

# Tentative steps in mining UK theses

OR 2016, Dublin

June 2016



### Is there valuable content in theses?



"Anything worthwhile in a thesis would have been published separately anyway."

-- bioscience researcher

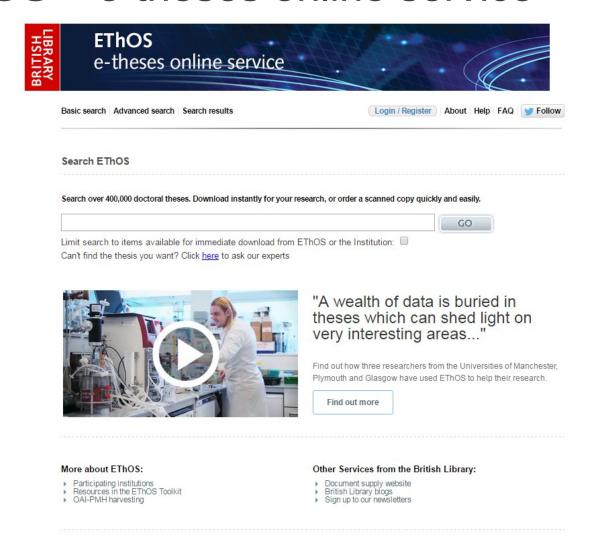
### **UK PhD theses**



- Cutting edge research
- Not published elsewhere
- Traditionally book, now usually e-
- PDF but new forms emerging
- 20,000 / year
- 300 pages each
- 6m pages of unique research every year

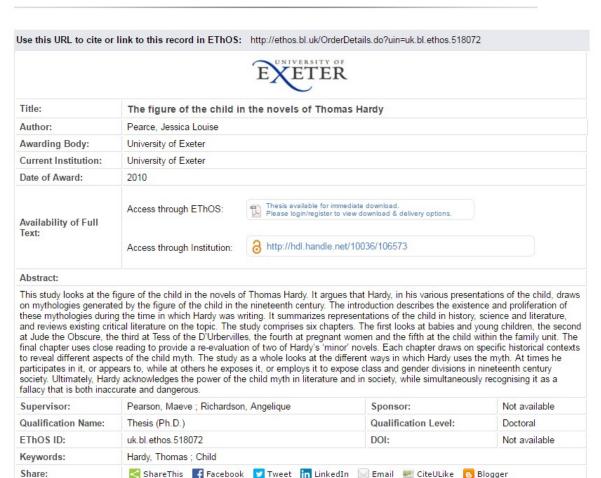


### EThOS – e-theses online service



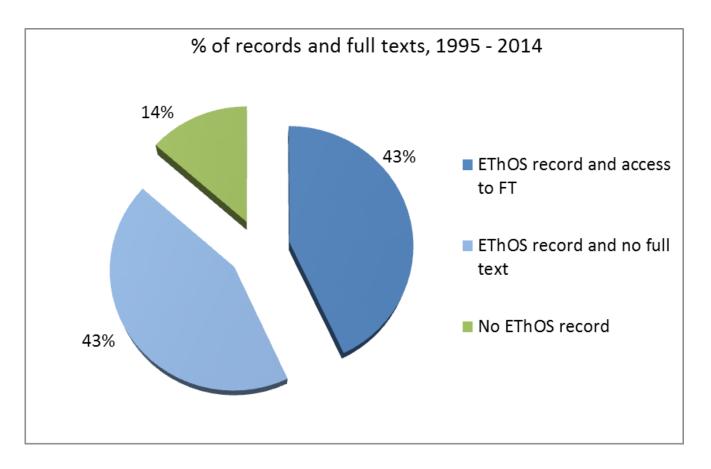
# **EThOS** e-theses online service

Basic search | Advanced search | Search results | Login / Register | About | Help | FAQ | | Follow





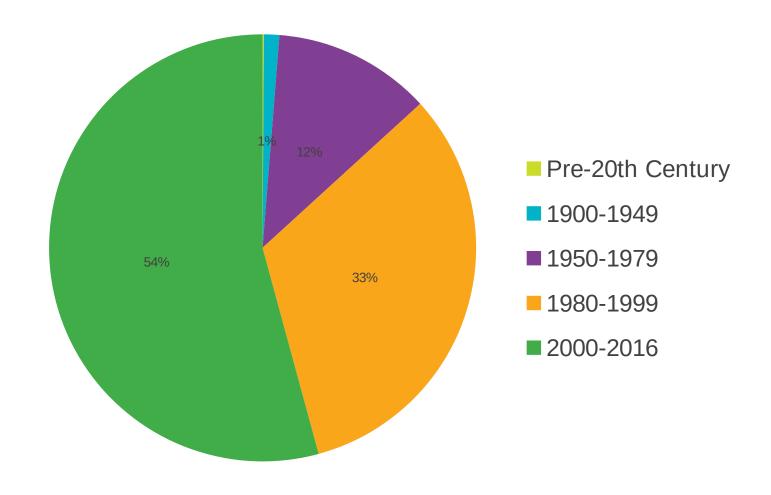
### UK thesis collection & EThOS



http://ethos.bl.uk

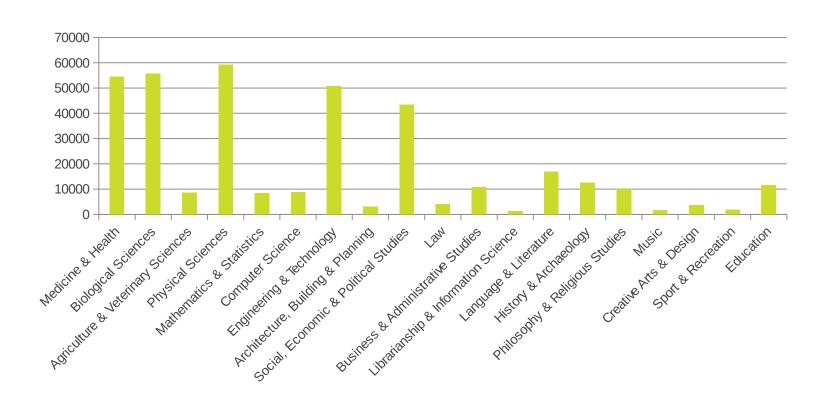


# Theses by Date





#### Theses by Subject





## TDM examples





## Alzheimer's Society report



RAND > RAND Europe > Research > Projects >

# Mapping the UK's Dementia Research Landscape and Workforce Capacity

#### **Background**

According to a recent report from the Global Observatory for Ageing and Dementia Care, the number of people with dementia worldwide will rise from 36 million in 2010 to 115m in 2050. In the UK, the Alzheimer's Society has estimated that one in 14 people over age 65 currently have dementia.



Illustration by Stephen Magrath, Wellcome Images/CC BY-NC-ND 4.0

Several governments, including the UK government, have announced commitments to increase funding for dementia research and innovation, with a goal to find a treatment or cure, and to improve the management of the condition through the way health and social care is delivered. It is vital that this funding be allocated effectively, building on existing strengths and targeting research gaps.

## Project Team Sonja Marjanovic Research Leader



Sonja Marjanovic is a research leader at RAND Europe Her work

focuses on health research system strengthening, multistakeholder collaboration in the health sector, capacity building, open-innovation and dementia innovation systems. Recent projects include studies and evaluations of R&D...

### http://

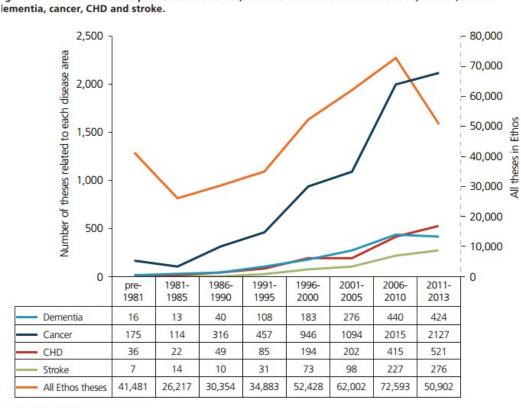
www.rand.org/randeurope/research/projects/mapping-uk-dementia-research-landscape.html

# TDM case study - Alzheimer's Society & RAND Europe



### Mapping the UK's Dementia Research Landscape

- Workforce pipeline
- Tracked PhD to senior research
- 1/5 dementia PhD graduates remain in dementia research
- 70% leave dementia research within 4 years of completing PhD
- Used EThOS metadata to analyse trends

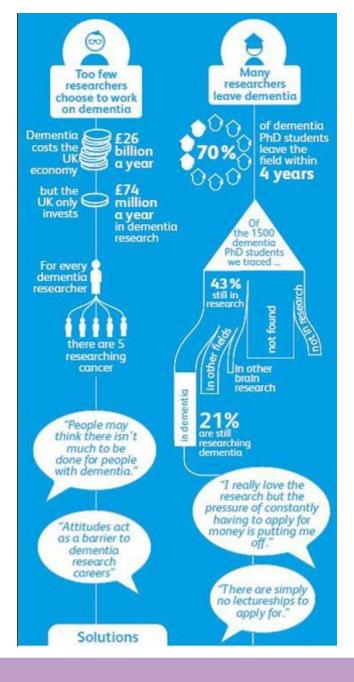


ource: EThOS at the British Library

http://britishlibrary.typepad.co.uk/science/2015/09/a-novel-use-of-phd-data.html

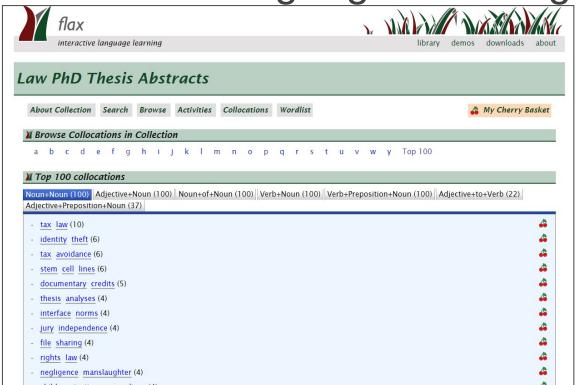
### Dementia search terms

- Alzheimer's
- Dementia
- Cognitive impairment
- Mixed dementia
- Early onset dementia
- Vascular dementia
- Lewy bodies (Dementia with Lewy bodies)
- Frontotemporal dementia
- Posterior Cortical Atrophy
- Familial dementia
- Creutzfeldt Jakob
- Korsakoff's syndrome
- Cognitive impairment
- Supranuclear palsy
- Binswanger's
- Multiple sclerosis
- Motor neurone disease
- Parkinson's
- Huntington's





**FLAX Interactive Language Learning** 



- http://flax.nzdl.org/greenstone3/flax?a=fp&sa=library
- Article http://www.journals.elsevier.com/learning-culture-and-social-interaction//

# TDM case study – FLAX interactive language learning



- Model writing at research level; domain-specific texts; colocated phrases
- Auto extraction & re-use for language learning
- Used EThOS metadata abstracts
- University of Waikato & Queen Mary, London





Law PhD Thesis Abstracts



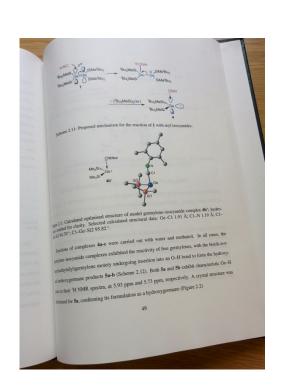
## Metadata or full text theses?

	Metadata	Full texts
Content	400,000 records	130,000 theses
Format	Data	<ul><li>Digitised from print</li><li>E-born</li></ul>
File format	Xml or Excel	PDF, .wav, .mov
Access	<ul><li>Harvest via OAI-PMH</li><li>Supplied data</li></ul>	<ul><li>Download from EThOS or other repository</li><li>Supplied with permissions</li></ul>
Rights	In the public domain	Rights holders

# TDM case study – National Compound Collection



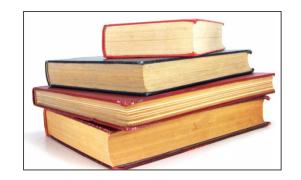
- Are there useful molecules in PhD theses?
- Extract the compounds; re-draw in ChemDraw; input into ChemSpider
- Bristol Uni & Royal Society Chemistry
- Manual pilot could process be automated?
- Used theses "likely to reveal new compounds"
- 47k compounds discovered (50% new)



### Data collection

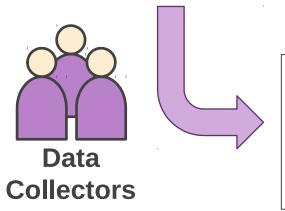


#### **Theses**

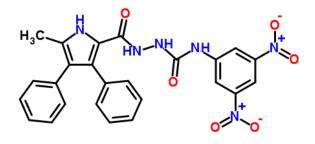


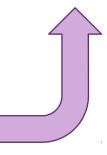
#### **Open Access Database**





#### **Molecular Structures**





> 45,000 compounds

N-(3,5-Dinitrophenyl)-2-[(5-methyl-3,4-diphenyl-1H-pyrrol-2-yl)carbonyl]hydrazinecarboxamide

Louise Sarah Evans, University of Southampton, 2006

# HSILI'N

# EThOS – <a href="http://ethos.bl.uk">http://ethos.bl.uk</a>

- Metadata for all UK doctoral (PhD) theses
- 430,000 records
- Top quality, accurate, consistent, unduplicated metadata
- Unique research, often not published elsewhere, cutting edge
- Data includes:
  - Author, title, year, university name
  - Abstracts (for 40%)
  - Supervisor names, funder/sponsor body
  - A few DOI and ORCiD identifiers
  - Subject discipline.



# Summary - EThOS data available

Excel or XML via OAI-PMH harvest:

http://simba.cs.uct.ac.za/~ ethos/cgi-bin/OAI-XMLFile-2.21/XMLFile/ethos/oai.pl

Data.bl.uk (coming soon)



Thank you

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