



UNIVERSITÉ
HAUTE-ALSACE

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

Écoles doctorales UHA – 11 mars 2025

mathilde.huguin@inist.fr

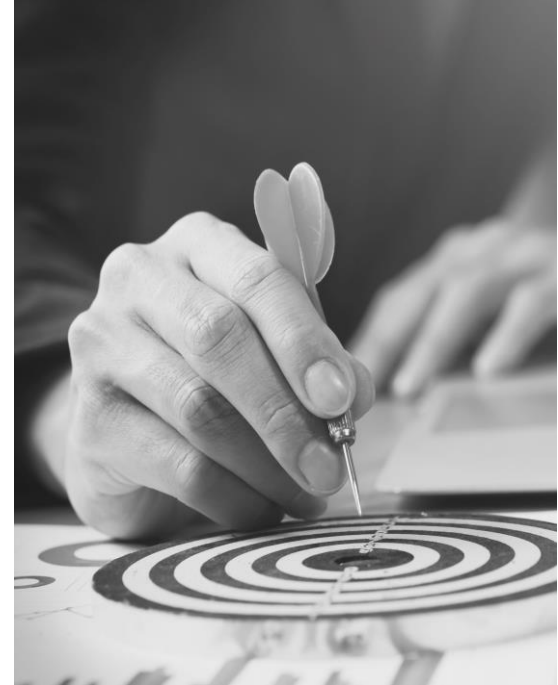
Ingénieure de recherche / PhD - Inist-CNRS

Programme & Objectifs

Recherche documentaire & Text and data mining

Mardis 4 et 11 mars de 13h30 à 16h30

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-uha.formation.lodex.fr/instance/default>

Programme



01

Introduction : le TDM & Istex

02

Constitution d'un corpus à partir des ressources Istex

03

Manipulations des outils présentés

A black and white photograph showing a stack of several closed books on the left. The top book is open, with its pages fanned out. To the right, a laptop is partially visible, its screen dark. The background is a plain, light-colored wall.

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, ouvrirlascience.fr)

MaTOS

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

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 ordinateur 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^{er} plan pour la science ouverte 5M/an
- 2021 : 2^{ème} 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



Introduction : le TDM & Istex

Exemple de traitements : [le WS catégories scientifiques Inist](#)

Classification supervisée : apprentissage sur des données déjà labellisées

- 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
  }
]
```

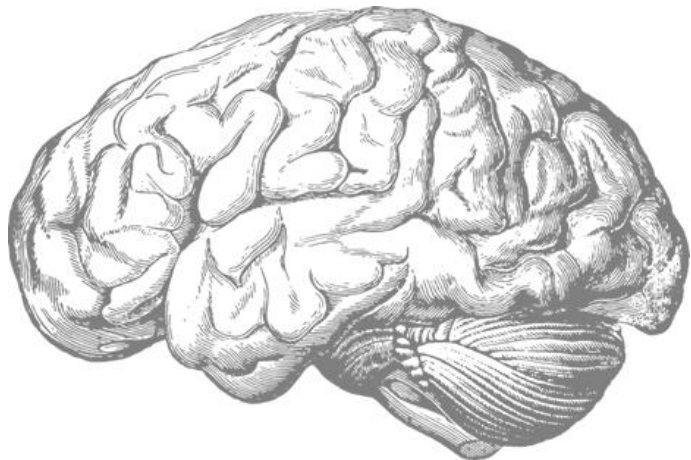
```
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  "idt": "08-040289",
  "value": [
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        "id": "001",
        "value": "Sciences exactes et technologie."
      },
      "confidence": 1.000057220458984,
      "rang": 1
    },
    {
      "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. The top book is open, showing its pages. To the right, a laptop is partially visible, its screen dark. The background is a dark, solid color.

2. Constitution d'un corpus spécialisé

Cas d'usage | Requêtage
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



Interrogation & Exploration



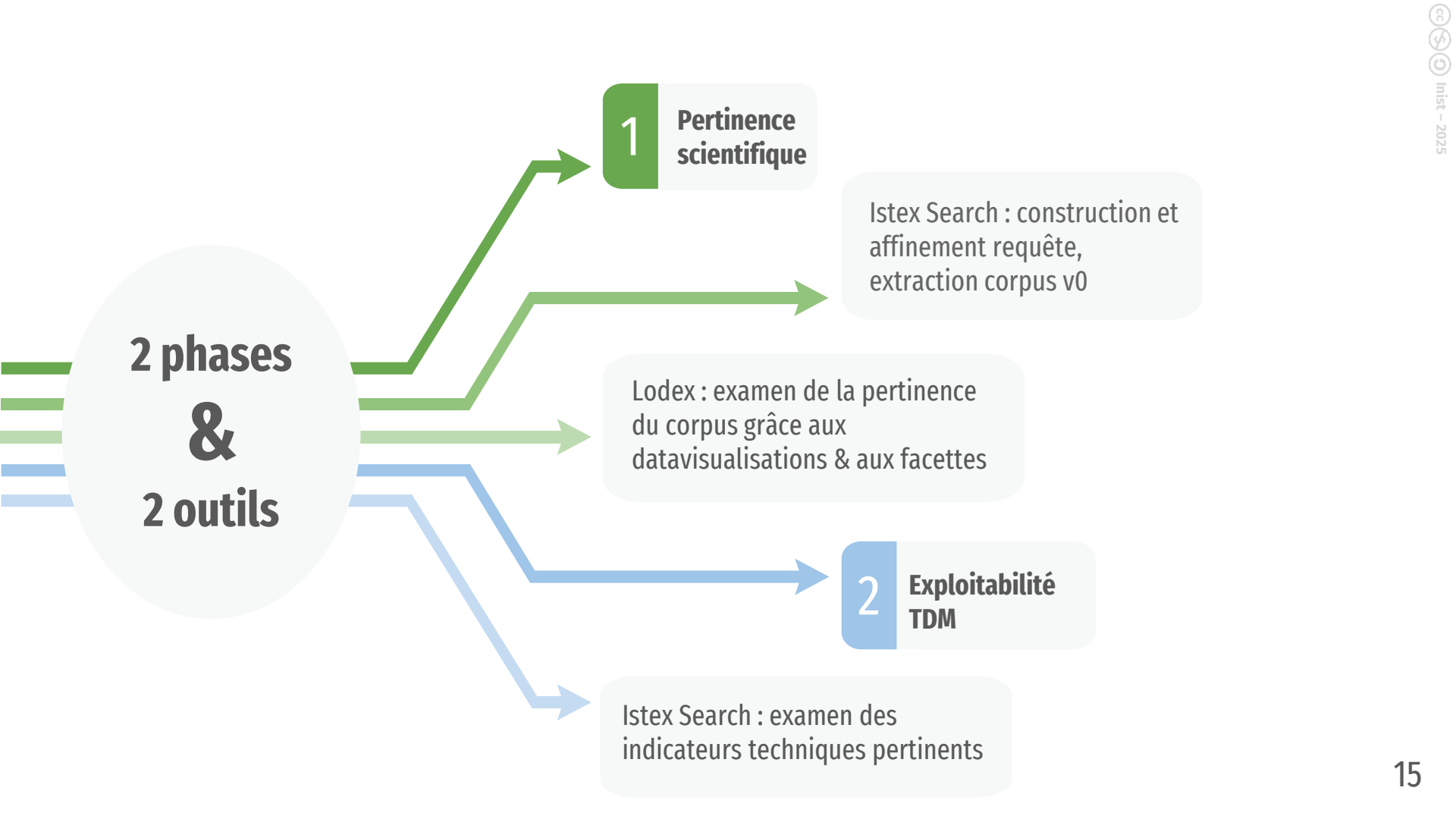
Extraction



Visualisation & Exploration



LODEX



2 phases & 2 outils

1 Pertinence scientifique

Istex Search : construction et affinement requête, extraction corpus v0

Lodex : examen de la pertinence du corpus grâce aux datavisualisations & aux facettes

2 Exploitabilité TDM

Istex Search : examen des indicateurs techniques pertinents

Requêtage

Requêtage

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

Requêtage

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 (?)

Requêtage

ENFANCES
 FAMILLES
 GÉNÉRATIONS

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.

The COVID Families

La pandémie de
 La pandemia de

Laurence Charton, Léoni Labrecque and Joseph Josy Lévy

Requêtage



Afriques

New Stud
 Garima E
 Nouvelles étu
 Garima

Sergey Kim

The study was financed by the project ANR EthioChrisProcess: Christianisation et interactions religieuses en Éthiopie (VIe-XIIIe 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.

Requêtage



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 Darwich¹¹. 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

Sociol
 panar

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

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

Requêtage

```
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 :

Requêtage



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

Requêtage

```
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")
```

Résultats (21-10-2024) : 20 726 doc.

Explication de la requête

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

Requêtage

ON MEMORY.¹

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

¹ Read at a meeting of the Neurological Society in December, 1890.

Requêtage

```
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 *]`

A dark gray circular icon containing a white downward-pointing arrow and a horizontal bar below it, representing a download function.

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

USAGE PERSONNALISÉ
LODEX
CORTEXT
GARGANTEXT

<input type="checkbox"/> Texte intégral <input type="checkbox"/> PDF <input type="checkbox"/> TEI <input type="checkbox"/> TXT <input type="checkbox"/> CLEANED <input type="checkbox"/> ZIP <input type="checkbox"/> TIFF	<input checked="" type="checkbox"/> Métadonnées <input checked="" type="checkbox"/> JSON <input type="checkbox"/> XML <input type="checkbox"/> MODS <input type="checkbox"/> Annexes <input type="checkbox"/> Couvertures	<input type="checkbox"/> Enrichissements <input type="checkbox"/> multicat <input type="checkbox"/> nb <input type="checkbox"/> grobidFulltext <input type="checkbox"/> refBibs <input type="checkbox"/> teeft <input type="checkbox"/> unitex
--	--	--

Trier par : **pertinence & qualité** ▼

Télécharger 13 158 / 13 158 TOUT

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

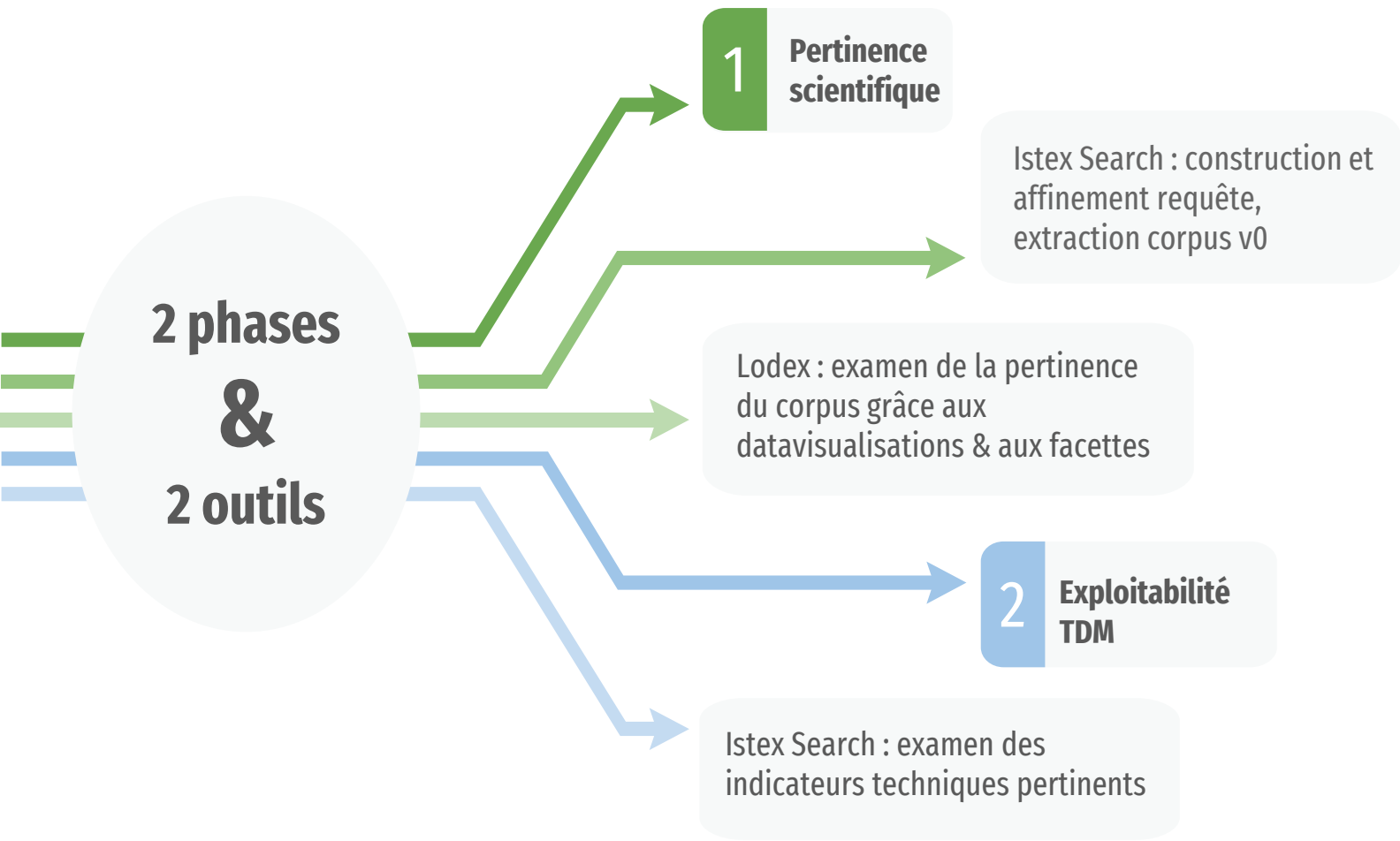
```
title:(m?mor* mnesic metamne* m?tam?mor* mémoire* mnési* mnémo* métamnési*) AND categories.wos.raw:(\"2 - neurosciences\" \"2 - psychology\" \"2 - clinical neurology\" \"2 - psychology, biological\" \"2 - psychiatry\" \"2 - psychology, clinical\" \"2 - geriatrics &...
```

Requête brute complète

```
https://api.istex.fr/document?q=title:(m?mor* mnesic metamne* m?tam?mor* mémoire* mnési* mnémo* métamnési*) AND categories.wos.raw:(\"2 - neurosciences\" \"2...
```



**Exploration
du corpus V0**



Corpus V0

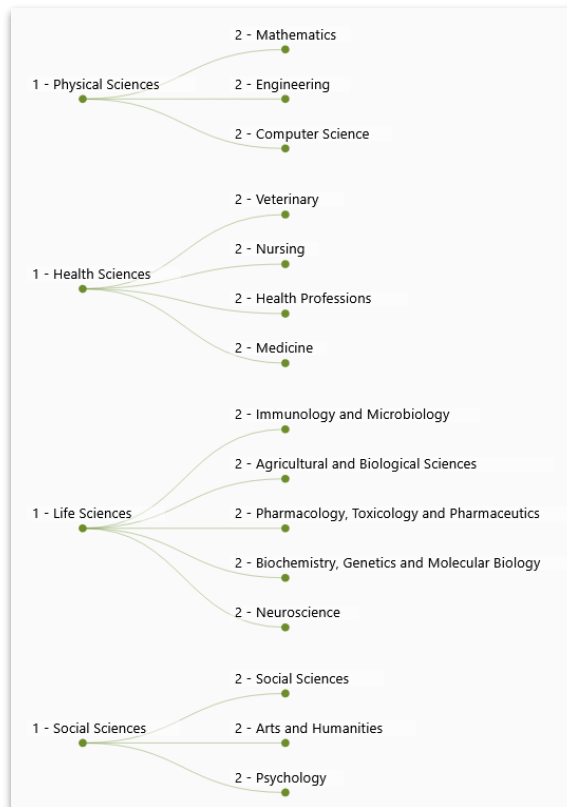
Exploration du corpus V0

Années de publication



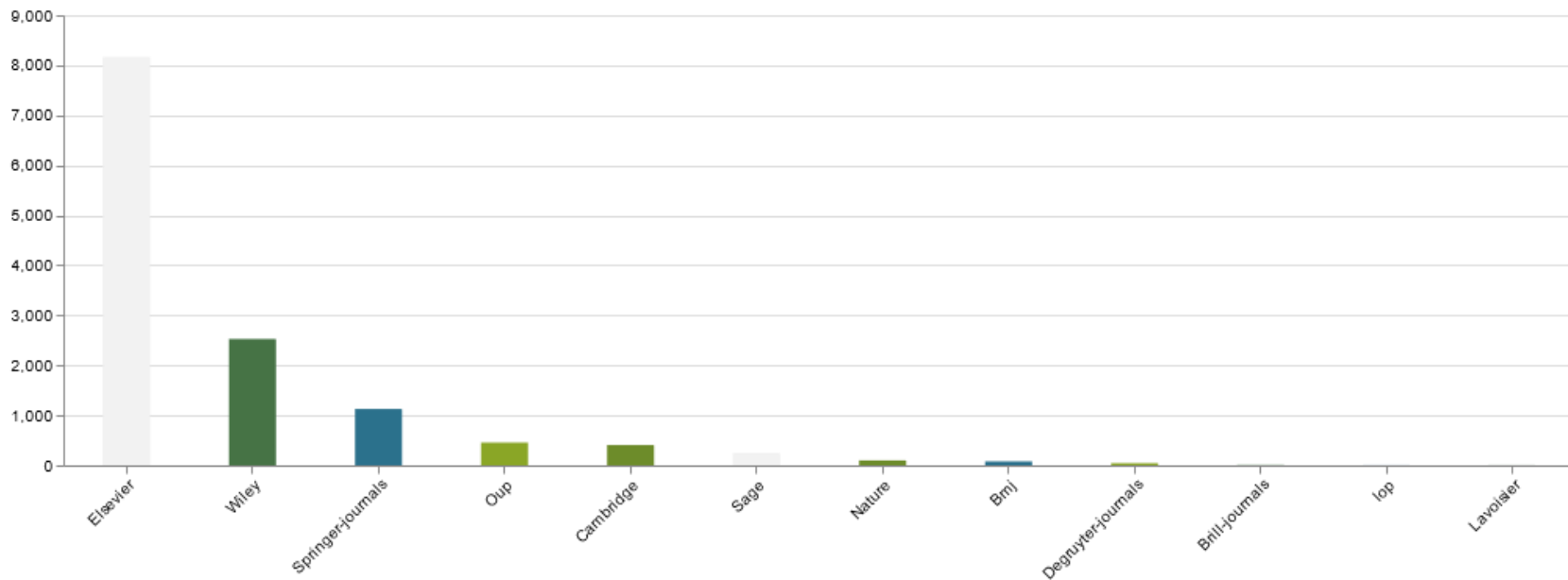
Exploration du corpus V0

Catégories scientifiques
Scopus



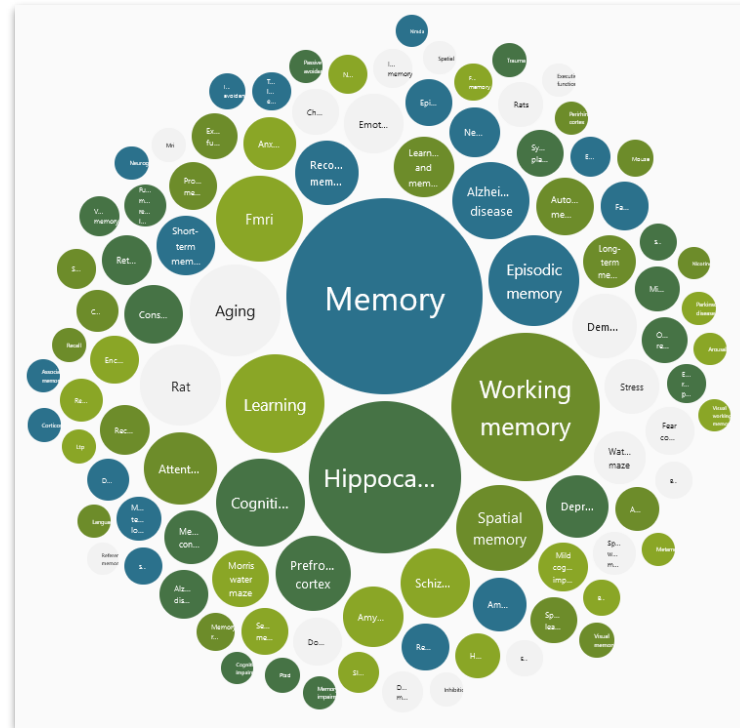
Exploration du corpus V0

Editeurs



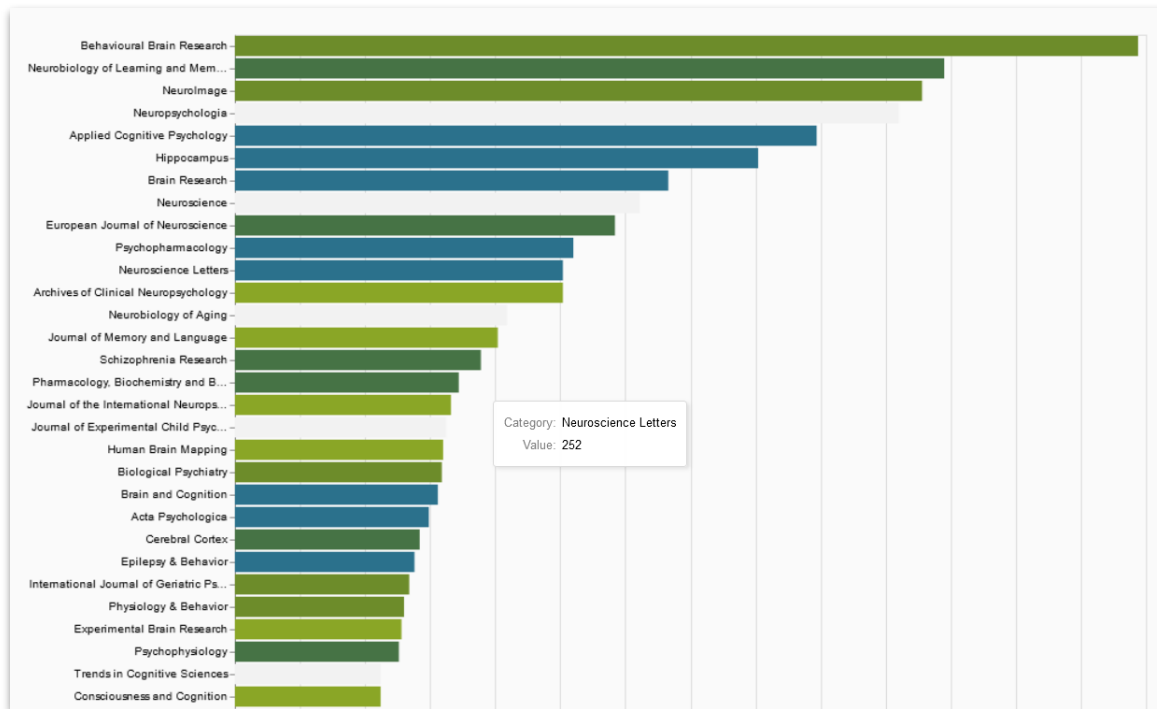
Exploration du corpus V0

Mots-clés d'auteur



Exploration du corpus V0

Revue (346)



Exploration du corpus V0

Revue d'éthologie

Revue / Monographie (3) ^

exclure

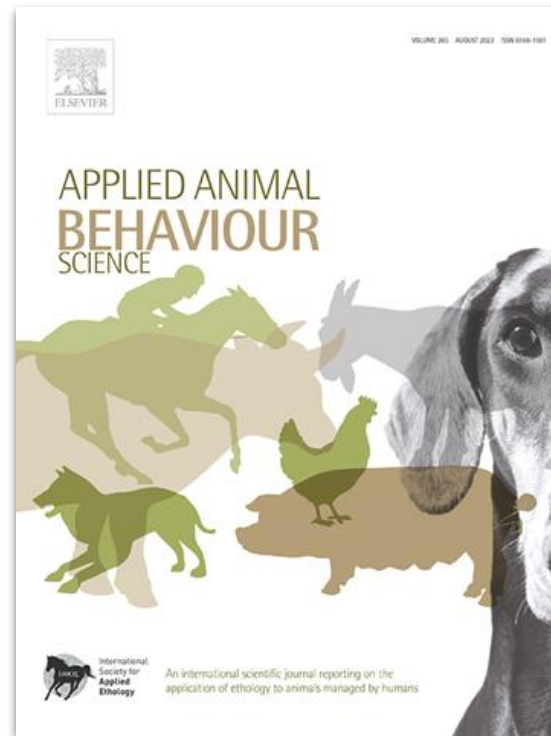
animal|

VALEUR COMPTER ↓

TOUT COCHER

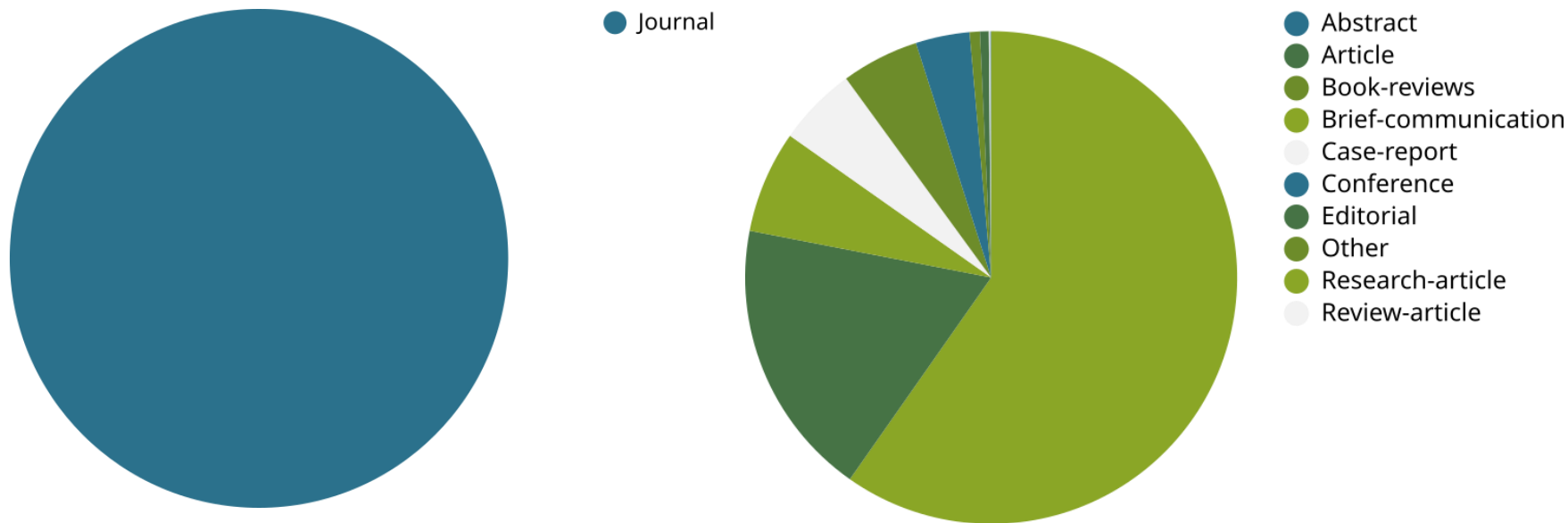
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<input type="checkbox"/> Animal Behaviour	43
<input type="checkbox"/> Applied Animal Behaviour Science	7

Showing 1 to 3 of 3 < >



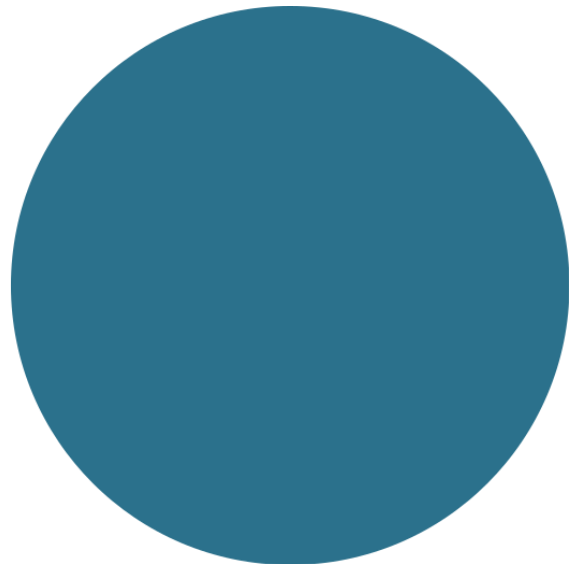
Exploration du corpus V0

Types de publication et de document

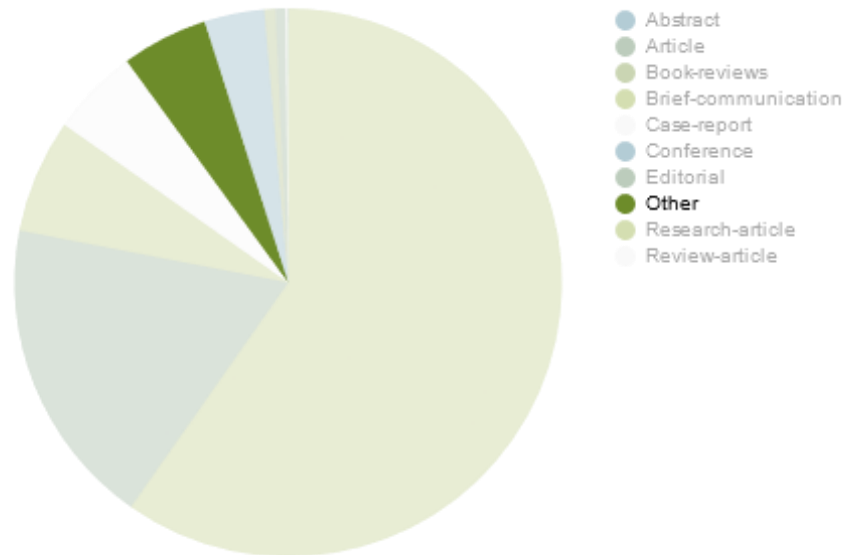


Exploration du corpus V0

Types de publication et de document



● Journal



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



À la mémoire de Betty Havens 9 octobre 1936 au 1^{er} mars 2005

Marcia Finlayson,¹ Neena Chappell,² and Lynn McDonald³

- 1 Université de l'Illinois à Chicago
- 2 Université de Victoria
- 3 Université de Toronto



lège qui nous a été offert de partager une partie de son

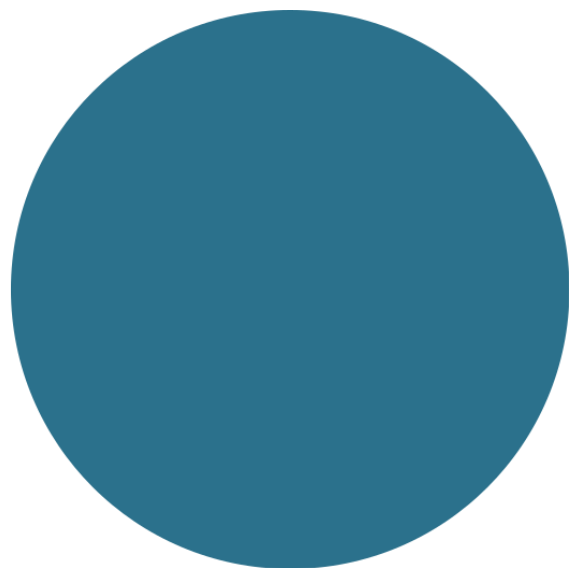
Lorsque Betty Havens est décédée, le 1^{er} mars au matin, la nouvelle s'est propagée rapidement que notre chère amie, collègue et mentor, celle qui nous avait toujours soutenus, était partie. Nombreux sont ceux à qui manqueront son rire chaleureux, ses répliques amusantes et ses petits clin d'œil. Nous sommes reconnaissants du privi-

lège 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 indiscutable, même à la toute fin, puisqu'elle lisait *The Gerontologist* dans son lit aux soins palliatifs.

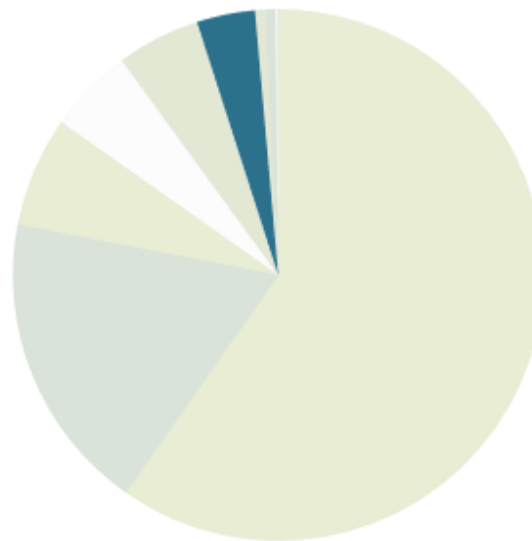
J'aimerais parler d'elle d'un point de vue plus personnel. Bien qu'elle n'était pas très démonstrative, elle soutenait sans aucune réserve les personnes en lesquelles elle croyait. Je me souviens très clairement de moments, pendant les premières années de ma carrière, où elle est venue me prendre par 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

Exploration du corpus V0

Types de publication et de document



● Journal



- Abstract
- Article
- Book-reviews
- Brief-communication
- Case-report
- Conference
- Editorial
- Other
- Research-article
- Review-article

Exploration du corpus

Types de publication et de document

Proceedings of the NAASS 23rd Annual Meeting / The Spine Journal 8 (2008) 15-1915

1495

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

doi:10.1016/j.spine.2008.06.163

P99. The Association Between Cervical Neck Pain and Health-related Quality of Life: A Cross-sectional Analysis
Manu Reza, DC, MHS^c, Pierre Côté, DC, PhD¹, J. David Cassidy, DC, PhD, DrMSc², Linda Carroll, PhD³, Centre of Research Expertise in Improved Disability Outcomes (CREIDO), University Health Network, Department of Public Health Sciences, University of Toronto, Toronto, Ontario, Canada; ²Department 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 (HRQL) 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 self-perceived 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 HRQL with the SF-36 Health Survey and computed 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 grades and HRQL. Compared to individuals without neck pain, those with Grades III-IV neck pain had significantly lower physical (mean difference = -13.9/10.0; 95% CI = -16.4, -11.3) and mental (mean difference = -10.8/10.0; 95% CI = -13.6, 8.1) HRQL. Controlling for covariates greatly reduced the strength of association between neck pain and physical HRQL and accounted for the observed association between neck pain and mental HRQL.

P100. Shape Memory Metal Rods Tested in a Porcine Model: Single Rod Constructs Result in Greater Deformity at One Week
Peter Newton, MD¹, Bart Yazawa, MD², Christine Farnsworth, MS¹, Vijayaraj Upasani, MD¹, Reid Chodura, BA¹, Srang Hwan Yoon, MD, PhD¹, Paul Furlan, MD¹, Rady Children's Hospital and UC Health Center, San Diego, CA, USA; ²University of California, San Diego, San Diego, CA, USA; ³DePuy 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 deformity correction as they return to their original shape with warming (straight in the coronal plane with a pre-contoured sagittal profile). A square cross-sectional rod may additionally allow deformity 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 deformity correction (clinically) (experimentally), while dual rod constructs are likely more stable with less clinical flexibility.

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: Deformity correction between single and dual rod groups.

METHODS: 10 mature Yucatan 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 deformity correction and compared between single and dual rod groups (p<0.05).

RESULTS: Scoliotic deformity correction 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°±5° vs 20°±4°, p=0.95). One week following rod placement, however, coronal deformity in the single rod group progressed to 42°±11°, which was significantly more than the dual rod group (33°±3°, p=0.002).

CONCLUSIONS: Pre-contoured (90° coronal curve), square-cross section shape memory metal rods successfully created coronal spinal deformity in all 10 animals. The less constrained single rod constructs resulted in greater deformity correction compared to dual rod constructs, at one-week post-op, with no evidence of implant failure/crowd 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. By Control deformity for both groups (average ± SD) ¹ indicates statistical difference between groups. p<0.005



710 CIRCADIAN RHYTHM DISTURBANCES IN ADVANCED DEMENTIA: DIAGNOSTIC SPECIFICITY

David G. Harper, McLean Hosp, Harvard Med Sch, Belmont, MA; Edward G. Sipes, Rhode Island Hosp, Brown Univ Sch of Medicine, Providence, RI; Ann C. Meyer, E. N. Rogers Mem Veterans Hosp, B U Sch of Medicine, Boston, MA; Andrew Salaf, McLean Hosp, Harvard Med Sch, Belmont, MA; Patricia C. Hasler, Bethel E. Goldberg, McLean Hosp, Belmont, MA; Ludovic Velter, E. N. Rogers Mem Veterans Hosp, B U Sch of Medicine, Bedford, MA

Many of the nosognostic symptoms of dementia (sleep disturbance, sundowning) may have their root in abnormalities of the circadian timing system. Previous studies have performed in this population, carrying a clinical diagnosis of probable Alzheimer's dementia, have shown that the phase of the circadian rhythm of temperature and activity is significantly delayed and that the amplitude is significantly reduced. We have since collected another sample and made pathologically confirmed diagnoses on 38 patients who were enrolled in our original study to compare with 8 healthy controls. Patients were categorized for presence of Alzheimer's disease (AD), frontotemporal degeneration (FTD), including Pick's disease and corticobasal ganglionic degeneration, and dementia with Lewy Bodies (DLB). Twenty-seven patients were given a final diagnosis of AD, 11 were given a final diagnosis of FTD and 1 was diagnosed with DLB. In addition, 4 AD patients were also diagnosed with DLB and 1 FTD patient received this diagnosis. Patients with dual diagnosis or an exclusive DLB diagnosis were excluded from further analysis. Patients with AD had a significantly delayed phase of their temperature and activity rhythms compared to controls, whereas patients with FTD had a temperature rhythm which was similar to controls but an activity rhythm characterized by unusual phase advance and lowered goodness-of-fit. These results indicate that the rest-activity rhythm disturbances seen in AD and FTD may have a neurobiological 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	13.6 ± 1.2	0.52 ± 0.04
AD	17.8 ± 0.4	15.9 ± 0.8	0.52 ± 0.08
FTD	15.9 ± 0.7	10.4 ± 1.2	0.38 ± 0.04

All values reported as means ± SE.

711 NEUROCHEMICAL AND BEHAVIORAL ALTERATIONS INDUCED IN MICE BY CENTRALLY ADMINISTERED CARBOXYTERMINAL FRAGMENT OF B-Amyloid PRECURSOR PROTEIN.

Cheryl Hwang Park, Se Heon Choi, Eun-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 A-amyloid precursor protein (APP) induced neurotoxicity in vivo and in vitro experiments. However, it is unclear whether neurochemical changes and learning and memory impairment accompany CT. To elucidate the in vivo neurotoxicity of CT, we examined behavioral changes using Morris water maze T-maze following a single intracerebroventricular injection of recombinant 105-250 amino acid CT (CT105). Mice and M35 protein. In mice, we also quantified the changes in acetylcholine (ACh) level of cortex and hippocampus. Mice that received CT105 revealed significant decrease in ACh level in cortex and hippocampus compared with saline treated group. Spatial learning and memory impairment was significantly impaired by CT 105 in dose-dependent manner. These results suggest that learning and memory impairment induced by centrally administered CT 105 in vivo may be related to neurochemical alteration.

712 EFFECTS OF CONTROL ON CONDITION AND IQG-PEF IN HEALTHY YOUNG AND OLD SUBJECTS

Oliver J. Wolf, Antonio Cavoti, Enad Kamil, Elvira I. Thorne, Susan De Santis, Mory J. de Leon, NYU Sch of Medicine, New York, NY

Elevated cortisol levels are observed in most patients with Alzheimer's disease (AD). Previous studies suggest that in some subjects, removal cortisol reduced in vivo

men participated in the present placebo controlled double blind crossover study. Subjects received 0.5 mg/kg cortisol or placebo in. Cognitive tests were administered before and two to four points (15 min, and 150 min) after cortisol administration. Cortisol impaired the recall of a word list (declarative memory) learned before the treatment in both age groups. Digit span (a measure of short-term memory) was impaired in young but not old subjects. The present results suggest that cortisol and declarative memory is especially sensitive to the disruptive effects of cortisol and that this effect occurs in both young and old subjects. Digit span is a measure of short-term memory, which is at least in part mediated by the frontal lobe is impaired by cortisol only in young subjects. Our findings suggest that during healthy aging the hippocampus, but not the frontal lobe, retains its sensitivity to the effects of cortisol. The cognitive findings predict that a cortisol challenge in young subjects during FTD-PEF should result in a reduction in hippocampal and frontal glucose metabolism. The data from the PET experiment in younger subjects, which is currently in progress, will be presented at the meeting. Together these studies highlight the importance of endocrine and behavioral changes in the assessment of functional brain aging.

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

Vlad Fencsik, János, Szabolcs Várványi, Panna, Bence, Research Institute, Moscow Russian Oleg Nikolai Odin, Research Ctr of Mental Health, Tallin Estonia

In normal aging energy expenditure and energy resources of the brain are decreased. In normal and pathological aging the automatization of energy processes in the brain is provided using the mechanisms similar to that in stress reactions. The aim of present study is the investigation of influence of stress-like mechanisms of getting energy on 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 registration of visual evoked potentials to the flash and DC potentials as characteristic of brain oxidator processes. The cortisol level in peripheral blood and the level of lipid peroxidation were evaluated. There is significant correlation between the cortisol level in brain blood and level of DC potential in elderly subjects. In normal aging energy DC potential correlates with the subclinical features of pathological symptoms. In DAT patients the significant increase of DC potentials and less noticeable increase of cortisol level are observed. The increase of the brain energy expenditures has a good correlation with the increase of the lipid peroxidation. The disappearance of late components of visual evoked potentials and other changes of electrophysiological characteristics, which accompany the progress of dementia. Thus, pathological ways of automatization of energy processes are potential for normal and pathological aging and their regulation is feasible target for prevention and therapies of DAT.

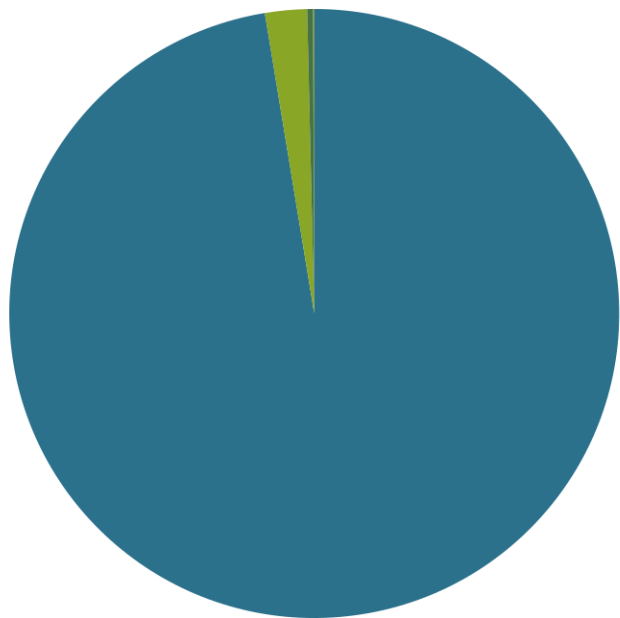
714 A DIFFERENTIAL MEMORY PROFILE IN PATIENTS WITH SUBJECTIVE MEMORY COMPLAINTS AND NORMAL MIMSE SCORE: DEPRESSION OR COGNITIVE DECLINE?

Jane Kubicki, Service of Neurology, 08025 Barabona Spine, Annapolis, Md, Peter Christian, East Geriatric, Armando Estrera, Geriatric

OBJECTIVE: To determine whether depressive symptoms influence particular aspects of memory performance in patients with subjective memory complaints. **BACKGROUND:** Individuals with otherwise normal MMSE, subjective memory complaints may predict dementia. Depressive symptoms, however, may influence memory performance via a differential mechanism between cognitive decline and depression. **Methods:** Analysis of memory profile in depressed and non-depressed individuals with normal MMSE and subjective memory complaints and help distinguish particular aspects of memory performance that are most probably linked to depressive symptoms. **DESIGN/METHODS:** Seventy nine non-demented subjects with subjective memory complaints, without abnormal history (oligos and MMSE) score > 26 were assessed with a comprehensive memory battery and other cognitive functions, and the GDS-15, a sensitive measure greater than 90% of depressive illness. 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 28.6 and GDS-15 (10 mean 5.8). Group 2: 23 subjects (11M/12F) with MMSE score of 27-30 mean 28.3 and GDS-15 (14 mean 19.3). There were no significant differences between groups on age (mean 65.6), years of education (mean 9.2) and

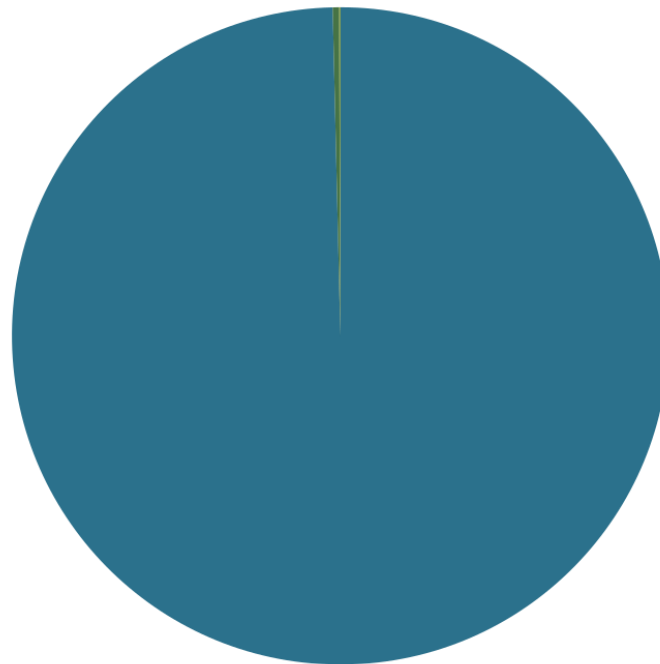
Exploration du corpus V0

Langues



Langues dans Istex (292 unknown)

- eng
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01

Reuves

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



02

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



03

Langues

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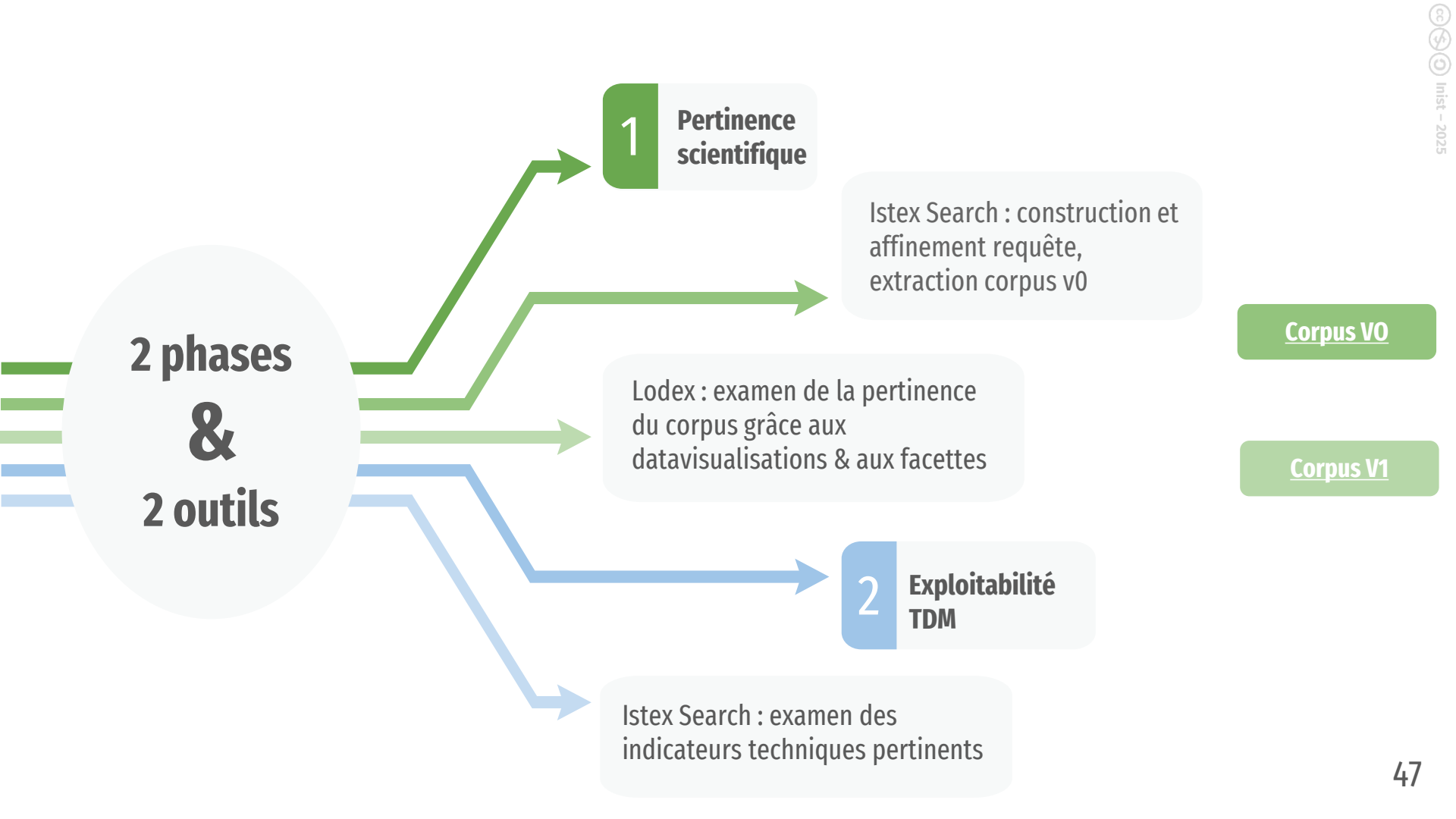
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1

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Corpus V0

Corpus V1

2

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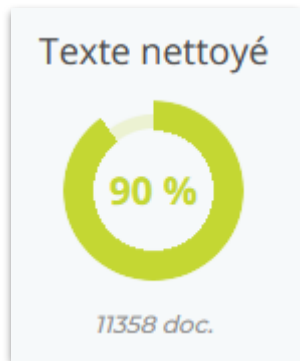
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- GarganText : plateforme collaborative d'exploration graphique de corpus

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