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Informationist: Informationist Breakout Session

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Informationist Breakout Session

eScience Symposium
April 6, 2016

Hello!

I am Leah Honor

Informationist Liaison to the **C**hild and **A**dolescent **N**euro**D**evelopment **I**nitiative (CANDI)

LSL Library Fellow

In this Session:

1. What we did, and why we did it

2. What I learned along the way

3. What we plan to do next

1.

NIH Informationist Supplement Grant

Data Citation in Neuroimaging: Proposed Best Practices for Data Attribution and Citation

Data Sharing and Citation in Neuroimaging

Sharing and reusing data (images) is already accepted and common, but no standards exist on how to properly cite reused data, and how to maintain attribution to data creators.

Citations are often:

◎ Indirect - Cite the paper where the data was presented, but not the data itself
◎ Unofficial - Citations in acknowledgements or contribution sections
◎ Indefinite - descriptions of sources and datasets in methods sections are not machine readable

What ARE Citations?

At their most basic level, citations are just a way to identify your sources.

Citing data, which has no specific format or structure, led us to ask: how can data be identified in a way that is direct, official, and definitive (and hopefully machine readable)?

What granularity of identification will be needed to accurately cite reused data? What about new datasets that draw from many sources?

Data DOIs In NITRC

NITRC - Neuroimaging Informatics Tools and Resources Clearinghouse

Realized we needed nested levels of identifiers:

◎ **Project level** - assigned when new data is uploaded
◎ **Image level** - each image carries its own identifier, as well as a parent project ID
◎ **Functional level** - assigned to image sets created from existing data

To Create a New Functional Level DOI for an Image Set:

Query

Using the standard repository search functions, a new image set is defined using standard criteria such as age, gender, handedness, diagnosis, etc.

Result/Selection

Results can be reviewed and excluded, or additional images included, until the final collection of images has been resolved.

Tag Preparation

Basic metadata fields, such as authors, associated publication ID's, funders, and project description fields must be completed in order to create an identifier for the newly defined image collection.

Functional DOI Process: Query

UMass/CANDI DOI Project

doi:
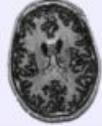
Home   Image database   Search

This page shows a collection of images starting with female, 5 <= age <= 18, right.

Actions:

[Tag] Tag this collection with a DOI.
[Download] Download the data in this collection (the download package may contain more data than requested).

Or refine the collection:

[Refine]

Project	Subject	Gender	Age	Handedness	Scan	Include	Exclude
cs_schizbull08	BPDwoPsy_030	female	9	right	anat		☐
cs_schizbull08	BPDwoPsy_030	female	9	right	seg		☐
cs_schizbull08	BPDwoPsy_031	female	15	right	anat		☑
cs_schizbull08	BPDwoPsy_031	female	15	right	seg		☑
cs_schizbull08	BPDwoPsy_032	male	7	right	anat	☐	
cs_schizbull08	BPDwoPsy_032	male	7	right	seg	☐	
cs_schizbull08	BPDwoPsy_033	male	8	right	anat	☐	
cs_schizbull08	BPDwoPsy_033	male	8	right	seg	☐	
cs_schizbull08	BPDwoPsy_034	male	10	right	anat	☐	

Functional DOI Process: Post Search Refinement

Functional DOI Process: Tag Creation

Functional DOI Landing Page

Window 1 — Image 10.18116/C6CC7C

doi.virtualbrain.org/lp/10.18116/C6CC7C

UMass/CANDI DOI Project

doi:

Home   Image database   Search

Manual Segmentation for CANDI Share Schizophrenia Bulletin 2008 subject BPDwoPsy_041

Child and Adolescent NeuroDevelopment Initiative, 2008

DOI 10.18116/C6CC7C

DataCite XML

Creators	Frazier JA (Cambridge Health Alliance) Hodge SM (Massachusetts General Hospital) Breeze JL (Cambridge Health Alliance) Giuliano AJ (Cambridge Health Alliance) Terry JE (Cambridge Health Alliance) Moore CM (Cambridge Health Alliance) Kennedy DN (Massachusetts General Hospital) Lopez-Larson MP (Cambridge Health Alliance) Caviness VS (Massachusetts General Hospital) Seidman LJ (Massachusetts General Hospital) Zablotsky B (Cambridge Health Alliance) Makris N (Massachusetts General Hospital)
Project	10.18116/C6159Z
Collections	10.5072/FK2H41Q83C
Sizes	1 files 167137 bytes
Format	NIfTI-1
Version	1.1
Rights	Creative Commons Attribution 4.0 International License

Download

Window 2 — Collection doi:10.5072/FK2H41Q83C

doi.virtualbrain.org/lp/10.5072/FK2H41Q83C

UMass/CANDI DOI Project

doi:

Home   Image database   Search

Image collection 10.5072/FK2H41Q83C

UMass/CANDI DOI project, 2015

DOI 10.5072/FK2H41Q83C

DataCite XML

Refine/download

Description	PubMed ID	Publication DOI	Funder	Authors
This data set of adolescent females was used to analyze hippocampal volumes in BPD.	18003631	doi:10.1093/schbul /sbm120	National Institute of Mental Health	Frazier JA Hodge SM Breeze JL Giuliano AJ Terry JE Moore CM Kennedy DN Lopez-Larson MP Caviness VS Seidman LJ Zablotsky B Makris N

Source projects	10.18116/C6159Z
Source images	10.18116/C6RP4R 10.18116/C6MW2T 10.18116/C6H599 10.18116/C6CC7C 10.18116/C67P43 10.18116/C63W25

2.

Lessons Learned

Bridging the gap between library and research team

Know Your Strengths

How I succeeded as an Informationist:

Necessary   Useful (but not critical)

◎ Info. science skills   ◎ Neuroscience background
   ○ Metadata standards   ◎ Research experience
   ○ Data management
   ○ Metrics and data
      usage reporting

Main Takeaways:

There is no right answer! You are there to help find a better one than exists today.

When joining a research team you need to be willing to listen, to learn, and to be flexible in your ideas.

...but also remember you are not in this alone, and that research is a collaborative process. Have conversations, try different approaches, and keep the big picture in mind.
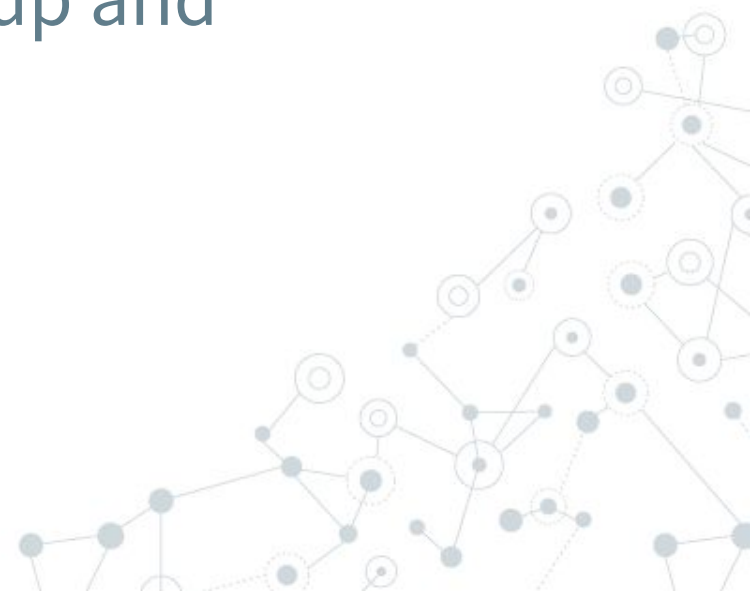
3.

Future Projects

Machine readable mark-up and building reproducibility frameworks

Thanks!

Any questions?

You can contact me at:

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