first linguistic resources for analyzing the corpus
- Promoting online presence of the tradition

# MeThAL project : Towards a macroanalysis of theater in Alsatian Goals

- **Quantitative drama analysis**
  - Numerous projects exist for the major European traditions
    - Cf. QuaDramA, Q:Track, Emotions in Drama, Dramacode, « Théâtre classique », DraCor
  - We focus on a “minor” tradition, not explored so far with such methods
  - Complémenter connaissances sur la tradition (Cerf, 1972, 1975; Huck, 1998, 2005; Hülsen, 2003)
- Increase electronic **resources** for **Alsatian**
  - Cf. RESTAURE and DIVITAL projects (nationwide scope for several languages in France)
- Historical **sociolinguistics**
  - Cf. Huck et al. (2007) ; Huck (2015)

# Outline

- Alsatian theater
- Project goals
- **Corpus selection and encoding**
  - Encoding automation
  - Social variable annotation
- Resource sharing: Repositories and interface
- Conclusion and outlook

# Corpus: (Digital) sources

- Numistral: Alsatian heritage digital library (Strasbourg National Library)
  - 250 image-mode plays
  - OCR not available or not reliable enough for most analyses at this point
- Archive.org (image-mode)
- Google Books (image-mode)
- Wikisource
  - Complete works by a single author (A. Lustig). Electronic text, but no TEI
- New digitizations if an important work is unavailable in digital format

# Corpus: Play selection criteria

- Strive for variety rather than exhaustive coverage of major authors
  - Temporal and geographic variety
  - Female authors
  - Lesser-known authors
- Focus on comedy but include major dramas and some tales
- Prefer digital sources, but also checked specialized literature (e.g. Gall, 1974) to identify important works not yet digitized
  - Obtained digitizations for some such works

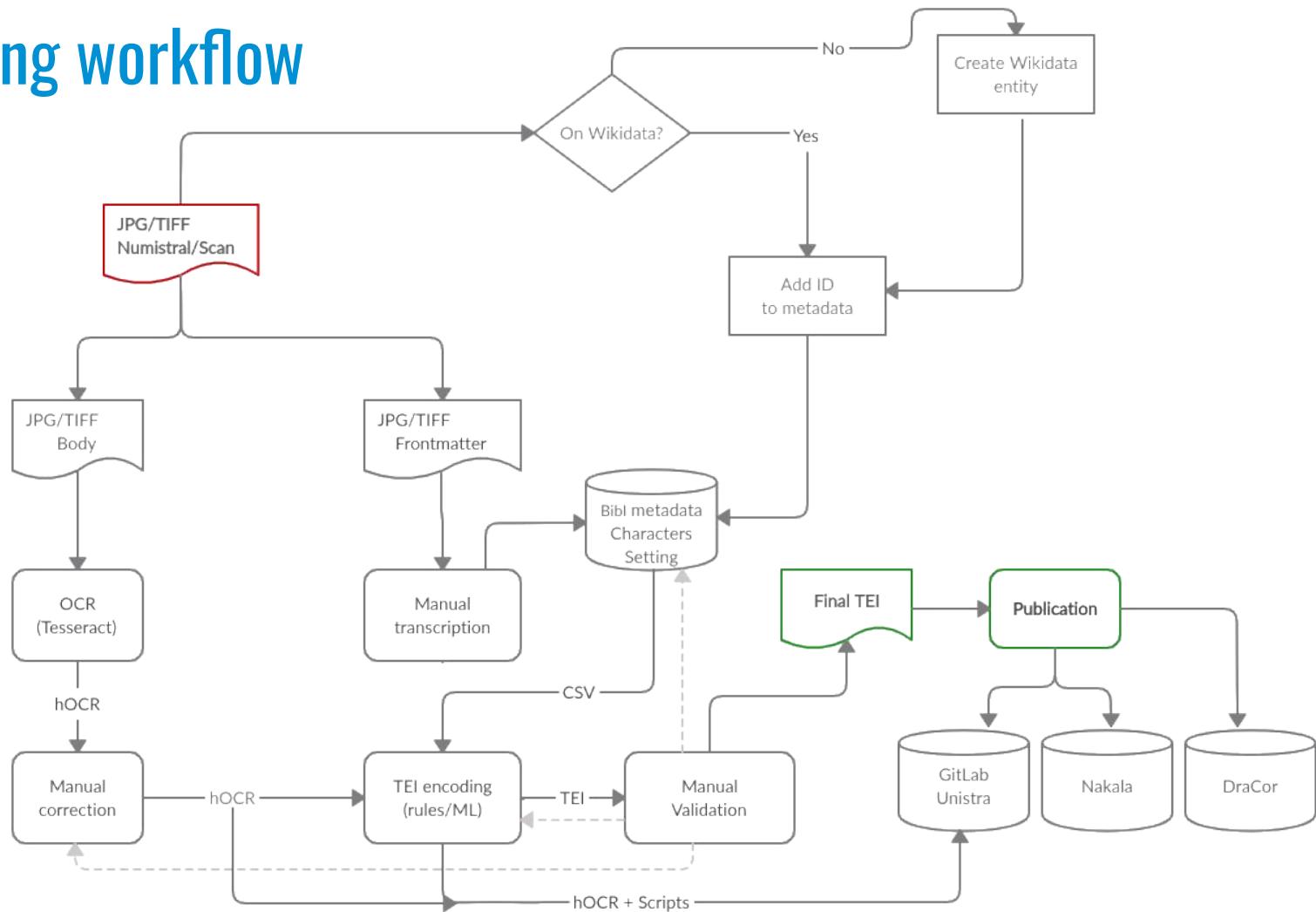
# Outline

- Alsatian theater
- Project goals
- **Corpus selection and encoding**
  - **Encoding automation**
  - Social variable annotation
- Resource sharing: Repositories and interface
- Conclusion and outlook

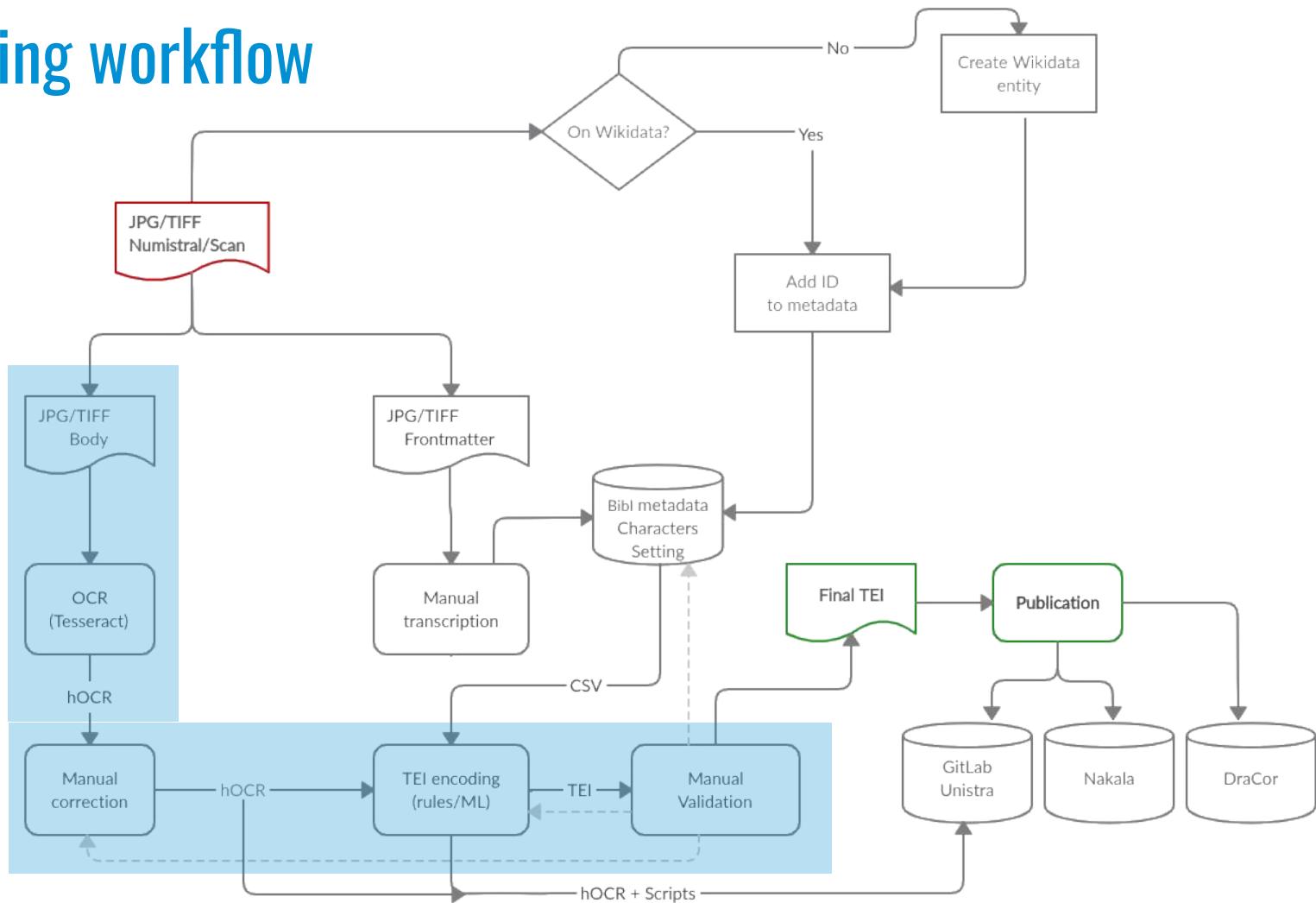
# TEI encoding: why?

- Has been used extensively in computational drama analysis
- Allows us to encode a play's structural divisions
  - Essential for the automation of basic analyses
    - configuration matrices
    - separating character speech from stage directions
- Allows us to identify each character's speech separately
- Other general advantages of the TEI
  - Widely adopted conventions, several ways to integrate analytical annotations
  - Metadata encoding capabilities

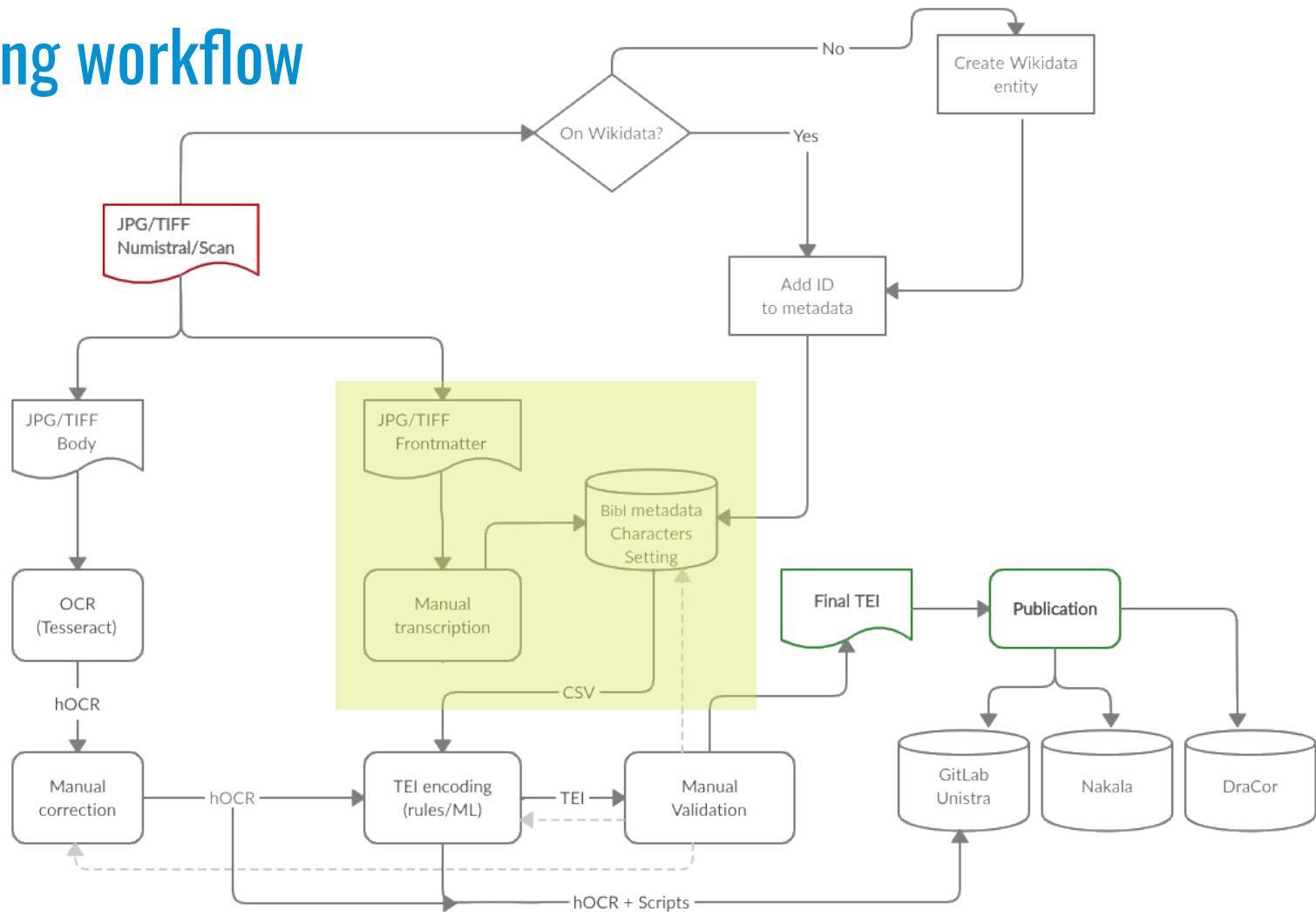
# TEI encoding workflow



# TEI encoding workflow



# TEI encoding workflow



# TEI encoding: what?

- Structural divisions
- Detailed bibliographic metadata
  - E.g. author origin and publisher location (relevant for geographical variants)
- Character social variables (personography)

# TEI encoding: how?

- The **main body** of the plays (after the *dramatis personæ*) is quite regular
- Optical character recognition (OCR)
  - Combination of Tesseract models
    - Language-specific: German + French
    - Script-specific: Fraktur vs. “Latin” (Antiqua)
  - Manual correction
- Automatic TEI encoding + manual corrections
  - Symbolic means (dictionaries + rule sets)
  - Machine learning with sequence-labeling models, based on first manually corrected plays

# TEI encoding: how?

- **Bibliographic information + *dramatis personæ***
- Too much variability for automatic encoding directly from OCR output
- Manual transcription in delimited format + auto TEI encoding

# Outline

- Alsatian theater
- Project goals
- **Corpus selection and encoding**
  - Encoding automation
  - **Social variable annotation**
- Resource sharing: Repositories and interface
- Conclusion and outlook

# Encoding: Character social variables

- Plays' character lists are an indication of socio-political groups in it (Wiedmer et al., 2020)
- Character features determine possible plots and conflicts (Asmuth 2016, 97-98; Pfister 2001, 220)
- Annotating character social variables is a way to gain an overview of the corpus while the complete text is still being encoded

# Character social variables

- Profession, socio-professional group, age, gender, social class
- Socio-professional group taxonomy adapted to the plays' context
- Creation of a TEI-encoded personography (Ruiz & Werner, 2022) using the *feature structures* formalism
- 2,386 characters annotated in the personography, from 231 plays

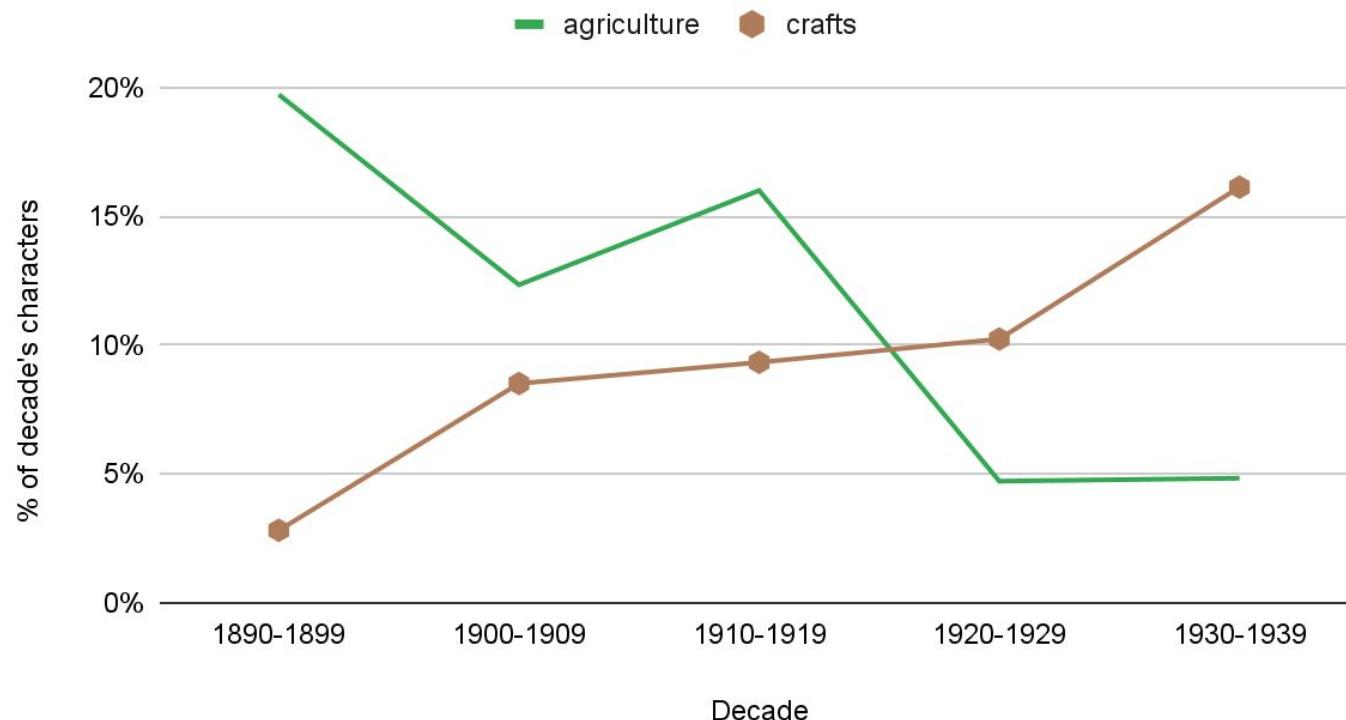
# Character transcription and annotation

<b>persName</b>	<b>roleDesc</b>	<b>sex</b>	<b>profession</b>	<b>normProfession</b>	<b>class</b>
Drohtspitz	Schuehmachermaischter	M	Schuehmachermaischter	master shoemaker	LMC
Eddes	Lehrbuewe biem	M	Lehrbuewe	shoemaker	LC
	Drohtspitz		(Schuehmacher)	apprentice	
Schakob	e Büur	M	Büur	farmer	LC
Linser	Photograph	M	Photograph	photographer	LMC
<hr/>					
Mlle Florentine Blind	rentière	F	rentière	rentier	UMC
Mlle Amélie	G'sellschaftre vu Mlle Florentine	F	G'sellschaftre	companion	UMC
Sophie	Kecha	F	Kecha	cook	LC
Elise	femme de chambre	F	femme de chambre	housemaid	LC
<hr/>					
Fritz Grinsinger	Konservenfabrikant	M	Konservenfabrikant	manufacturer	UC
Olga Gauthier	stud. phil.	F	stud. phil.	philosophy student	UC

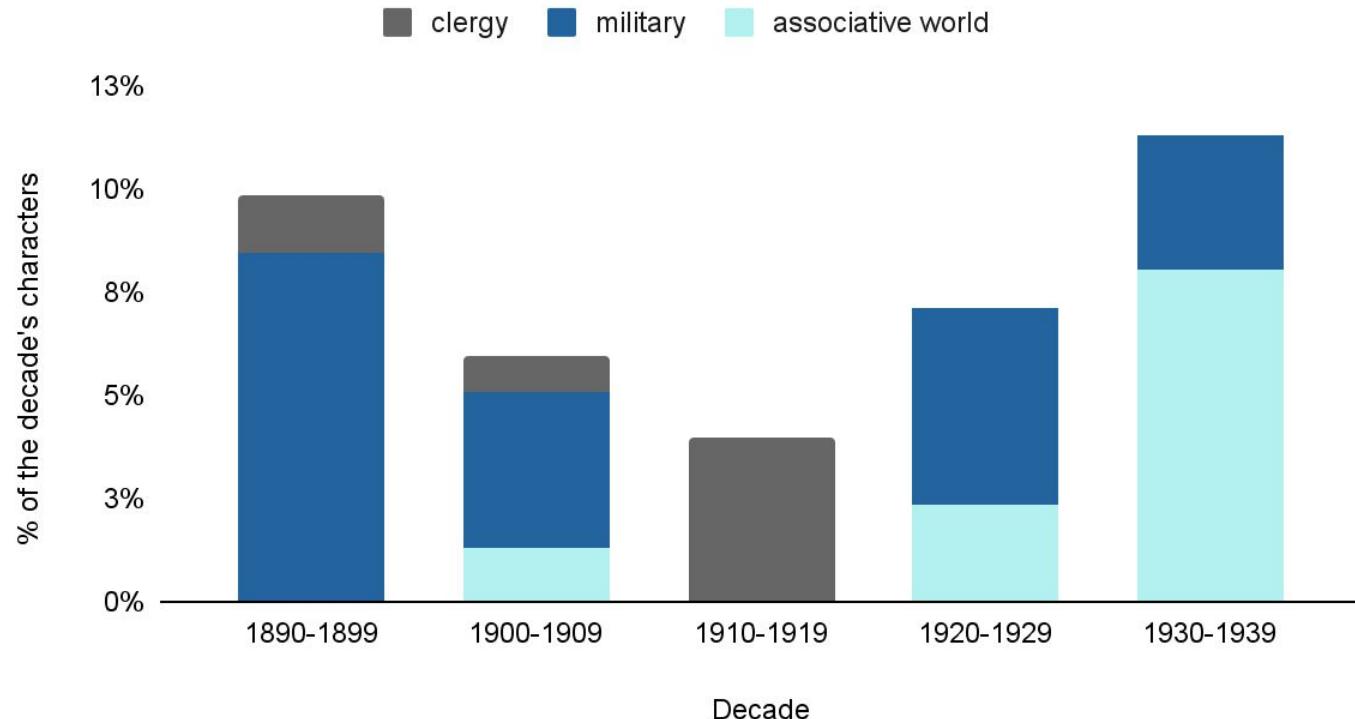
# Socioprofessional groups

- Inspired by historical profession taxonomies like HISCO (van Leeuwen et al., 2014)
- 12 groups
  - o professionals, scientific, technical
  - o intermediate professions
  - o service and sales
  - o crafts
  - o industry and transportation
  - o agriculture
  - o elementary professions
  - o **rentiers**
  - o clergy
  - o military
  - o government officials
  - o **associative world**

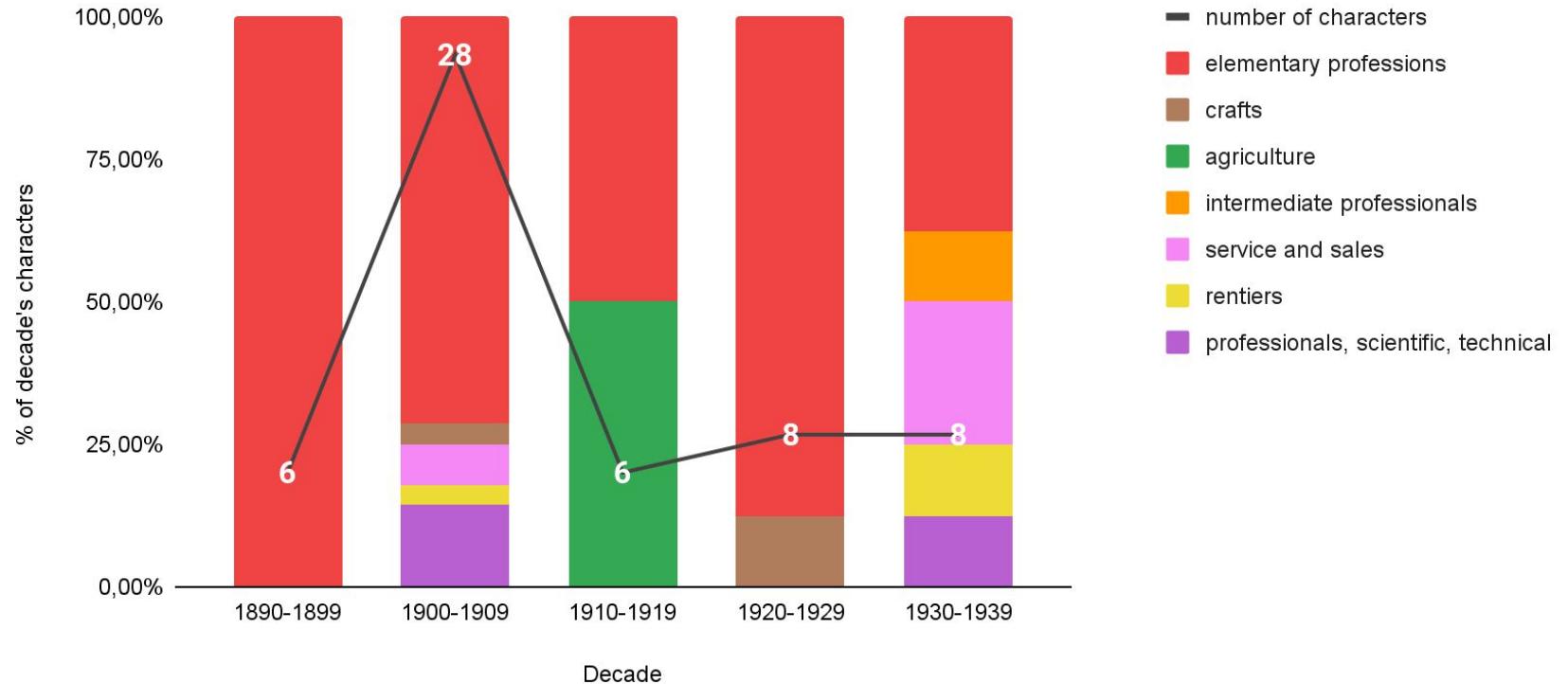
## Groups with pronounced changes



## Discontinuous groups



## Female characters: professional groups



# Outline

- Alsatian theater
- Project goals
- Corpus selection and encoding
  - Encoding automation
  - Social variable annotation
- **Resource sharing: Repositories and interface**
- Conclusion and outlook

# Public resources

- Project site: <https://methal.pages.unistra.fr/en>
  - University GitLab: <https://git.unistra.fr/methal>
- Nakala open repository (French national infrastructure for DH)
  - <https://nakala.fr/collection/10.34847/nkl.feb4r8j9>
  - TEI-encoded plays
  - TEI-encoded personography
- DraCor platform : <https://dracor.org/als>
- Corpus exploration interface: <https://methal.eu/ui/>

Title

Sort  

Author

All 1810-20 1940-50 

Genre

All 

Publisher

Publication place

Full text

Irrelevant Synopsis Author: Camille Jost (Q96489174) 

## 5. E Dienschtbott wurd g'suecht (Q106588339)

E Schnirichel in 1 Akt vum Camille Jost

Print source: 1928 (F. X. Le Roux)

Genre: comedy

Cast: 3 (F 0, M 3)

### Details & Characters

#### Synopsis

Comédie en 1 acte. Jean est un valet de chambre malin et franc, ce qui déplaît parfois son maître Meyer. Après avoir lu l'annonce de la faillite d'une banque sur laquelle il fait des spéculations, Meyer accuse Jean injustement et le renvoie. Cependant Jean ne veut pas quitter le maître aussitôt et utilise l'aide de son ami et aussi d'un déguisement pour faire regretter Meyer d'avoir renvoyé Jean. Meyer se rend compte qu'il s'est quand même bien attaché à Jean et le reprend comme valet de chambre au final, après avoir su que la faillite annoncée de la banque était une erreur et que Jean a eu la présence d'esprit de sauver les actions que Meyer crut avoir brûlées. (Synopsis by A. Li-Thiao-Te, MeThAL)

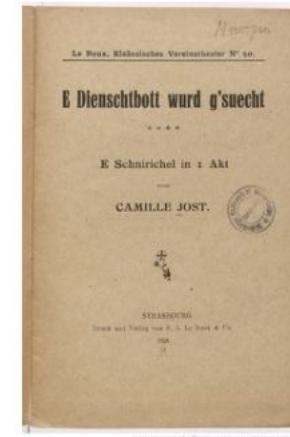


Image source: Numistral (Bnu Strasbourg)

# D'r Maischter hett gewunne! Schwank in aam Akt ([Q106604829](#))

[Back](#)

## PERSONE:

Drohtspitz, Schuehmachermaischter

Eddes

Addes

Lehrbuewe biem Drohtspitz

Schakob, e Büur

Schaköbel, siner Bue

Mirliton, e nowler Fitzer

Dorel, Dabezierer

Linser, Photograph

Ort vun d'r Handlung: Umgejed vun Strossburj.

Zitt: Gejewart.

Rechts und links vum Spieler.

## SZENE

Die Hinterwand ist mit farbigem Bilderbogen beklebt. Mitteltüre, rechts und links davon ein Fenster, links Seitentüre. Gegen rechts eine Schusterbank mit Werkzeug, drei Schusterschemel, alte Schuhe, an der Wand links zwei Stühle.

— 3 —

## 1. UFFTRITT

*Eddes, Addes. ADDES — EDDES (pfeifen die Melodie: « D'r Hans im Schnokeloch » und schlagen im Takt auf den Klopfstein).*

**EDDES:**

Dü, Addes!

**ADDES:**

Hä!

**EDDES:**

Wie hett dir die Rissubb geschmeckt hitt Middaz?

TEI edition by MeThAL

Author: Ferdinand Bastian ([Q13099282](#))

First published: 1937 (L. Jaggi-Reiss)

Genre: comedy

[Characters \[↗\]](#)

[All plays by Ferdinand Bastian \(34\) \[↗\]](#)

Digital source: [Numistral](#)



Image source: Numistral (Bnu Strasbourg)

[MainSearch](#) CharacterAnalysis

Title

stoskopf

All ▾

1810-20 ▾

1940-50 ▾

Genre

All ▾

Publisher

Publication place

Full text

Irrelevant ▾

 Synopsis

Submit

Reset

Professional Group

Social Class

Character gender

17 plays | 2 authors

## Character cooccurrences in cast list, by professional group

Characters: 288 (F 76, M 191, O 21) | With prof group: 169 (58.68% : F 27 · 15.98%, M 130 · 76.92%, O 12 · 7.10%)

	agri	asso	craf	elem	gov	inTr	inte	mili	pro	rent	seSa
<b>agri</b>	9.46	0.94	1.03	6.93	7.68	0	2.34	0.37	5.24	0.19	2.06
<b>asso</b>	0.94	3.28	1.31	3.28	3.09	0.94	0.94	0.19	3.0	0.19	2.25
<b>craf</b>	1.03	1.31	0.37	1.87	1.5	0.19	0.37	0.28	1.5	0	1.03
<b>elem</b>	6.93	3.28	1.87	2.9	3.65	0.47	1.87	0.47	5.06	0.84	3.28
<b>gov</b>	7.68	3.09	1.5	3.65	2.06	0.56	1.59	0.19	2.9	0	1.03
<b>inTr</b>	0	0.94	0.19	0.47	0.56	0.09	0.28	0.09	1.03	0	0.28
<b>inte</b>	2.34	0.94	0.37	1.87	1.59	0.28	0.37	0.09	1.03	0.28	1.22
<b>mili</b>	0.37	0.19	0.28	0.47	0.19	0.09	0.09	0	0.37	0	0.56
<b>pro</b>	5.24	3.0	1.5	5.06	2.9	1.03	1.03	0.37	1.87	0.56	1.69
<b>rent</b>	0.19	0.19	0	0.84	0	0	0.28	0	0.56	0.09	0.37
<b>seSa</b>	2.06	2.25	1.03	3.28	1.03	0.28	1.22	0.56	1.69	0.37	1.03

Professional groups as in Ruiz &amp; Werner (2021)

## Legend [?]

agri agriculture

asso associative world

cler clergy

craf crafts

elem elementary professions

gov government executive officials

inte intermediate professions

inTr industry &amp; transportation

mili military

pro professionals, scientific, technical

rent rentiers

seSa service and sales

id	title	author	year ▾	genre
4	D'r Herr Maire	Stoskopf, Gustave	1898	comedy
87	E Diplomat	Stoskopf, Gustave	1899	comedy
99	D'r Candidat	Stoskopf, Gustave	1899	comedy
88	E Mordsaffär	Stoskopf, Gustave	1900	comedy
103	D'Pariser Reis	Stoskopf, Gustave	1900	comedy
101	D'Heimet	Greber, Julius Stoskopf, Gustave	1901	drama
363	D'Millionepartie	Stoskopf, Gustave	1901	comedy
50	D'r Prophet	Stoskopf, Gustave	1902	drama
97	E Demonstration	Stoskopf, Gustave	1903	comedy
139	Mossieu le maire	Stoskopf, Gustave	1903	comedy
364	D'r verbotte Fahne	Stoskopf, Gustave	1904	comedy
3	D'r Hoflieferant	Stoskopf, Gustave	1906	comedy
2	In's Ropfer's Apothek	Stoskopf, Gustave	1907	comedy
105	Er hieroth sini Frau!	Stoskopf, Gustave	not before 1909	comedy
86	's Orakel	Stoskopf, Gustave	not before 1918	comedy
365	D'r Luftibüs	Stoskopf, Gustave	1919	comedy
100	Wenn d'Fraue	Stoskopf, Gustave	1925	comedy

Title

Professional Group

Social Class

Character gender

14 plays | 5 authors

 AuthorF 1810-20  1940-50 Genre All 

Publisher

Publication place

Full text Irrelevant  Synopsis  Submit  Reset

## Character cooccurrences in cast list, by professional group

Characters: 98 (F 72, M 26) | With prof group: 35 (35.71% : F 16 · 45.71%, M 19 · 54.29%)

	agri	craf	elem	gov	inte	pro	seSa
agri	11.48	0	3.28	3.28	6.56	0	13.11
craf	0	16.39	9.84	3.28	0	1.64	0
elem	3.28	9.84	0	4.92	0	1.64	3.28
gov	3.28	3.28	4.92	1.64	0	3.28	0
inte	6.56	0	0	0	0	0	3.28
pro	0	1.64	1.64	3.28	0	0	0
seSa	13.11	0	3.28	0	3.28	0	13.11

Professional groups as in Ruiz &amp; Werner (2021)

### Legend [ ]

agri agriculture

asso associative world

cler clergy

craf crafts

elem elementary professions

gov government executive officials

inte intermediate professions

inTr industry &amp; transportation

mili military

pro professionals, scientific, technical

rent rentiers

seSa service and sales

Title

Professional Group

Social Class

Character gender

14 plays | 5 authors

Author

F ▾

1810-20 ▾

1940-50 ▾

Genre

All

Publisher

Publication place

Full text

Irrelevant ▾

Synopsis 

Submit

Reset

## Character cooccurrences in cast list, by professional group

Characters: 98 (F 72, M 26) | With prof group: 35 (35.71% : F 16 · 45.71%, M 19 · 54.29%)

	agri	craf	elem	gov	inte	pro	seSa
agri	11.48	0	3.28	3.28	6.56	0	13.11
craf	0	16.39	9.84	3.28	0	1.64	0
elem	3.28	9.84	0	4.92	0	1.64	3.28
gov	3.28	3.28	4.92	1.64	0	3.28	0
inte	6.56	0	0	0	0	0	3.28
pro	0	1.64	1.64	3.28	0	0	0
seSa	13.11	0	3.28	0	3.28	0	13.11

Professional groups as in Ruiz &amp; Werner (2021)

## Legend [-]

agri agriculture

asso associative world

cler clergy

craf crafts

elem elementary professions

gov government executive officials

inte intermediate professions

inTr industry &amp; transportation

mili military

pro professionals, scientific, technical

rent rentiers

seSa service and sales

Title

Professional Group

Social Class

Character gender

14 plays | 5 authors

 AuthorF 1810-20  1940-50 Genre All 

Publisher

Publication place

Full text Irrelevant  Synopsis  Submit  Reset

## Character cooccurrences in cast list, by professional group

Characters: 98 (F 72, M 26) | With prof group: 35 (35.71% : F 16 · 45.71%, M 19 · 54.29%)

	agri	craf	elem	gov	inte	pro	seSa
agri	11.48	0	3.28	3.28	6.56	0	13.11
craf	0	16.39	9.84	3.28	0	1.64	0
elem	3.28	9.84	0	4.92	0	1.64	3.28
gov	3.28	3.28	4.92	1.64	0	3.28	0
inte	6.56	0	0	0	0	0	3.28
pro	0	1.64	1.64	3.28	0	0	0
seSa	13.11	0	3.28	0	3.28	0	13.11

Professional groups as in Ruiz &amp; Werner (2021)

### Legend [ ]

agri agriculture

asso associative world

cler clergy

craf crafts

elem elementary professions

gov government executive officials

inte intermediate professions

inTr industry &amp; transportation

mili military

pro professionals, scientific, technical

rent rentiers

seSa service and sales

Professional Group

Social Class

Character gender

14 plays | 5 authors

## Character cooccurrences in cast list, by professional group

Characters: 98 (F 72, M 26) | With prof group: 35 (35.71% : F 16 · 45.71%, M 19 · 54.29%)

	agri	craf	elem	gov	inte	pro	seSa
agri	11.48	0	3.28	3.28	6.56	0	13.11
craf	0	16.39	9.84	3.28	0	1.64	0
elem	3.28	9.84	0	4.92	0	1.64	3.28
gov	3.28	3.28	4.92	1.64	0	3.28	0
inte	6.56	0	0	0	0	0	3.28
pro	0	1.64	1.64	3.28	0	0	0
seSa	13.11	0	3.28	0	3.28	0	13.11

Professional groups as in Ruiz &amp; Werner (2021)

## Legend [-]

agri agriculture

asso associative world

cler clergy

craf crafts

elem elementary  
professionsgov government executive  
officialsinte intermediate  
professionsinTr industry &  
transportation

mili military

pro professionals, scientific,  
technical

rent rentiers

seSa service and sales

Cooc filter craf + elem 

2 plays | 2 authors

id	title	author	year	genre
14	D'r StadtNarr	Hart, Marie	1907	comedy
446	Zwei Schweschtere	Hahn, Emilie	1926	comedy

# Outline

- Alsatian theater
- Project goals
- Corpus selection and encoding
  - Encoding automation
  - Social variable annotation
- Resource sharing: Repositories and interface
- **Conclusion and outlook**

# Conclusion and outlook

- Viability of TEI encoding automation
  - Symbolic means
  - Machine-learning based on first annotated plays
- Usefulness of character metadata to gain an overview of the corpus
  - Also to obtain new knowledge of the tradition thanks to larger-scale analysis

# Conclusion and outlook

- Most literary analyses based on the text will require an automatic detection of scriptural variants
- Current work:
  - Emotion analysis based on emotion lexicon for Alsatian (Bernhard & Ruiz, 2022) which handles variation
  - Description of variation patterns (automatic alignment)

# Team: At the *Linguistique, Langues, Parole* lab (Strasbourg)

- Delphine Bernhard
- Pascale Erhart
- Dominique Huck
- Pablo Ruiz
- Carole Werner

# Team: Interns

- Nathanaël Beiner
- Andrew Briand
- Lena Camillone
- Hoda Chouaib
- Audrey Deck
- Barbara Hoff
- Valentine Jung
- Salomé Klein
- Quinyue Liu
- Audrey Li-Thiao-Té
- Kévin Michoud
- Vedisha Toory
- Heng Yang

Many different programs

- Modern Languages (German)
- Applied Foreign Languages (LEA)
- Computer Science
- MA Linguistics
- MA Computational Linguistics

Universities

- Université de Strasbourg
- University of Edinburgh
- University of Washington (via IFE)
- Université Grenoble Alpes

## References

- Asmuth [1980] (2016). *Einführung in die Dramenanalyse*. J.B. Metzler
- Bernhard, D. & Ruiz, P. (2022). ELAL: An emotion lexicon for the analysis of Alsatian theatre plays. Accepté à LREC 2022, Language Resources and Evaluation Conference
- Dilan Canan, Ç. & Fischer, F. (2022). Dramatische Metadaten. Die Datenbank deutschsprachiger Einakter 1740-1850. In *DHd2022: Kulturen des digitalen Gedächtnisses*. University of Potsdam.
- Cerf, E. (1972). Le théâtre alsacien de Strasbourg, miroir d'une société (1898-1939). *Saisons d'Alsace*, 43.
- Cerf, E. (1975). Les contes merveilleux du Théâtre alsacien de Strasbourg. *Revue des sciences sociales de la France de l'Est*, 4, 3-30
- Dennerlein, K., Schmidt, T., & Wolff, C. (2022). Emotionen im kulturellen Gedächtnis bewahren. DHd 2022 Kulturen des digitalen Gedächtnisses. Potsdam. Zenodo. <https://doi.org/10.5281/zenodo.6327957>
- Fischer, F., Börner, I., Göbel, M., Hechtl, A., Kittel, C., Milling, C., Trilcke, P. (2019). Programmable Corpora: Introducing DraCor, an Infrastructure for the Research on European Drama. *Proceedings of Digital Humanities 2019*.
- Fischer, F., Göbel, M., Kampkaspar, D., & Kittel, C. (2017). Network Dynamics, Plot Analysis: Approaching the Progressive Structuration of Literary Texts. *Digital Humanities 2017*, 437-441.
- Gall, J.-M. (1974). *Le théâtre populaire alsacien au XIXe siècle*. Istra
- Galleron, I. (Ed.). (2017). Revue d'Historiographie du Théâtre, Numéro 4: Études théâtrales et humanités numériques.
- Galleron, I. (2017). Conceptualisation of Theatrical Characters in the Digital Paradigm : Needs, Problems and Foreseen Solutions. *Human and Social Studies*, 6(1), 88-108. <https://doi.org/10.1515/hssr-2017-0007>
- Huck, D. (1898). D'r Herr Maire (1898) de Gustave Stoskopf. Entre ethnologie et littérature : Les Alsaciens an auto-représentation. *Recherches Germaniques*, 28, 163-190
- Huck, D. (2005). Le «Théâtre Alsacien de Strasbourg» et la production dramaturgique de ses fondateurs (1898-1914). In J.-M. Leveratto, J. Benay, O. Thomas, & S. Wuttke, *Culture et histoire des spectacles en Alsace et en Lorraine : De l'annexion à la décentralisation (1871-1946)* (p. 198-222). Peter Lang.
- Huck, D. (2015). Une histoire des langues de l'Alsace. La Nuée Bleue.
- Huck, D., Bothorel-Witz, A., & Geiger-Jallet, A. (2007). L'Alsace et ses langues. Eléments de description d'une situation sociolinguistique en zone frontalière. In A. Abel et al. (Éds.), *Aspects of Multilingualism in European Border Regions : Insights and Views from Alsace, Eastern Macedonia and Thrace, the Lublin Voivodeship and South Tyrol* (p. 13-101). EURAC Research <http://ala.u-strasbg.fr/documents/Publication%20-%20L%27Alsace%20et%20ses%20langues.pdf>

## References

- Hülsen, B. von. (2003). *Szenenwechsel im Elsass : Theater und Gesellschaft in Strassburg zwischen Deutschland und Frankreich 1890-1944*. Leipziger Universitätsverlag.
- Marcus, s. (1973). *Mathematische Poetik*. Frankurt/M. Atheneum
- Moeller, K., & Nasarek, R. (2018). Die Ontologie historischer deutschsprachiger Berufs- und Amtsbezeichnungen. Interoperationalität und Berufsklassifizierung durch semantisches Topic Modeling. *DHd 2018. Kritik der Digitalen Vernunft. Konferenzabstracts*, 173-177.
- Pfister, M. [1977] (2001). *Das Drama: Theorie und Analyse* (11th ed.). W. Fink.
- Ruiz Fabo, P., Bernhard, D., & Werner, C. (2020). Crédation d'un corpus FAIR de théâtre en alsacien et normalisation de variétés non-contemporaines. In T. Poibeau, Y. Parmentier, & E. Schang (Eds.), 2èmes journées scientifiques du Groupement de Recherche Linguistique Informatique Formelle et de Terrain (LIFT) (pp. 34–43). CNRS. <https://hal.archives-ouvertes.fr/hal-03047152>
- Ruiz Fabo, P., & Werner, C. (2021). Exploration du théâtre alsacien à travers ses listes de personnages pendant la période 1870-1940. *Humanistica 2021. Humanistica 2021*, Rennes (online). <https://doi.org/10.5281/zenodo.4762733>
- Schmidt, T., Burghardt, M., Dennerlein, K., & Wolff, C. (2019). Katharsis – A Tool for Computational Drametrics. *Digital Humanities 2019*, Utrecht, The Netherlands. <https://dev.clariah.nl/files/dh2019/boa/0584.html>
- Van Leeuwen, M. H. D., Maas, I., & Miles, A. (2004). Creating a Historical International Standard Classification of Occupations An Exercise in Multinational Interdisciplinary Cooperation. *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, 37(4), 186-197. <https://doi.org/10.3200/HMTS.37.4.186-197>
- Wiedmer, N., Pagel, J., & Reiter, N. (2020). Romeo, Freund des Merkutio : Semi-Automatische Extraktion von Beziehungen zwischen dramatischen Figuren. *DHd2020 Spielräume. Digital Humanities zwischen Modellierung und Interpretation. Konferenzabstracts.*, 194-200. <https://doi.org/10.5281/zenodo.3666689>

## Projects cited

DraCor: <https://dracor.org>

Dramacode: <https://github.com/dramacode/>

Emotions in Drama:

[https://dfg-spp-cls.github.io/projects\\_en/2020/01/24/TP-Emotions\\_in\\_Drama/](https://dfg-spp-cls.github.io/projects_en/2020/01/24/TP-Emotions_in_Drama/)

QuaDramA & Q:TRACK: <https://quadrama.github.io/index.en>

RESTAURE: <https://restaure.unistra.fr>

DIVITAL: <https://divital.gitpages.huma-num.fr/>

Théâtre classique: <http://www.theatre-classique.fr>

# Thank you!

<https://methal.pages.unistra.fr/en>

This research was supported by University of Strasbourg's IdEx program