



# Constitution et analyse d'un corpus documentaire à partir d'Istex

Écoles doctorales Paris Cité – 2 décembre 2025

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Ingénierie de recherche CNRS



Inist - 2025



# Programme & Objectifs

**Recherche documentaire  
& Text and data mining**

Mardis 25 novembre et 2 décembre de 9h30 à 12h30

1. Connaître le réservoir multidisciplinaire Istex
2. Savoir interroger le réservoir
3. Acquérir les bases pour manipuler l'outil de datavisualisation Lodex & des web services
4. Prendre du recul sur la constitution de corpus et la fouille de textes



# Documents utiles

Télécharger ce support et les fichiers utiles aux manipulations sur la page

<https://ed-pariscite.formation.lodex.fr/instance/support>

# Programme



01

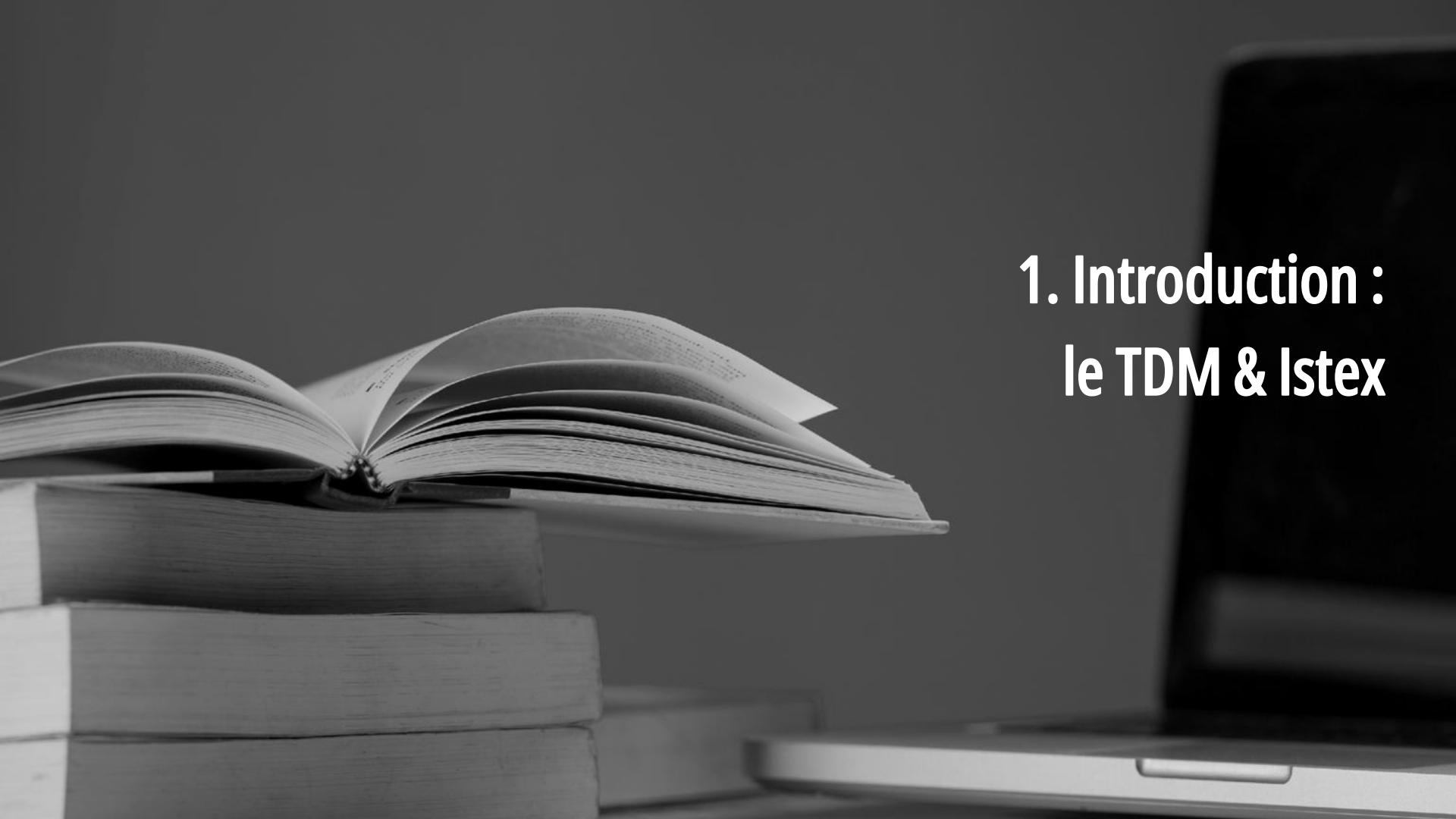
Introduction : le TDM & Istex

02

Constitution d'un corpus spécialisé

03

Manipulations des outils présentés



# 1. Introduction : le TDM & Istex

# Introduction : le TDM & Istex

« Toute technique d'analyse automatisée visant à analyser des textes et des données sous une forme numérique afin d'en dégager des informations, ce qui comprend, à titre non exhaustif, des constantes, des tendances et des corrélations »

(Ordonnance du 24 novembre 2021, [ouvirlascience.fr](http://ouvirlascience.fr))

- Extraire de l'information pertinente (recherche d'information)
- Analyser de gros volumes de textes
- Déetecter des sentiments dans les textes
- Construire des résumés automatiques
- Désambiguïser des lieux, des personnes...
- Faire des systèmes de recommandations
- Déetecter des « fake news »
- Trier des mails, des textes
- Faire de la bibliométrie

MaTOS

# Introduction : le TDM & Istex

## Évolution massive de la quantité de publications

- Sur ces six dernières années, la part des publications scientifiques mondiales a augmenté de 47% (Hanson *et al.*, 2023)
- Selon les domaines entre 12% (médecine) et 82% (sciences humaines) des articles ne sont jamais cités ([Larivière & Gingras, 2009](#))
- 50% des articles cités ne sont jamais lus ([Office of Research Integrity](#))

## Évolution massive des techniques de TAL et d'IA

- Accompagnée par l'implication d'industriels (intérêt financier) : ex. chatGPT (OpenAI)
- Évolution de la puissance de calcul et de stockage (super calculateur Jean Zay : 28 pétaflops, soit 28 millions de milliards d'opérations par seconde)

# Introduction : le TDM & Istex

## Évolution de la législation

- 2019 : directive européenne sur le droit d'auteur > exceptions au code de la propriété intellectuelle dans un cadre de recherche
- 2021-2022 : transposition de la directive européenne en droit français

## Évolution des moyens pour la science ouverte

- 2018 : 1<sup>er</sup> plan pour la science ouverte 5M/an
- 2021 : 2<sup>ème</sup> plan national pour la science ouverte 15M/an

# Introduction : le TDM & Istex

1. Des données
2. Des spécialistes
3. Des outils de visualisation
4. Des outils de traitement



**ISTEX**



# Introduction : le TDM & Istex

Exemple de traitements : le WS catégories scientifiques Inist

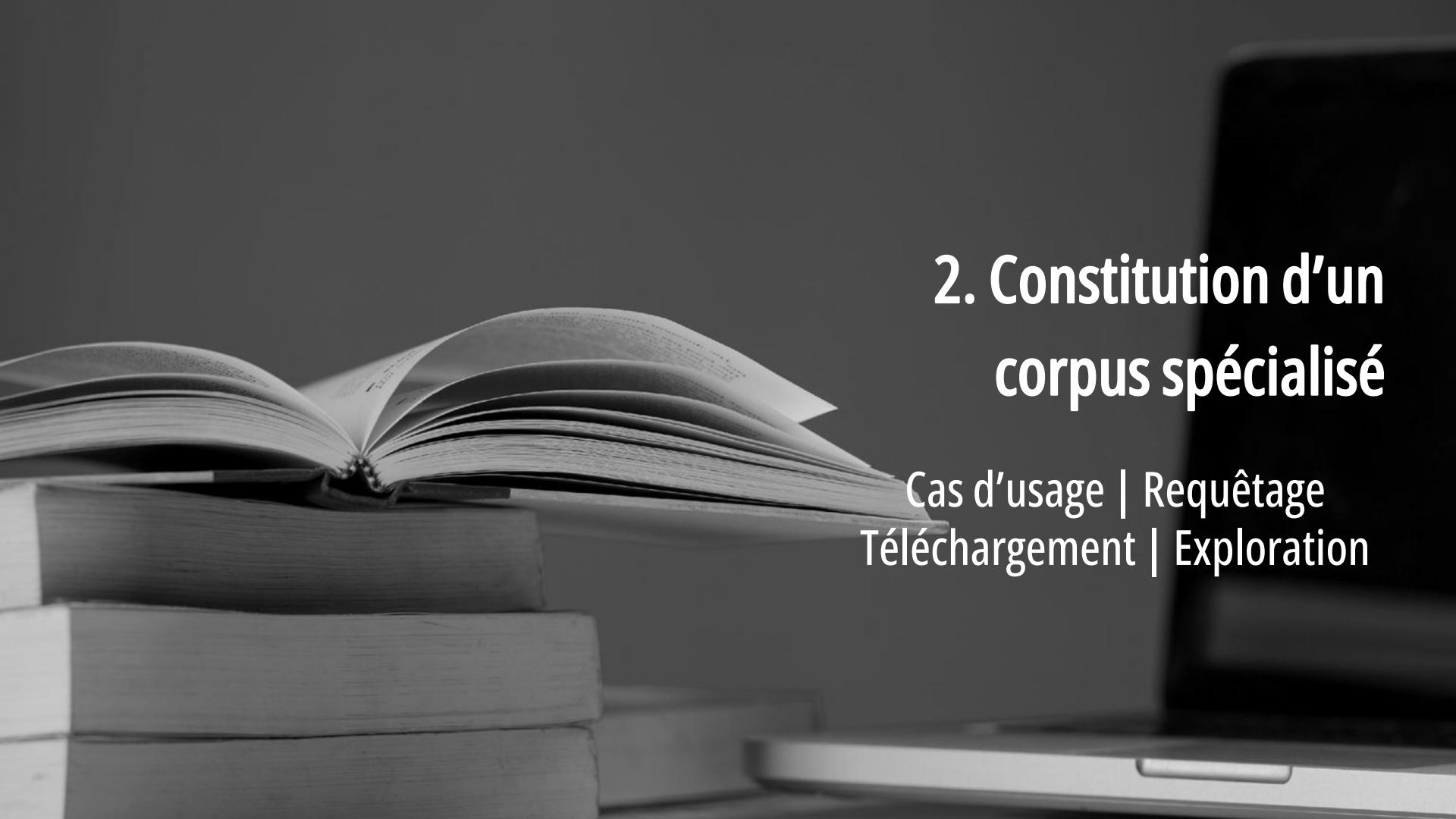
Classification supervisée : apprentissage sur des données déjà labelisées

- Input : l'Inist dispose d'un fond de documents labellisés suivant leur domaine scientifique
- Action : l'algorithme apprend seul à associer un document à un label
- Output : le programme associe à chacun des nouveaux documents présenté un label

# Introduction : le TDM & Istex

```
[  
  [  
    {  
      "idt": "08-040289",  
      "value": "Planck 2015 results. XIII. Cosmological parameters.We present  
    }  
  ]
```

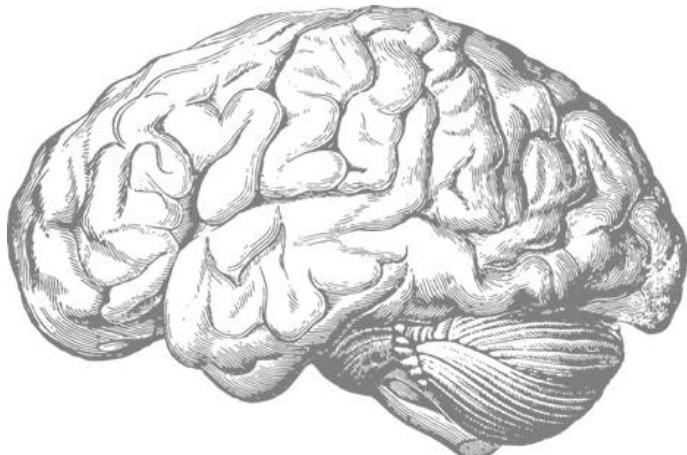
```
[{  
  "idt": "08-040289",  
  "value": [  
    {  
      "code": {  
        "id": "001",  
        "value": "Sciences exactes et technologie."  
      },  
      "confidence": 1.0000057220458984,  
      "rang": 1  
    },  
    {  
      "code": {  
        "id": "001E",  
        "value": "Terre, océan, espace."  
      },  
      "confidence": 0.9999549388885498,  
      "rang": 2  
    },  
    {  
      "code": {  
        "id": "001E03",  
        "value": "Astronomie."  
      },  
      "confidence": 1.0000100135803223,  
      "rang": 3  
    }]  
}]
```

A black and white photograph of a stack of books. In the foreground, the top book is open, showing several pages of text. The rest of the stack is visible behind it, creating a sense of depth.

## 2. Constitution d'un corpus spécialisé

Cas d'usage | Requêteage  
Téléchargement | Exploration

# Cas d'usage



**Besoin :** recherche en collaboration avec des chercheurs en psychologie et en neurosciences pour constituer un thésaurus sur la mémoire humaine pour : indexer des publications ou des ressources ; uniformiser la terminologie du domaine ; répertorier les concepts issus de la recherche cognitive sur la mémoire humaine

## Méthodologie

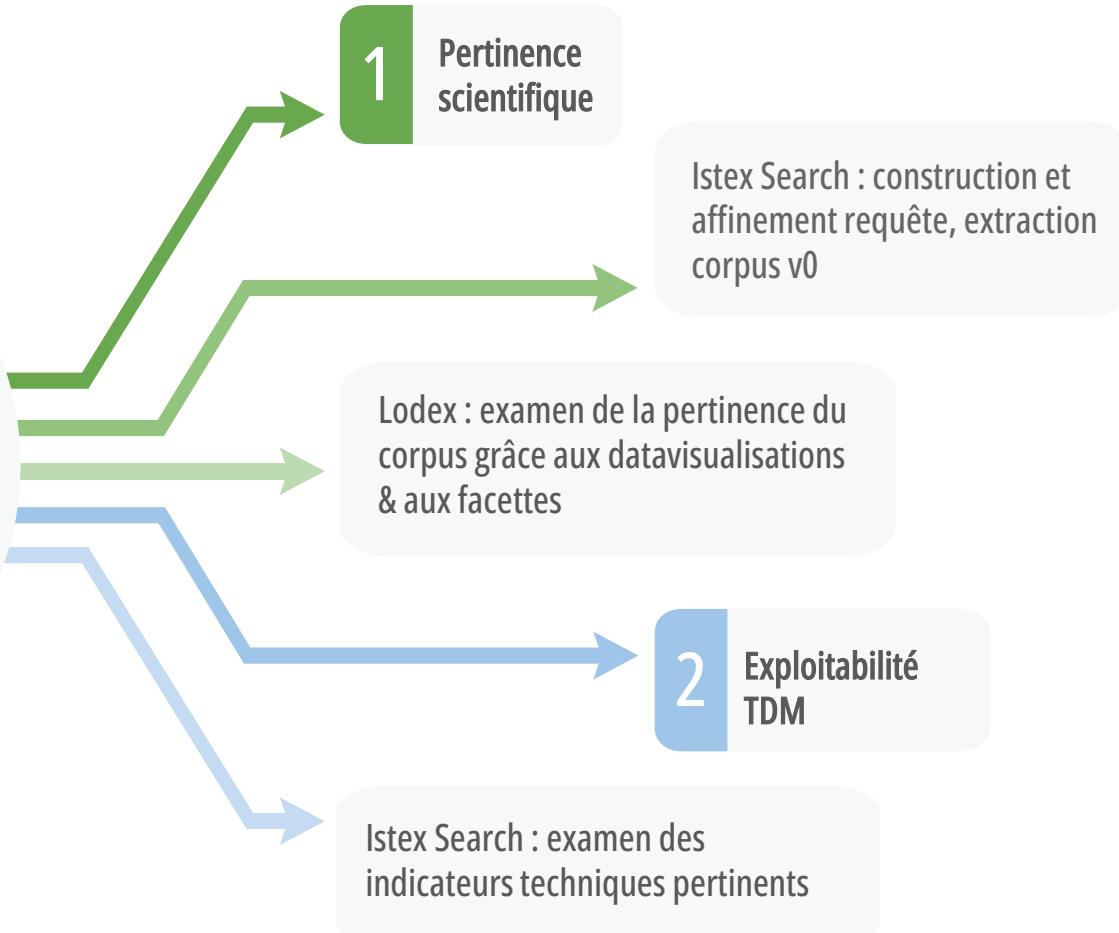
- Vérifier la pertinence scientifique du corpus en collaboration avec les experts
- Affiner ou enrichir le corpus au moyen d'outils propres à Istex en vue d'une exploitation TDM
- Extraire la terminologie

# Méthodologie





## 2 phases & 2 outils



# Requête

# Requête

memory OR metamnesy OR metamemory OR  
mémoire OR métamnésie OR métamémoire

Résultats (21-10-2024) : 1 701 374 doc.

## Explication de la requête

- Les mots sont recherchés dans tout le document (métadonnées, texte intégral, références bibliographiques, enrichissements)
- Insensibilité à la casse
- La syntaxe Lucene autorise 3 opérateurs booléens (AND, OR, NOT) et par défaut l'espace blanc équivaut à un OR

# Requête

m?mor\* mnesic metamne\* m?tam?mor\*  
mémoire\* mnési\* mnémo\* métamnési\*

*Résultats (21-10-2024) : 2 664 987 doc.*

## Explication de la requête

- Rechercher des variantes morphosyntaxiques et des dérivés des mots-clés grâce à la troncature (\*)
- Mutualiser certains termes (é|e) grâce au joker (?)

# Requête

## The COVID Families

La pandémie de  
La pandemia de

### Enfances Familles Générations

Revue interdisciplinaire sur la famille contemporaine

McMillan, I. F., L. M. Armstrong et J. Langhinrichsen-Rohling. 2021. «Transitioning to parenthood during the pandemic: covid-19 related stressors and first-time expectant mothers' mental health», *Couple and Family Psychology: Research and Practice*, 10(3): 179-189.

McRae, C. S., N. C. Overall, A. M. E. Henderson, ... et V. T. Chang. 2021. «Parents' distress and poor parenting during a covid-19 lockdown: the buffering effects of partner support and cooperative coparenting», *Developmental Psychology*, 57(10): 1623-1632.

Meloche, K. 2022. *Les impacts des mesures sanitaires en contexte de la COVID-19 sur les personnes âgées vivant dans les centres d'hébergement de soins de longue durée au Canada* (mémoire), École de service social, Université d'Ottawa.

Laurence Charton, Léoni Labrecque and Joseph Josy Lévy

# Requêteage

Afrique

## Afriques

The study was financed by the project ANR EthioChrisProcess: Christianisation et interactions religieuses en Éthiopie (VIe-XIII<sup>e</sup> s.), in 2019-2020, and IRIS Scripta-PSL. Histoire et pratiques de l'écrit, in 2020-2021 (<https://scripta.psl.eu/projets/lectures-liturgiques-et-usages-memoriels-des-manuscrits-des-evangiles-dabba-garima-ethiopie-vi-xvie-s/>). I warmly thank the project supervisors Anaïs Wion and Marie-Laure Derat for scientific advice and bibliographical help, as well as Alessandro Bausi for helping obtain reproductions of the Abba Garima Gospels and Nafisa Valieva for fruitful discussions. Special thanks go to Michael Gervers for giving permission to use his photographs of manuscripts and to Alexei Pentkovsky for consulting on liturgical matters. I am grateful to two anonymous reviewers who helped a lot to correct mistakes and elucidate the exposition.

New Stud  
Garima E

Nouvelles étud  
Garima

Sergey Kim

# Requête



Sociok  
panar

## Revue des mondes musulmans et de la

Romanciers, poètes, philosophes et historiens trouvent dans *al-Yawm al-sābi'* l'espace intellectuel de leur convergence, un lieu de médiation facilitateur de leurs échanges et de la circulation transnationale (à l'échelle du monde arabe) de leurs productions écrites. Nombreux sont ceux à y avoir tenu une rubrique pendant plusieurs mois ou années, l'une des plus mémorables étant celle du poète palestinien Mahmoud Darwich<sup>11</sup>. Sa rubrique est d'ailleurs enrichie d'une correspondance littéraire qu'il entretient avec le poète palestinien Samih Al-Qasim, à partir du mois de mai 1986, et ce pendant deux années. Dans un registre lyrique, leurs échanges

*Sociohistory of al-Yawm al-sābi': a pan-Arab magazine in exile (1984-1991)*

التاريخ الاجتماعي لـ «اليوم السابع»، مجلة عربية في المنفى (1991-1984)

# Requête

```
title:(m?mor* mnesic metamne* m?tam?mor*  
mémoire* mnési* mnémo* métamnési*)
```

*Résultats (21-10-2024) : 85 689 doc.*

## Explication de la requête

- Cibler le champ interrogé
- Les noms de champs sont introduit par :

# Requêteage



**L'Atelier du Centre de recherches historiques**

Revue électronique du CRH

Les thèses du CRH | 2022

---

Déposer les armes, prendre la parole. La lutte armée d'extrême gauche en Italie (1969-2015) : narrations autobiographiques, représentations historiques, controverses mémorielles

Thèse soutenue le 29 novembre 2022

*Laying Down the Guns, Taking up Writing. Left-Wing Armed Struggle in Italy (1969 - 2015): Autobiographical Narratives, Historical Representations, Memorial Controversies*

Lorenzo De Sabbata

# Requête

```
title:(m?mor* mnésic metamne* m?tam?mor*  
mémoire* mnési* mnémo* métamnési*) AND  
categories.wos.raw:(\"2 - neurosciences\" \"2 -  
psychology\" \"2 - clinical neurology\" \"2 -  
psychology, biological\" \"2 - psychiatry\" \"2 -  
psychology, clinical\" \"2 - geriatrics &  
gerontology\" \"2 - gerontology\" \"2 -  
neuroimaging\" \"2 - behavioral sciences\" \"2 -  
psychology, experimental\")
```

*Résultats (21-10-2024) : 20 726 doc.*

## Explication de la requête

- Cibler les catégories scientifiques interrogées grâce au champ categories.wos.raw

# Requêteage

## ON MEMORY.<sup>1</sup>

BY JAMES ROSS, M.D., LL.D.

THE subject for discussion to-night is "Memory," and I presume that we are supposed to enquire into its nature, its limitations from other modes of consciousness, its laws of action, its connection with cerebral activity, and its dissolution by disease. But memory is so intertwined with every other form of mental activity, with the feelings which accompany instinctive and acquired movements, with sensations, perceptions and conceptions, with reasoning, from the simplest to the most abstract, and even with the emotions and the will, that it is simply impossible to deal with it satisfactorily in the few moments at my disposal to-night. To treat this subject with even a moderate degree of adequacy would involve the writing of a complete system of psychology, and consequently in the few remarks I have to offer I will

My *first* proposition with regard to memory is that it is a mode of consciousness, and consequently to speak of unconscious memory is a contradiction in terms. If a psychical act or an impression on the organism is wholly unperceived it cannot afterwards be recalled as a memory.

My *second* proposition is that our primary knowledge of memory is obtained by means of introspection. This knowledge is no doubt greatly extended by objective observation of the actions of other organisms, but my guarantee that anyone except myself possesses memory

<sup>1</sup> Read at a meeting of the Neurological Society in December, 1890.

# Requête

```
title:(m?mor* mnesic metamne* m?tam?mor*  
mémoire* mnési* mnémo* métamnési*) AND  
categories.wos.raw:( "2 - neurosciences" "2 -  
psychology" "2 - clinical neurology" "2 -  
psychology, biological" "2 - psychiatry" "2 -  
psychology, clinical" "2 - geriatrics &  
gerontology" "2 - gerontology" "2 -  
neuroimaging" "2 - behavioral sciences" "2 -  
psychology, experimental") AND  
publicationDate:[2000 TO *]
```

*Résultats (21-10-2024) : 13 158 doc.*

## Explication de la requête

- Limiter la recherche aux 20 dernières années grâce au champ publicationDate
- Utiliser un intervalle [2000 TO \*]



Téléchargement

# Téléchargement

```
title:(m?mor* mnesic metamne* m?tam?mor*  
mémoire* mnési* mnémo* métamnési*) AND  
categories.wos.raw:( "2 - neurosciences" "2 -  
psychology" "2 - clinical neurology" "2 -  
psychology, biological" "2 - psychiatry" "2 -  
psychology, clinical" "2 - geriatrics &  
gerontology" "2 - gerontology" "2 -  
neuroimaging" "2 - behavioral sciences" "2 -  
psychology, experimental") AND  
publicationDate:[2000 TO *]
```

# Téléchargement

## Configurez votre téléchargement

LODEX

USAGE PERSONNALISÉ

CORTEXT

GARGANTEXT

Texte intégral

PDF

TEI

TXT

CLEANED

ZIP

TIFF

Métadonnées

JSON

XML

MODS

Annexes

Couvertures

Enrichissements

multicat

nb

grobidFulltext

refBibs

teeft

unitex

Trier par : **pertinence & qualité**

Télécharger  / 13 158

Format de l'archive : **ZIP**

Compression : **moyenne**

**TÉLÉCHARGER**

**Lodex**

Application web open-source dédiée aux données structurées qui permet de visualiser et d'enrichir ses données puis de les transformer en site web.

[EN SAVOIR PLUS](#)

**Requête**

```
title:(m?mor* mnesic metame* m?tam?mor*  
mémoire* mnési* mnémo* métamnési*) AND  
categories.wos.raw("2 - neurosciences" "2 -  
psychology" "2 - clinical neurology" "2 -  
psychology, biological" "2 - psychiatry" "2 -  
psychology, clinical" "2 - geriatrics &...")
```

**Requête brute complète**

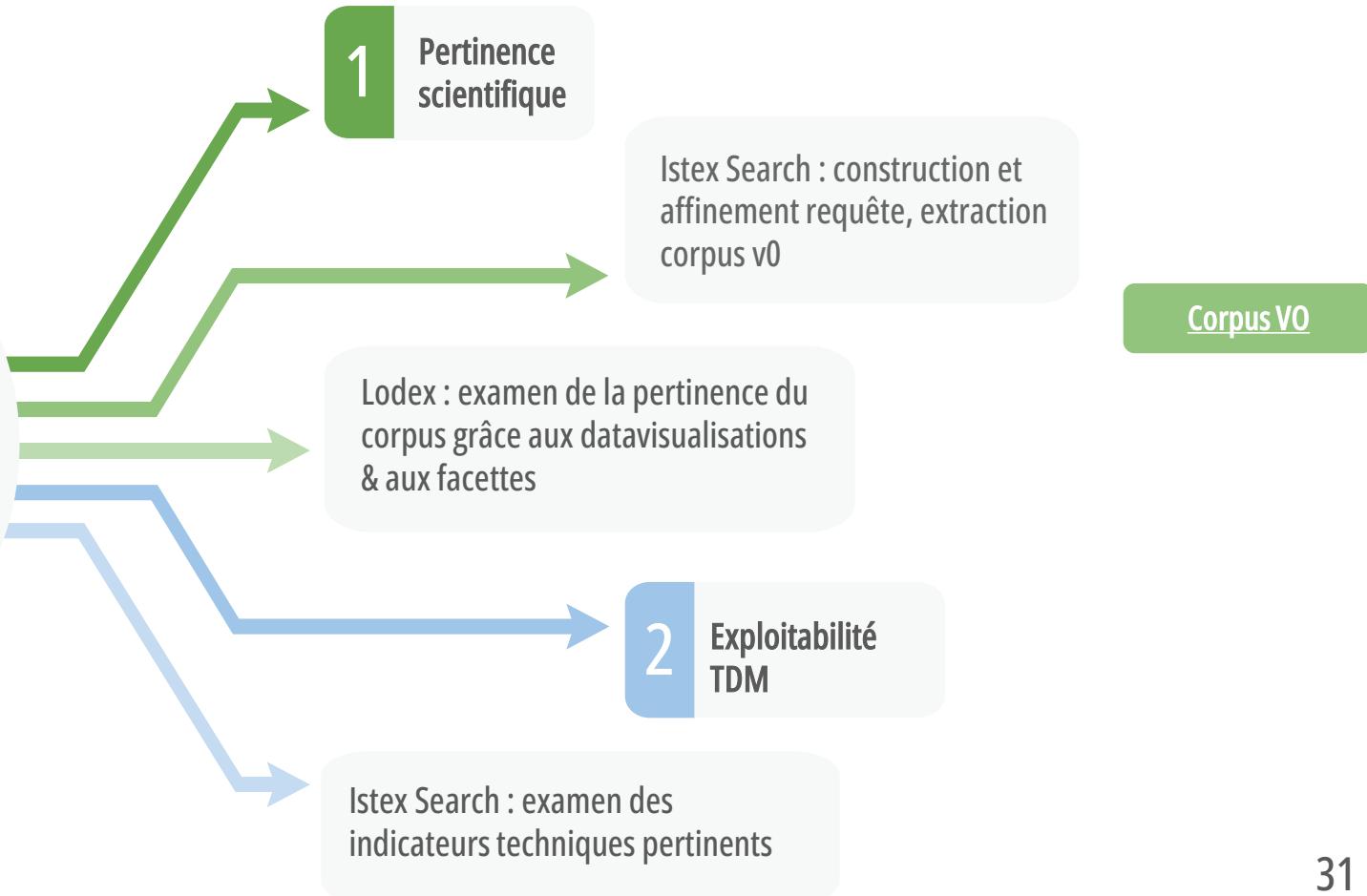
```
https://api.istex.fr/document?q=title:\(m?mor\* mnesic metame\* m?tam?mor\* mémoire\* mnési\* mnémo\* métamnési\*\) AND categories.wos.raw\(%22- neurosciences%22-%20psychology%2C%20biological%22-%20psychiatry%22-%20psychology%2C%20clinical%22-%20geriatrics%20&%20...%22\)
```

29

# Exploration du corpus V0

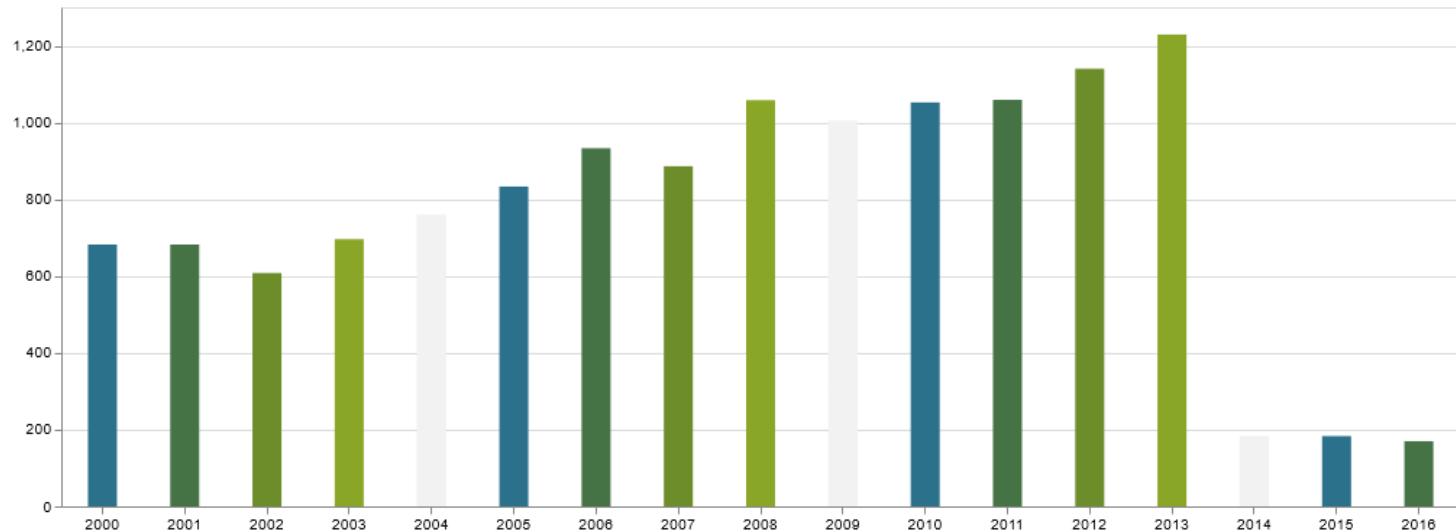


# 2 phases & 2 outils



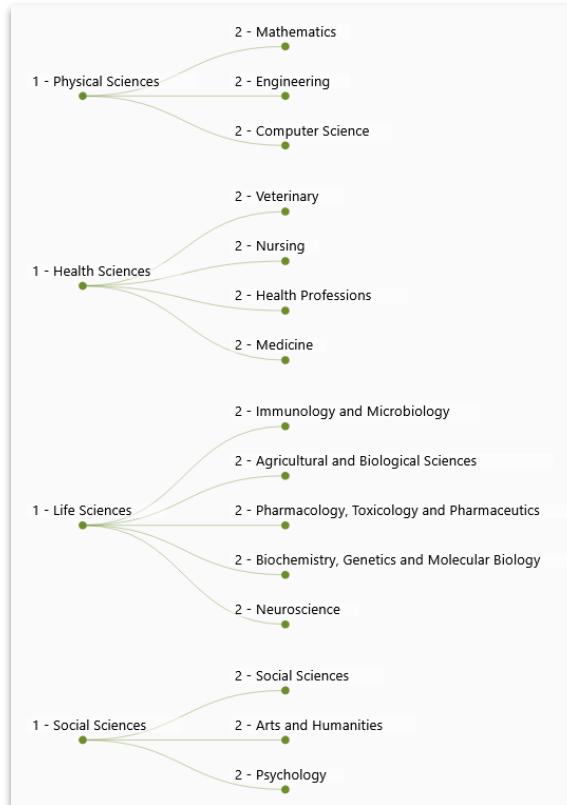
# Exploration du corpus V0

## Années de publication



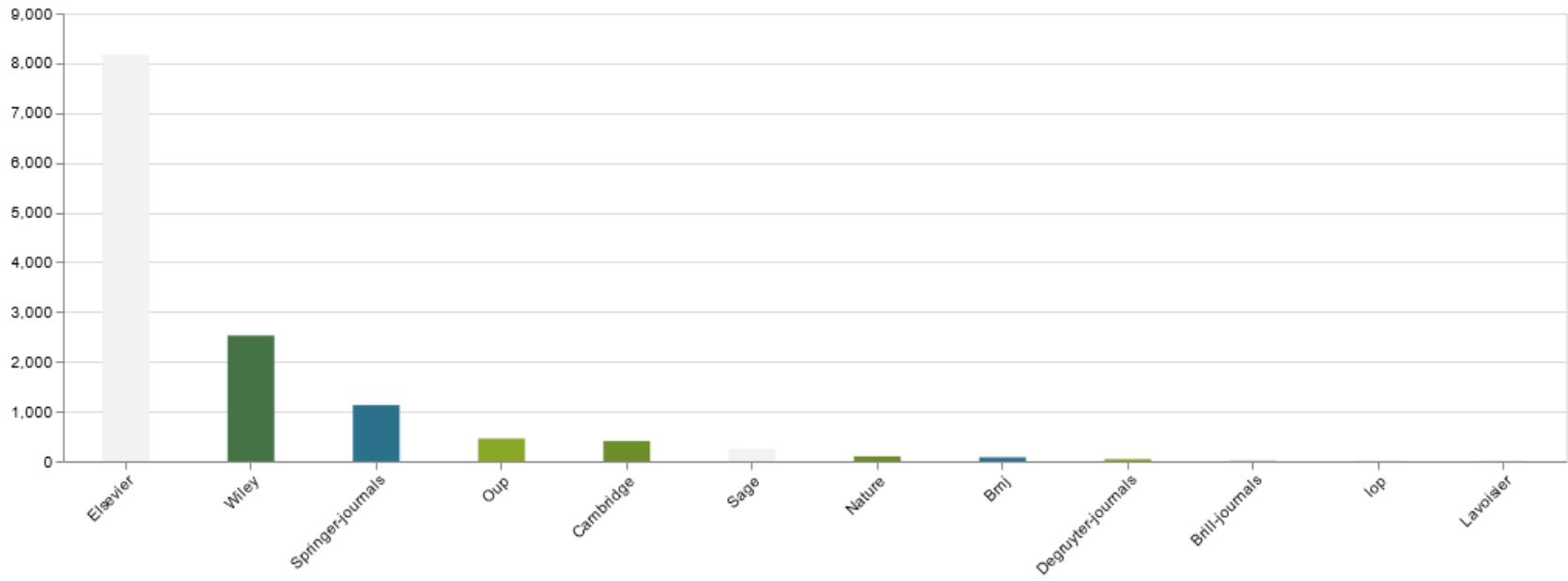
# Exploration du corpus V0

Catégories scientifiques  
Scopus



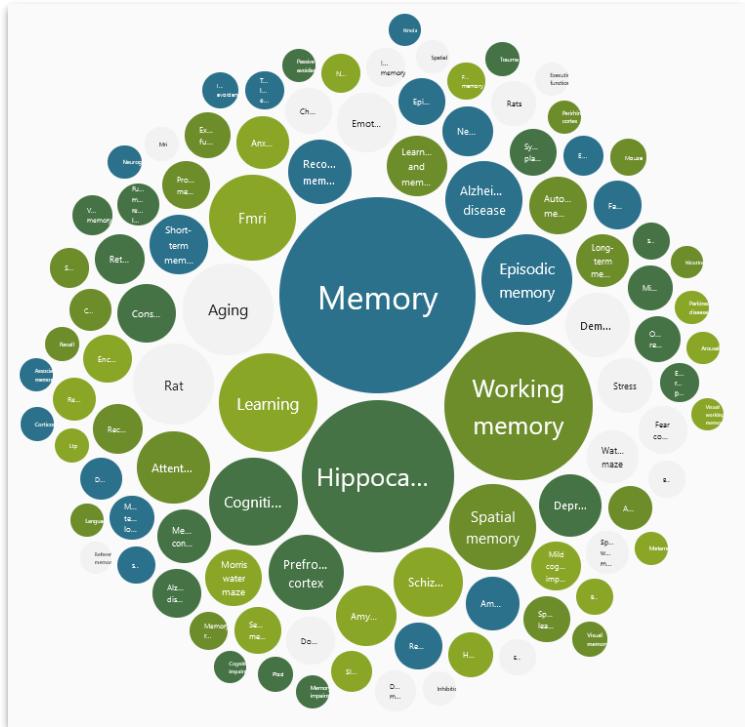
# Exploration du corpus V0

## Editeurs



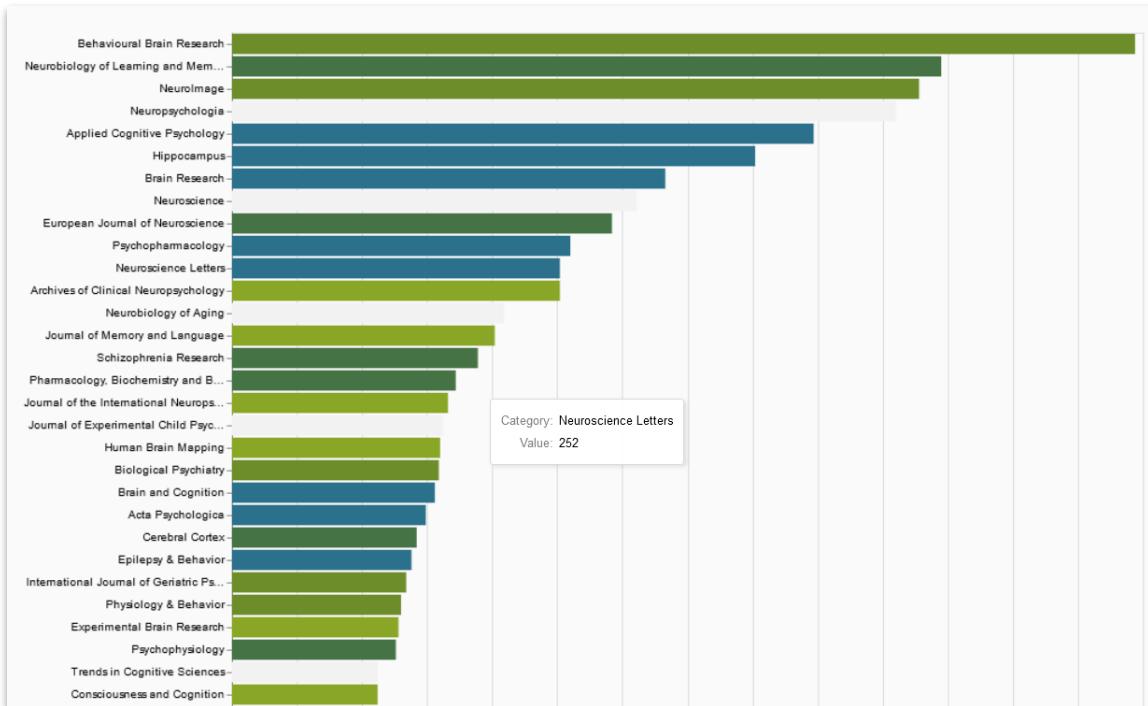
# Exploration du corpus V0

## Mots-clés d'auteur



# Exploration du corpus V0

Revues (346)



# Exploration du corpus V0

## Revues d'éthologie

### Revue / Monographie (3) ^

exclure

animal

VALEUR

COMPTER ↓

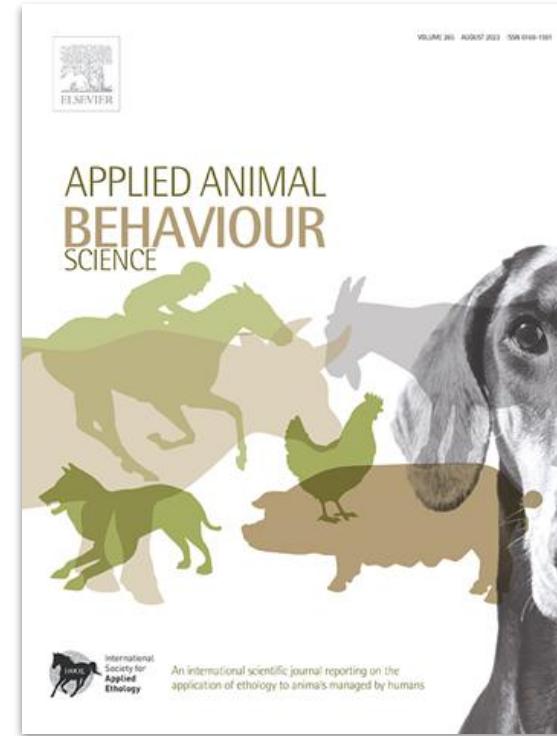
TOUT COCHER

Animal Cognition 51

Animal Behaviour 43

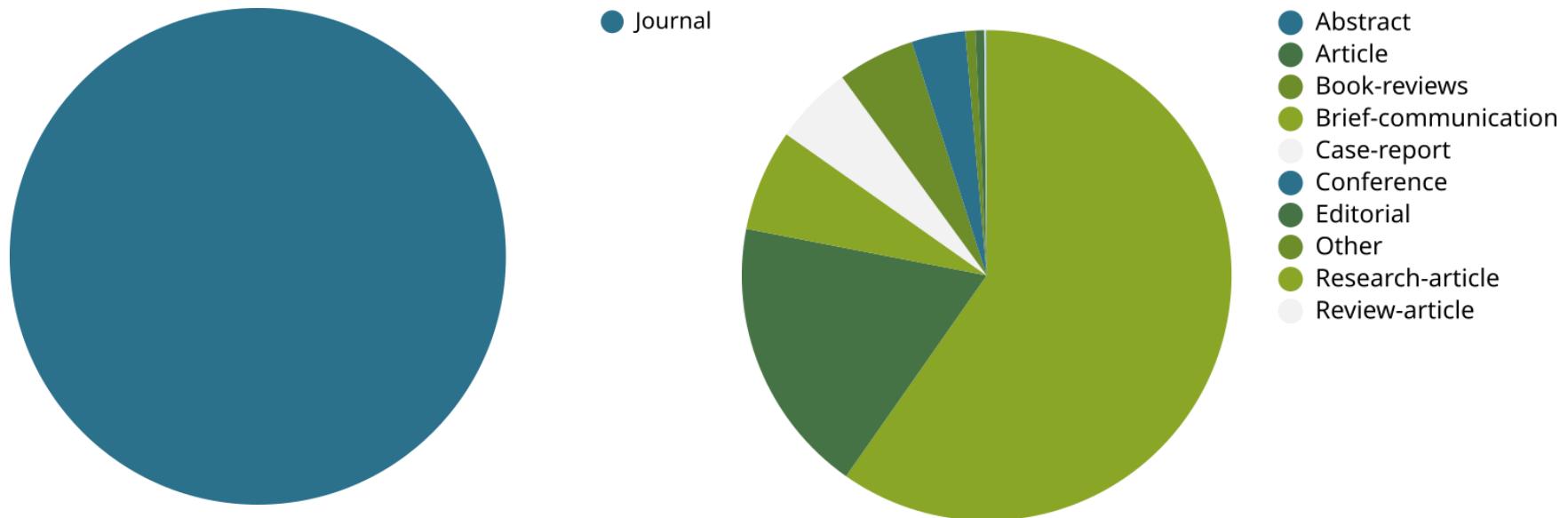
Applied Animal Behaviour  
Science 7

Showing 1 to 3 of 3



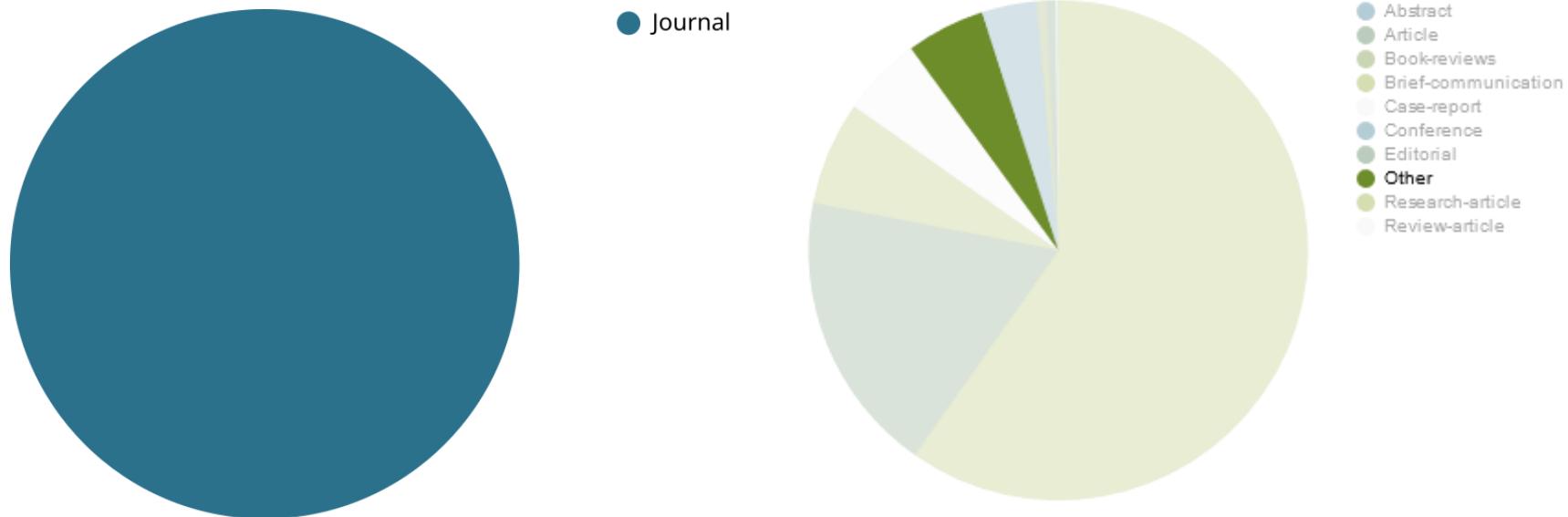
# Exploration du corpus V0

## Types de publication et de document



# Exploration du corpus V0

## Types de publication et de document



# Exploration du corpus V0

## Types de publication et de document

*Journal of the International Neuropsychological Society* (2000), 6, 376–377.  
Copyright © 2000 INS. Published by Cambridge University Press. Printed in the USA.

### In Memoriam

Laird S. Cermak, Ph.D.  
June 24, 1942–November 4, 1999

Laird Cermak was to become President of INS in February 2000, taking over the responsibilities for leading a scientific society he loved and served for over a quarter of a century. In many ways he embodied the very values the INS has always hoped to promote in excellence of scholarship, keen interest in behavioral neurosciences, and an easy and reflexive interdisciplinary citizenship. His name has been synonymous with a distinctive line of intellectual inquiry in amnesia and memory mechanisms for as long as I have been in neuropsychology myself.

It now can be told that I was alerted to Laird's considerable intellectual talent even as a graduate student. I recall that my major Professor, Phillip Rennick, showed me the initial application for research support he was reviewing that Laird had made to the Veterans Administration in the early 1970s. "Read this really excellent grant, Ken," he said, "because this guy is really going to do some significant work." Given that Phil tended to view proposals as having fatal flaws usually no later than the literature review, I was impressed and learned with awe what moved Phil. Apparently many others have joined in Phil's appraisal and appreciation of a career of scholarly promise fulfilled. I know that I did from that day. Laird took a central faculty role in one of the most protean research arenas in the history of neuropsychology.



### À la mémoire de Betty Havens 9 octobre 1936 au 1<sup>er</sup> mars 2005

Marcia Finlayson,<sup>1</sup> Neena Chappell,<sup>2</sup> and Lynn McDonald<sup>3</sup>

1 Université de l'Illinois à Chicago

2 Université de Victoria

3 Université de Toronto



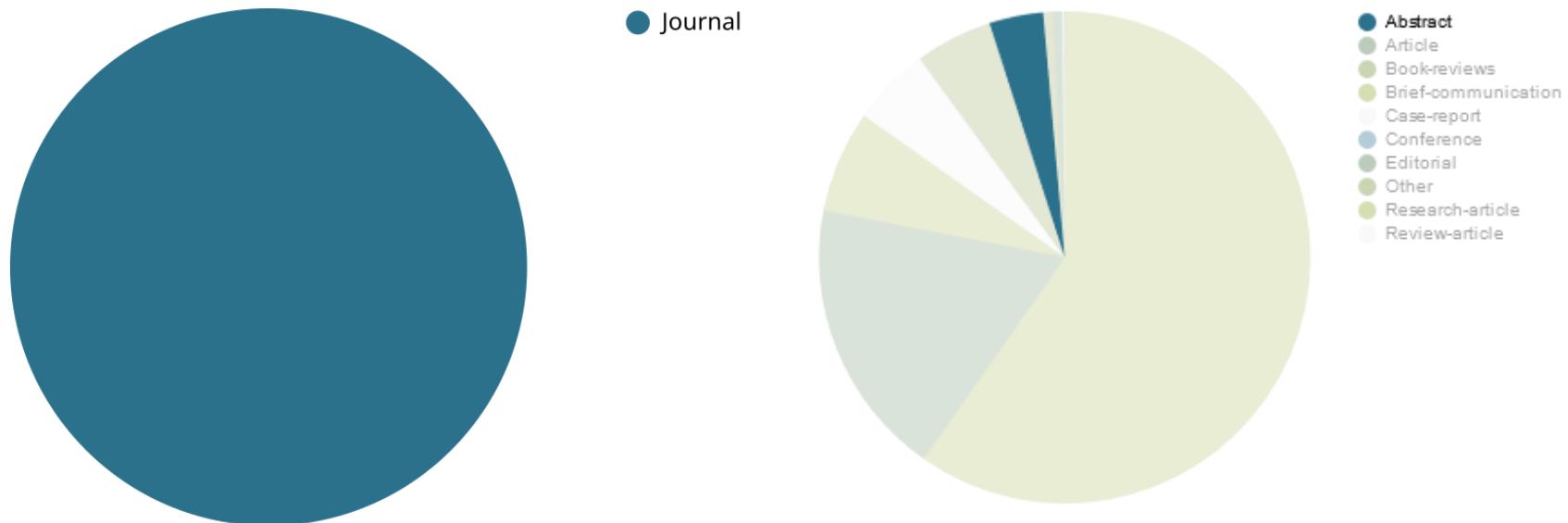
Lorsque Betty Havens est décédée, le 1<sup>er</sup> mars au matin, la nouvelle s'est propagée rapidement que notre chère amie, collègue et mentor, celle qui nous avait toujours soutenus, était partie. Nombreux sont ceux à qui manqueront son rire chaleureux, ses répliques amusantes et ses petits clins d'œil. Nous sommes reconnaissants du privilège qui nous a été offert de partager une partie de son

Nous connaissons son engagement et son empressement constant à lutter pour les aînés et la gérontologie. Son intérêt envers la gérontologie était indiscutables, même à la toute fin, puisqu'elle lisait *The Gerontologist* dans son lit aux soins palliatifs.

J'aimerais parler d'elle d'un point de vue plus personnel. Bien qu'elle n'était pas très démonstrative, elle soutenait sans aucune réserve les personnes en lesquelles elle croyait. Je me souviens très clairement de moments, pendant les premières années de ma carrière, où elle est venue me prendre par la main, lors de réunions du GSA, de l'ISA ou d'autres occasions, pour me présenter à Bernice Neugarten, à Matilda White Riley et à de nombreux autres grands spécialistes de la gérontologie : «Nous avons finalement l'un des meilleurs Mémoires dans cette ville. Elle a commencé à

# Exploration du corpus V0

## Types de publication et de document



# Exploration du corpus V0

## Types de publication et de document

Proceedings of the NASS 23rd Annual Meeting / The Spine Journal 8 (2008) 193–195

**FDA DEVICE/DRUG STATUS:** This abstract does not discuss or include any applicable devices or drugs.

doi:10.1016/j.spinee.2008.06.343

### P99. The Association Between Prevalent Neck Pain and Health-related Quality of Life: A Cross-sectional Analysis

Maria Rezai, DC, MHS<sup>1</sup>, Pierre Côté, DC, PhD<sup>2</sup>, J. David Cassidy, DC, PhD, DrMedSci<sup>3</sup>, Linda Carroll, PhD<sup>2</sup>, <sup>1</sup>Centre of Research Expertise in Improved Disability Outcomes (CREIDO), University Health Network; Department of Public Health Sciences, University of Toronto, Toronto, Ontario, Canada; <sup>2</sup>Department of Public Health Sciences, School of Public Health, University of Alberta; Alberta Centre for Injury Prevention and Research, University of Alberta, Edmonton, Alberta, Canada

**BACKGROUND CONTEXT:** The literature suggests that physical and mental health-related quality of life (HQoL) are worse for individuals with neck pain compared to those without neck pain. However, the strength of the association varies across studies. Discrepancies in study results may be attributed to the use of different definitions and measures of neck pain and differences in the selection of covariates used as control variables in the analyses.

**PURPOSE:** To examine the association between grades of neck pain severity and health-related quality of life.

**STUDY DESIGN/SETTING:** Population-based, cross-sectional mailed survey.

**PATIENT SAMPLE:** We used data from the Saskatchewan Health and Back Pain Survey, a population-based cohort study of the distribution and determinants of spinal disorders in Saskatchewan, Canada. Saskatchewan is a Canadian province of approximately one million inhabitants with a universal health care system. The survey targeted Saskatchewan residents aged 20–69 years who held a valid Saskatchewan Health Services card on August 31, 1995.

**OUTCOME MEASURES:** The Medical Outcomes Study SF-36 standard English Canadian version 1.0 was used to measure general health status. This analysis used the physical component summary (PCS) and mental component summary (MCS) measures of the SF-36.

**METHODS:** The Saskatchewan Health and Back Pain Survey was mailed to 2184 randomly selected Saskatchewan adults and 1,131 returned the questionnaire. Neck pain was measured with the Chronic Pain Questionnaire and categorized into four increasing grades of severity. We measured HQoL with the SF-36. Second, we examined the physical and mental component summary scores. We built separate multiple linear regression models to examine the association between grades of neck pain and physical and mental summary scores while controlling for sociodemographic, general health and comorbidity covariates.

**RESULTS:** Our crude analysis suggests a gradient exists between the severity of neck pain and HQoL. Compared to individuals without neck pain, those with Grades III–IV neck pain have significantly lower physical (mean difference = -13.9/100, 95% CI = -16.4, -11.3) and mental (mean difference = -10.8/100, 95% CI = -13.6, -8.1) HQoL. Controlling for covariates greatly reduced the strength of association between neck pain and physical HQoL, and accounted for the observed association between neck pain and mental HQoL.

### P100. Shape Memory Metal Rods Tested in a Porcine Model: Single Rod Constructs Result in Greater Deforability at One Week

Peter Newton, MD<sup>1</sup>, Barry Yungas, MD<sup>1</sup>, Christine Fornasier, MD<sup>1</sup>, Vidya Sudar Upasani, MD<sup>1</sup>, Beril Chambers, BA<sup>1</sup>, Seong Hwan Yoon, MD, PhD<sup>1</sup>, Paul Finkins, MD<sup>2</sup>, Italy Children's Hospital and Health Center, San Diego, CA, USA; <sup>1</sup>University of California, Hospital and Health Center, San Diego, CA, USA; <sup>2</sup>University of California, San Diego, San Diego, CA, USA; <sup>3</sup>DePuy Spine, Le Locle, Switzerland

**BACKGROUND CONTEXT:** In the surgical treatment of spinal deformity, shape memory metal (Nitinol) rods can theoretically be approximated to a curved spine in their malleable, cooled state, then achieve spinal deforability as they return to their original shape with warming straight in the coronal plane with a pre-determined initial profile. A square cross-section rod profile may additionally allow defometry correction in the transverse plane when engaged in squared head pedicle screws. Single rod constructs, thought to be less constrained, may be able to achieve a greater defometry correction (clinically) / creation (experimentally), while dual rod constructs are likely more stable with less risk of implant failure.

**PURPOSE:** The purpose of this study was to determine the clinical feasibility and potential effectiveness of using single vs dual nitinol rod constructs by creating spinal deformity in an *in vivo* animal model.

**STUDY DESIGN/SETTING:** *In vivo* animal study.

**OUTCOME MEASURES:** Defometry creation between single and dual rod groups.

**METHODS:** 10 mature male mini-pigs were instrumented with single (n=5) or dual (n=5) nitinol rod constructs (Figure 1A). The rods were instrumented straight at -15°C and allowed to return to their pre-contoured 90° coronal profile (twice the normal porcine lateral bending range of motion) after being warmed with a 41°C saline solution. Serial radiographs were obtained to follow defometry creation and compared between single and dual rod groups ( $p=0.05$ ).

**RESULTS:** Scoliotic defometry creation was observed in both single and dual rod groups during the surgery (Figure 1B) and was not significantly different at the completion of the procedure ( $28^\circ \pm 6^\circ$ ,  $28^\circ \pm 4^\circ$ ,  $p=0.95$ ). One week following rod placement, however, coronal defometry in the single rod group progressed to  $42^\circ \pm 1^\circ$ , which was significantly more than the dual rod group ( $33^\circ \pm 3^\circ$ ,  $p=0.002$ ).

**CONCLUSIONS:** Precontoured (90° coronal profile), square-cross section memory metal rods successfully created coronal spinal deformity in all 10 animals. The less constrained single rod constructs resulted in greater defometry creation compared to dual rod constructs, at one week post-op, with no evidence of implant failure/screw pullout in either group. Nitinol rods may be useful in achieving spinal deformity correction that occurs both acutely during surgery and increases post-operatively over time.

Figure 1: A) Single and dual rod constructs. B) Coronal defometry for both groups (average  $\pm$  SD) (\* indicates statistical difference between groups,  $p=0.05$ ).



### P101. CIRCADIAN RHYTHM DISTURBANCES IN ADVANCED DEMENTIA: DIAGNOSTIC SPECIFICITY

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Many of the noncognitive symptoms of dementia (sleep disturbance, wandering) may have their root in abnormalities of the circadian timing system. Previous studies we have performed in this population, carrying a clinical diagnosis of probable Alzheimer's disease (AD), have shown that activity is significantly reduced at night and activity is significantly delayed and that the amplitude is significantly reduced. We have since collected actigraphy samples and made pathologically confirmed diagnoses on 34 patients who were enrolled in our original study to compare with 30 healthy controls. We found that the circadian rhythms of the healthy controls were significantly different from those of the patients with probable AD, frontotemporal degeneration (FTD), including Pick's disease and Lewy bodies (DLB). Twenty-seven patients had a diagnosis of probable AD, 4 had probable FTD, 2 had probable Pick's disease and 1 was diagnosed with FTD. In addition, 4 AD patients were also diagnosed with DLB and 1 FTD patient received the diagnosis. Patients with dual diagnosis or an exclusive DLB diagnosis were excluded from further analysis. Patients with AD had a significant decrease in the amplitude of their circadian rhythms compared to controls, whereas patients with FTD had a temperature rhythm which was similar to controls but an activity rhythm characterized by dramatic phase advance and lowered amplitude. These findings suggest that circadian rhythms in patients with dementia in AD and FTD may have a chronological underpinning. The origin and expression of these disturbances however appear to be distinct between the two diagnoses.

**Phase time of activity and temperature and activity goodness-of-fit**

Diagnosis	T phase (hours)	Act phase (hours)	Goodness-of-fit
Controls	15.2 ± 0.7	13.8 ± 1.2	0.57 ± 0.05
AD	17.9 ± 0.4	16.9 ± 0.8	0.52 ± 0.03
FTD	15.9 ± 0.7	10.4 ± 1.2	0.38 ± 0.04

All values reported as means  $\pm$  SE.

**711. NEUROBIOLOGICAL AND BEHAVIORAL ALTERATIONS INDUCED BY IN VIVO ADMINISTERED CARBONYL FRAGMENT OF PANHYDRO PRECURSOR PROTEIN**

Cheol Hyungh Park, Se Hoon Choi, You-Han Suk, Dept of Pharmacol., Coll of Med., Seoul National Univ, Seoul, South Korea

We have previously shown that the C-terminal fragment (CT) of  $\beta$ -amylid precursor protein (APP) induces neurotoxicity in vitro and *in vivo* experiments. However, it is unclear whether the neurotoxicity of APP is induced by the C-terminal fragment or the whole molecule. To elucidate the *in vivo* neurotoxicity of CT, we examined behavioral changes using Morris water maze 7 days following a single intracerebral injection of APP C-terminal fragment (CT 100) in mice. We also examined the effects of APP C-terminal fragment on the hippocampus. We also quantified the changes in acetylcholin (ACh) level of cortex and hippocampus. Mice that received CT100 revealed significant decrease in ACh levels in cortex and hippocampus compared with the control group. Spatial learning and memory was impaired in APP C-terminal fragment treated group in a dose-dependent manner. These results suggest that learning and memory impairment induced by centrally administered CT 100 is in some way related to neurotoxic alterations.

### P112. EFFECTS OF CORTISOL ON COGNITION AND FDG-PET IN ALZHEIMER'S DISEASE

Oliver T Wolf, Antoni Comella, Enric Knutel, Elisa J Thorne, Susan De Santis, Maria J de Leon, NYU Sch of Medicine, New York, NY

Elevated cortisol levels are observed in most patients with Alzheimer's disease (AD). Previous cognitive studies in young subjects reported cortisol related reductions in

men participated in the present placebo controlled double blind crossover study. Subjects received 0.5 mg cortisol or placebo in Cognitive tests were administered before and at two time points (15 min and 150 min) after cortisol administration. Cognitive tests included the MMSE, the CDR-SIB, and the CDR. Cortisol was measured in saliva 1 hour before and 1 hour after the treatment in both age groups. Dspat (a measure of short-term memory) was improved in young but not old subjects. The present results suggest that retrieval from memory is improved in young subjects by cortisol. The mechanism of action of cortisol may be different in young and old subjects. The effect of cortisol on memory is not mediated by the frontal lobes as Dspat is improved in young subjects but not in old subjects. The cognitive findings predict that a cortisol challenge in young subjects during FDG-PET should result in a reduction in hippocampal and frontal glucose metabolism. The results of the present study in young subjects, which are preliminary, will be presented at the meeting. Together, these results highlight the importance of endocrine and behavioral challenges in the assessment of functional brain aging.

### 713. ENERGY PROCESSES OF THE HUMAN BRAIN IN NORMAL AGING AND DEMENTIA OF ALZHEIMER'S TYPE

Alain Verster, Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, The Netherlands; Oleg Abramov, Department of Radiology, Institute of Mental Health, Tallinn Estonia; Oleg Abramov, Olga Silistru, Order Research Ctr of Mental Health, Tallinn Estonia

In normal aging energy expenditures and energy resources of the brain are decreased. In normal and pathological aging the intensification of energy processes in the brain is preceded using the methods similar to that in stress reactions. The aim of present study is to evaluate the pattern of influence of aging on energy expenditure and energy process of normal aging and the development of dementia of Alzheimer's type (DAT). In healthy subjects and patients with DAT electrophysiological and biochemical investigations were carried out. The electrophysiological examination included the measurement of the amplitude of the slow wave of the EEG and the characteristic of brain oxidative processes. The cortical level in peripheral blood and the level of lipid peroxidation were evaluated. There is significant correlation between the plasma level of lipid peroxidation and the amplitude of the slow wave of the EEG. The normal aging process is associated with the enhanced exhibition of psychopathological symptoms. In DAT patients the significant increase of DC potentials and less remarkable increase of cortical level are observed. The increase of the brain energy expenditure is preceded by the increase of the intensity of lipid peroxidation, the disappearance of late components of visual evoked potentials and other change of electrophysiological characteristics, which accompany the progression of DAT. The amplitude of the slow wave of the EEG in DAT patients is less than expected for normal and pathological aging and their regulation is feasible target for prevention and therapeutics of DAT.

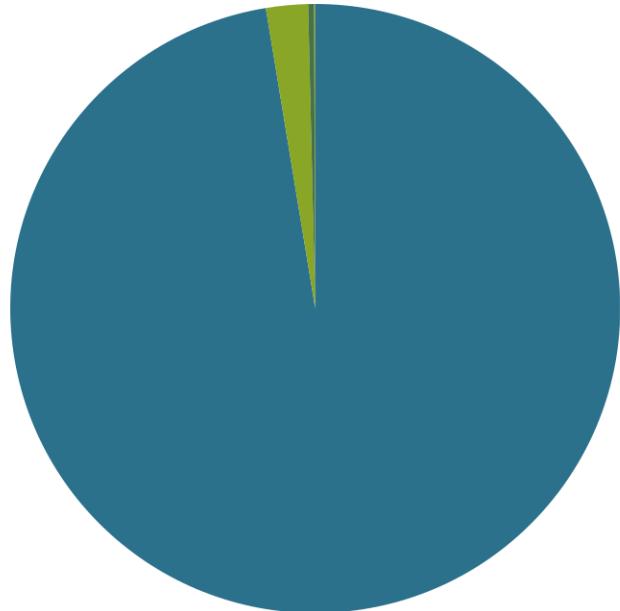
### 714. A DIFFERENTIAL MEMORY PROFILE IN PATIENTS WITH SUBJECTIVE MEMORY COMPLAINTS AND NORMAL MMSE SCORE: DEPRESSION OR COGNITIVE DECLINE?

Jane Kultman, Service of Neurology, 08025 Barcelona Spain; Anaïs Bébris, Polyclinique, Ever Génicat, Armand-Estève-Génicat;

**OBJECTIVE:** To determine whether depressive symptoms influence patient aspects of memory performance in patients with subjective memory complaints. **BACKGROUND:** In individuals with otherwise normal MMSE, subjective memory complaints may predict dementia. Depressive symptoms, however, may influence memory performance. **METHODS:** We studied 100 consecutive patients with depression and depression is not available. Analysis of memory profile in depressed and non-depressed individuals with normal MMSE and subjective memory complaints can help to differentiate depression from cognitive decline. **RESULTS:** We found that patients with subjective memory complaints, without antecedents of neurological illness and MMSE >20, who were assessed with a comprehensive physical history and other cognitive tests, had a normal MMSE score. However, they had a significant number of depressive symptoms. Fifty subjects were selected and memory performance was analyzed in two groups: Group 1: 26 subjects (13M/13F) with MMSE score of 27-30 (mean 28.5) and Group 2: 24 subjects (13M/11F) with MMSE score of 20-26 (mean 22.5). The mean age of the groups was 64.5 years. The mean education was 12.5 years. The mean number of depressive symptoms was 3.2 in Group 1 and 4.2 in Group 2. The mean MMSE score was 28.5 in Group 1 and 22.5 in Group 2. The mean GDS-15 score was 14.5 in Group 1 and 18.5 in Group 2. The mean age of the patients was 64.5 years. The mean education was 12.5 years. The mean number of depressive symptoms was 3.2 in Group 1 and 4.2 in Group 2. The mean MMSE score was 28.5 in Group 1 and 22.5 in Group 2. The mean GDS-15 score was 14.5 in Group 1 and 18.5 in Group 2. The mean age of the patients was 64.5 years. The mean education was 12.5 years. The mean number of depressive symptoms was 3.2 in Group 1 and 4.2 in Group 2. 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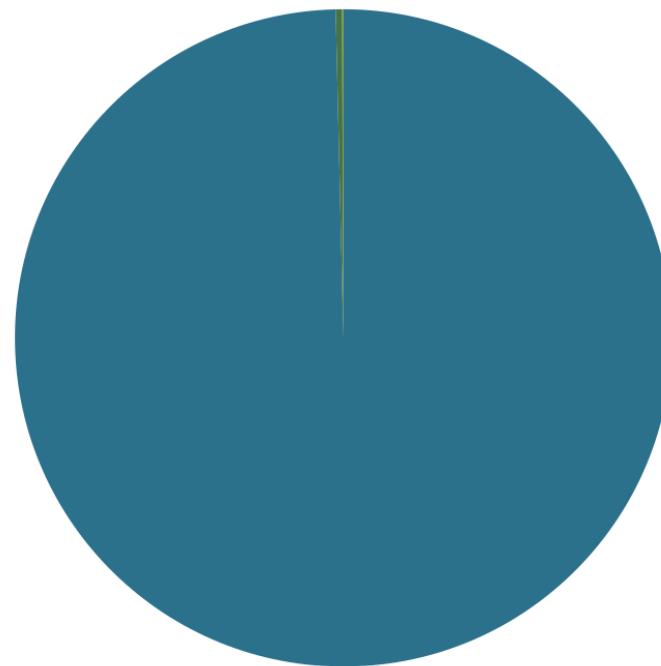
# Exploration du corpus V0

Langues



Langues dans Istex (292 unknown)

- eng
- fre
- ger
- unknown

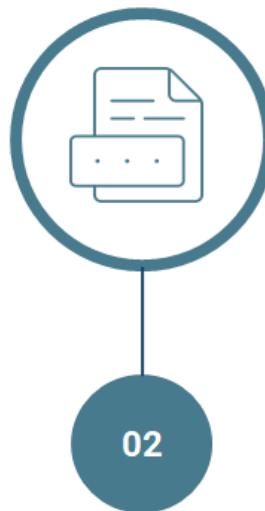


Résultat du web service

- eng
- fre
- ger

# Exploration du corpus V0

Bilan



NOT host.title:(  
"Animal Cognition"  
"Animal Behaviour" "Applied Animal  
Behaviour Science")

NOT title:(  
"in mémoriam" "à la  
mémoire") NOT genre:abstract

NOT language:ger

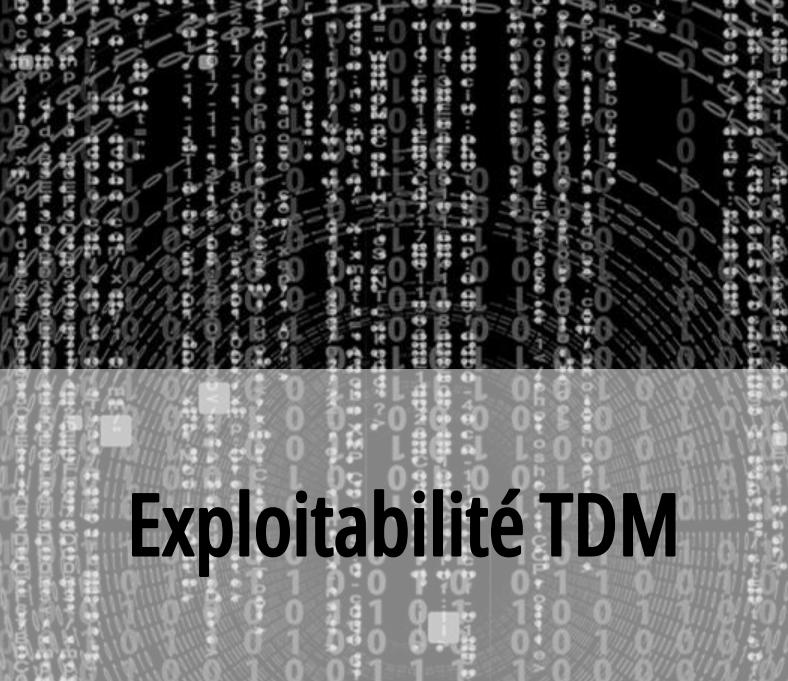
# Révision de la requête

## Suppression de 578 documents

```
title:(m?mor* mnesic metamne* m?tam?mor*  
mémoire* mnési* mnémo* métamnési*) AND  
categories.wos.raw:(\"2 - neurosciences\" \"2 -  
psychology\" \"2 - clinical neurology\" \"2 -  
psychology, biological\" \"2 - psychiatry\" \"2 -  
psychology, clinical\" \"2 - geriatrics &  
gerontology\" \"2 - gerontology\" \"2 -  
neuroimaging\" \"2 - behavioral sciences\" \"2 -  
psychology, experimental\") AND  
publicationDate:[2000 TO *]
```

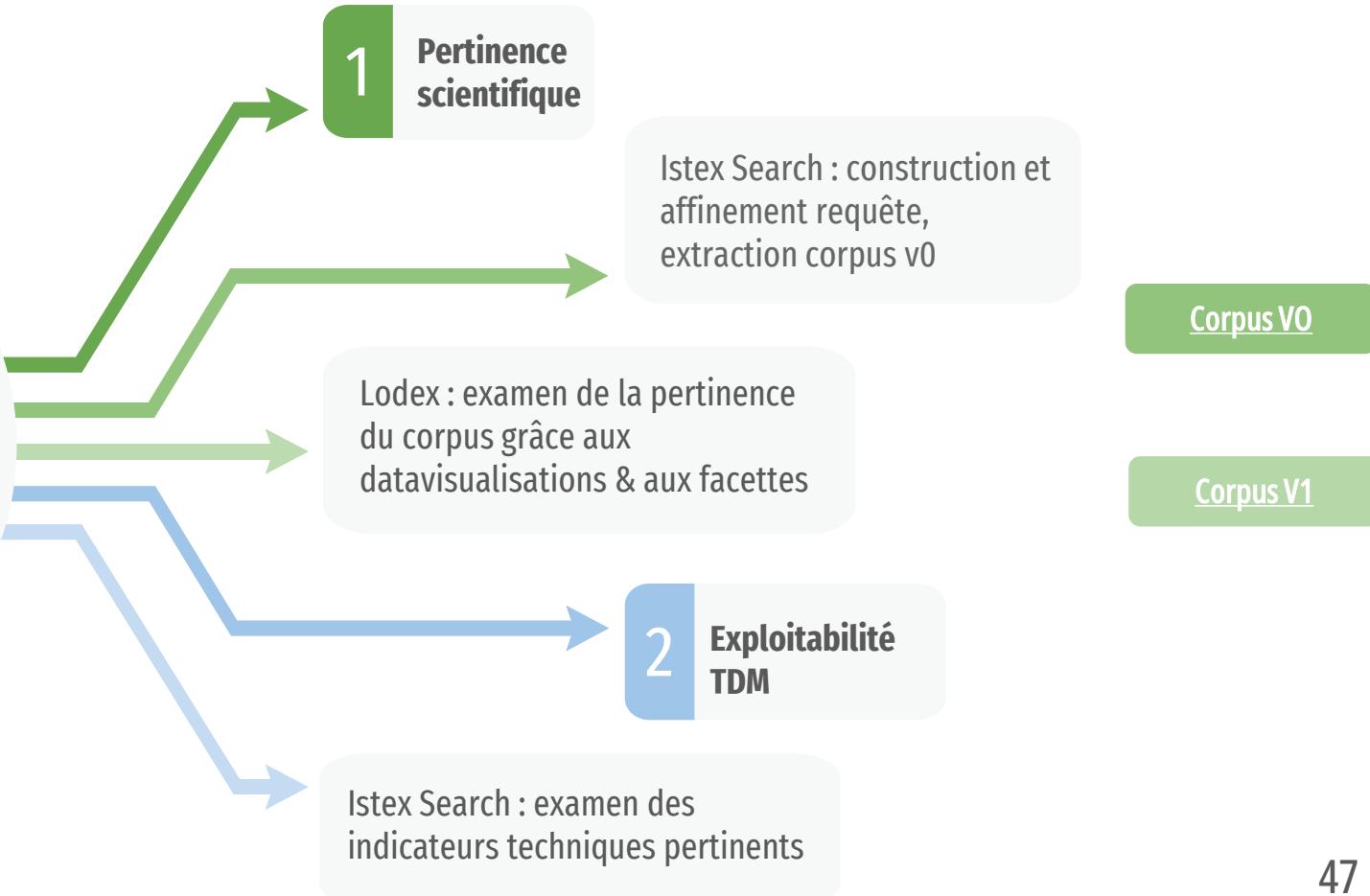
```
title:(m?mor* mnesic metamne* m?tam?mor* mémoire*  
mnési* mnémo* métamnési*) AND categories.wos.raw:(\"2 -  
neurosciences\" \"2 - psychology\" \"2 - clinical neurology\" \"2 -  
psychology, biological\" \"2 - psychiatry\" \"2 - psychology,  
clinical\" \"2 - geriatrics & gerontology\" \"2 - gerontology\" \"2 -  
neuroimaging\" \"2 - behavioral sciences\" \"2 - psychology,  
experimental\") AND publicationDate:[2000 TO *] NOT  
host.title:(\"Animal Cognition\" \"Animal Behaviour\"  
\"Applied Animal Behaviour Science\") NOT title:(\"in  
mémoriam\" \"à la mémoire\") NOT genre:abstract NOT  
language:ger
```

# Exploitabilité TDM





## 2 phases & 2 outils



# Exploitabilité TDM

## Résumé



### Constat

- 6 % des documents n'ont pas de résumé

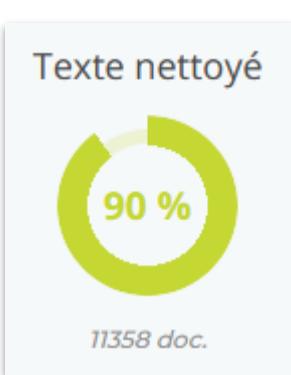
### Procédures / outils

- Teeft : indexation non supervisée pour extraire les termes les plus spécifiques d'un contenu scientifique
- GarganText : plateforme collaborative d'exploration graphique de corpus

### Requête AND abstract:<sup>\*</sup>

# Exploitabilité TDM

## Texte nettoyé



### Constat

- 10 % des documents n'ont pas de texte nettoyé ([texte brut](#) vs [texte nettoyé](#))

### Procédures / outils

- CorText : outil d'analyse et d'exploitation de corpus textuels (script Terms extraction)
- TermSuite : outil d'extraction terminologique et d'alignement de termes multilingues
- Bibliothèque Python (gensim)
- Concordancier (Sketch Engine)

Requête AND qualityIndicators.tdmReady:true

# Exploitabilité TDM

## PDF texte



### Constat

- Tous les documents ont un PDF texte (vs type [PDF image](#))

### Procédures / outils

- Transformer le PDF en texte avant l'intégration dans l'outil souhaité ([tesseract](#))

Requête AND qualityIndicators.pdfText:true

# Exploitabilité TDM

## Nombre de pages / mots

### Constats

- 25 documents possèdent plus de 100 000 mots
- 11 documents possèdent plus de 100 pages

### Requêtes

AND qualityIndicators.pdfPageCount:[\* TO 100]  
AND qualityIndicators.pdfWordCount:[\* TO 100000]

NOMBRE DE MOTS DU PDF ^

Nombre de mots (106 179 à 161 114)

106 179 à 161 114

APPLIQUER X



# Exploitabilité TDM

## Bilan





À vous !

# Exercice 1 : construire une requête Istex

□ Étape 1 : Se rendre sur Istex Search.

□ Étape 2 : Rechercher les formes anglaises et françaises *refugee*, *demandeur d'asile*.

Pour une aide sur la syntaxe des requêtes consulter les Astuces de recherche ? (à droite dans Istex Search).

□ Étape 3 : Limiter le bruit et le silence.

□ Étape 4 : Répondre aux contraintes scientifiques et techniques.

Quelle est la taille de votre corpus ?

# Exercice 1 : construire une requête Istex

```
(title:(refugee refugees réfugié réfugiée réfugiés réfugiées "asylum seeker" "asylum seekers"  
"demandeur d'asile" "demandeurs d'asile" "demandeuse d'asile" "demandeuses d'asile")  
subject.value:(refugee refugees réfugié réfugiée réfugiés réfugiées "asylum seeker" "asylum  
seekers" "demandeur d'asile" "demandeurs d'asile" "demandeuse d'asile" "demandeuses d'asile")) AND  
genre.raw:"research-article" AND publicationDate:[2000 TO *] AND abstract:* AND language:eng
```

# Exercice 2 : chargement des données et création du site Lodex

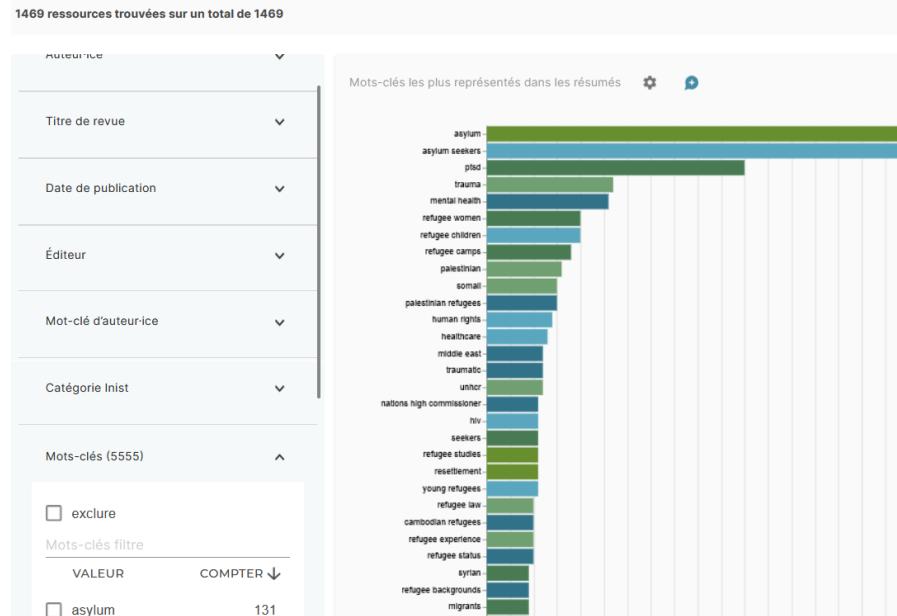
- Étape 1 : Télécharger le corpus.
- Étape 2 : Importer le corpus dans Lodex.
- Étape 3 : Importer le modèle.
- Étape 4 : Modifier un champ existant dans Lodex.

The screenshot shows the ISTEX Formation website interface. At the top, there's a navigation bar with links like 'ACCÈS ISTEX.FR', 'TDM WEB SERVICES', 'LOTTERIE', 'CORPUS SCIENTIFIQUES', and 'ACTUALITÉS ISTEX'. Below the header, the 'ISTEX Formation' logo is displayed, followed by 'Université Paris Cité'. The main content area features a section titled 'Corpus Réfugié·es' with a sub-section titled 'Étude des réfugié·es politiques et climatiques'. There are three small globe icons below this title. A descriptive text block states: 'Le corpus *Réfugié·es* sert de base à une recherche en sociologie. Son objectif est de fournir un matériau de recherche pour analyser les **mouvements des réfugié·es à travers le monde** à travers la littérature scientifique. Il offre de distinguer la part de documents traitant des réfugié·es climatiques et des réfugié·es politiques et d'identifier leur origine géographique.' At the bottom, there are three data fields: 'Date de création' (with a placeholder 'à renseigner'), 'Structure' (with a placeholder 'Université de Paris Cité'), and 'Nombre de documents' (with the value '1469').

# Exercice 3 : Premiers pas vers le TDM

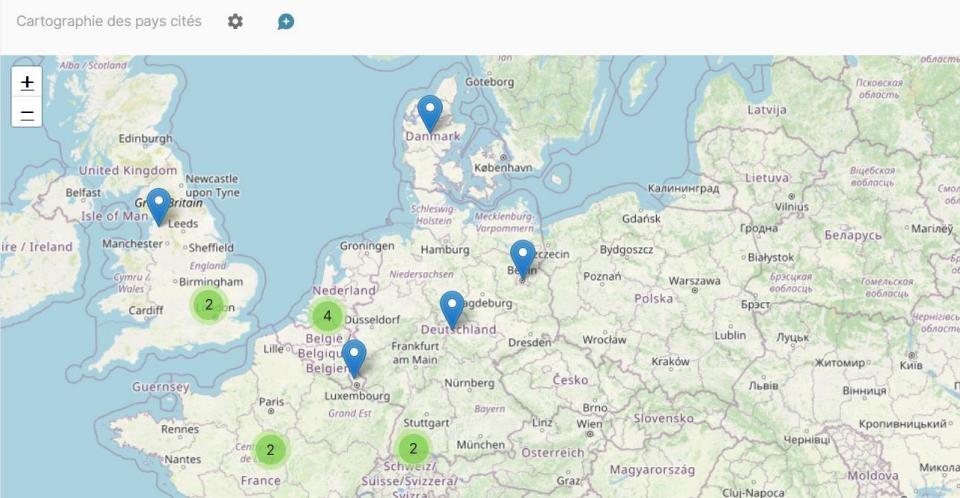
- Étape 1 : Extraire les mots-clés des résumés via le web service Teeft.
- Étape 2 : Créer un diagramme en barres.
- Étape 3 : Créer une nouvelle facette Mots-clés.

Combien de documents comportent le terme *asylum seekers* et *environmental refugees* ?



# Exercice 4 : Cartographie

- Étape 1 :** Récupérer les noms de lieux mentionnés.
- Étape 2 :** Uniformiser les noms de lieux pour créer une cartographie.
- Étape 3 :** Créer une carte en fonction des pays mentionnés dans les articles.



# Exercice 5 : Premier précalcul

□ Étape 1 : Extraction des thématiques du corpus.

