RHDBank Database Development: The Discourse Protocol

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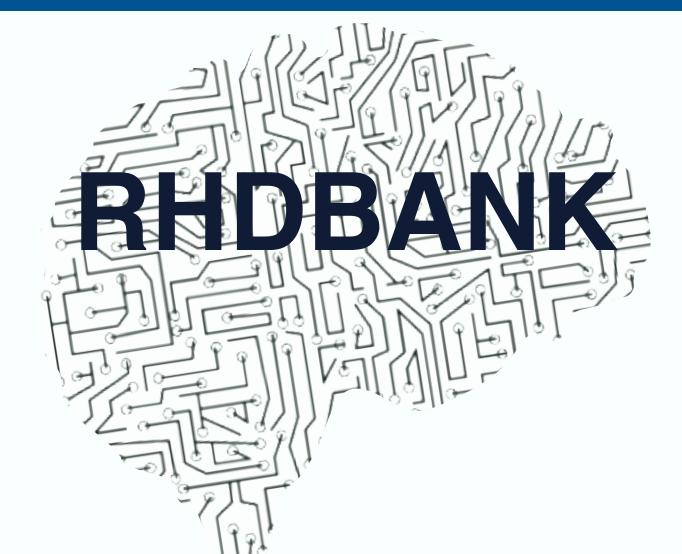
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is a shared database of multimedia interactions for the study of communication in people with Right Hemisphere Disorders.

RHD BANK GOALS

To create a large corpus of systematically collected and analyzed data to:

- Increase knowledge of communication differences in adults with RHD
- Improve assessment, diagnosis, and treatment of adults with RHD
- Support research, education, and clinical applications for RHD

The Discourse Protocol

- Free speech sample
 Stroke Story
 Important Event
- 2. First-encounter conversation (Kennedy et. al. 1994)
- 3. Picture Description
 Cookie Theft
 Cat Rescue
- 4. Story Narrative Cinderella
- 5. Procedural Discourse
 Peanut Butter and Jelly Sandwich
- 6. Question Production (Minga, 2014) Unfamiliar Object Task

Test Data

- 1. General Short Form of the CBIP (Communicative Participation Item Bank; Baylor, Yorkston, Eadie, Kim, Chung, & Amtmann, 2013)
- 2. CLQT (Cognitive Linguistic Quick Test; Helm-Estabrooks, 2001)
- 3. Apples Test (Bickerton, Samson, Williamson, & Humphreys, 2011)
- 4. Indented Paragraph Test (Caplan, 1987)

WHO IS IN THE DATABASE?

Table 1. PARTICIPANT DEMOGRAPHICS

	RHD (n = 8)	Controls (n = 5)
AGE RANGE (YRS)	53 – 81 (mean = 63.5)	44 – 57 (mean = 51.9)
SEX	4 females	5 females
EDUCATION RANGE (YRS)	15 – 24 (mean = 19.4)	14 – 21 (mean = 16.6)
HANDEDNESS	7 right	5 right
CLQT COMPOSITE SCORE	1.8 – 4 (mean = 3.25)	N/A

EXAMPLES OF DATA ANALYSIS

TOOLS

CLAN The editor provides functions such as media playback, data validation, linkage to audio and video, and a comprehensive set of data analysis programs.

CHAT A standardized format for transcription, coding, and detailed morphological analysis of conversational interactions.

MANUAL CODING is being developed for RHD transcripts to capture impaired discourse and pragmatics behaviors (e.g., topic maintenance, turn-taking, coherence, cohesion, question use, etc.)

1. The CLAN MOR program was used on this excerpt from the CINDERELLA story to add a line after each speaker tier giving the part-of-speech for each word and specifying the morphology of affixes.

*PAR:she went to this prince's castle (.) for &uh a dancing party.

%mor:pro:sub|she v|go&PAST prep|to det|this n| prince~poss|s n|castle prep|for art|apart|dance-PRESP n|party.

*PAR:she got special shoes, (.) the glass slippers. %mor:pro:sub|she v|get&PAST n|special n|shoe-PL cm|cm art|the n|glassn|slipper-PL.

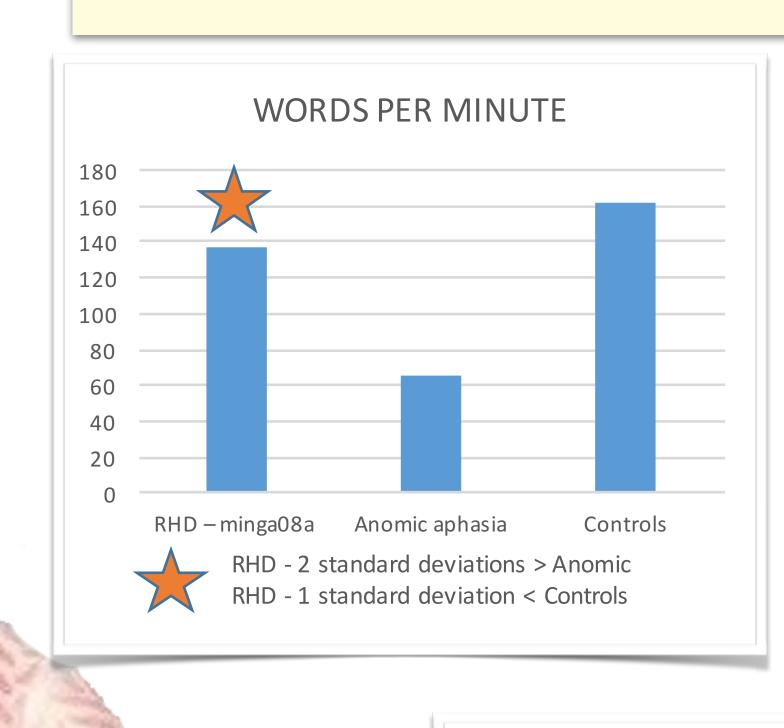
*PAR:but one of (th)em fell off .
%mor:conj|but pro:indef|one prep|of pro:obj|them v|
fall&PAST adv|off .

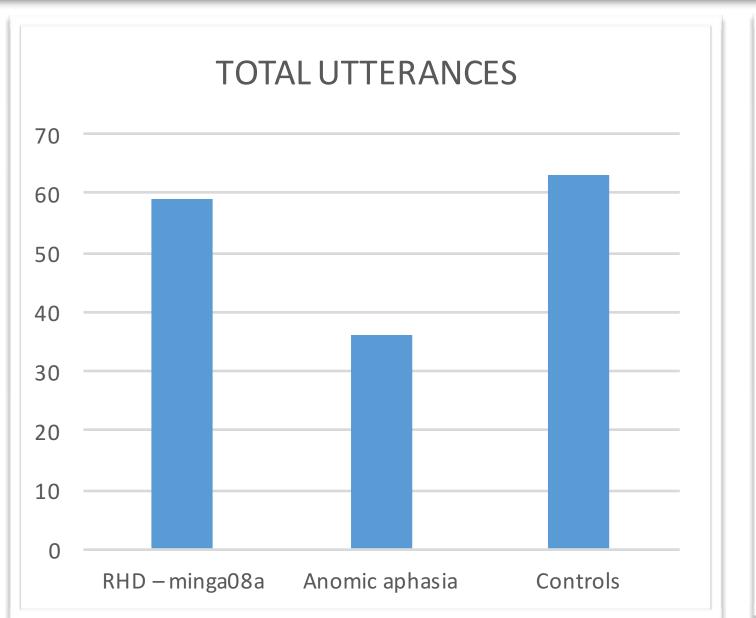
2. The CLAN FREQ program is used for frequency analyses. Using this command, we get the count and list of nouns used in the Cinderella story by the RHD participant:

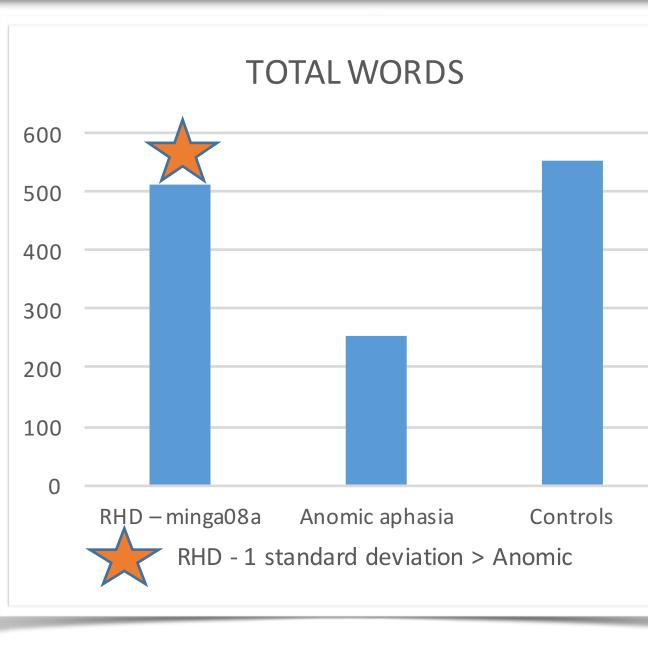
freq +t*PAR +d5 +o +s"@r-*,|-n,|-n:*,o-%" +u *.cha

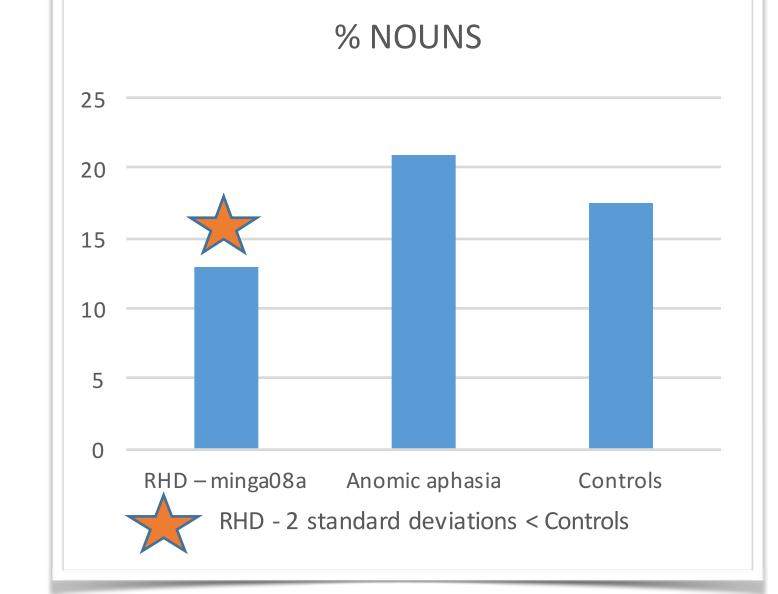
- 7 n:prop|Cinderella
- 4 n|ball
- 3 n|prince
- 3 n|shoe
- 3 n|sister
- 3 n|slipper
- 2 n|+god+mother
- 2 n|chance
- 2 n gown
- 2 nopportunity

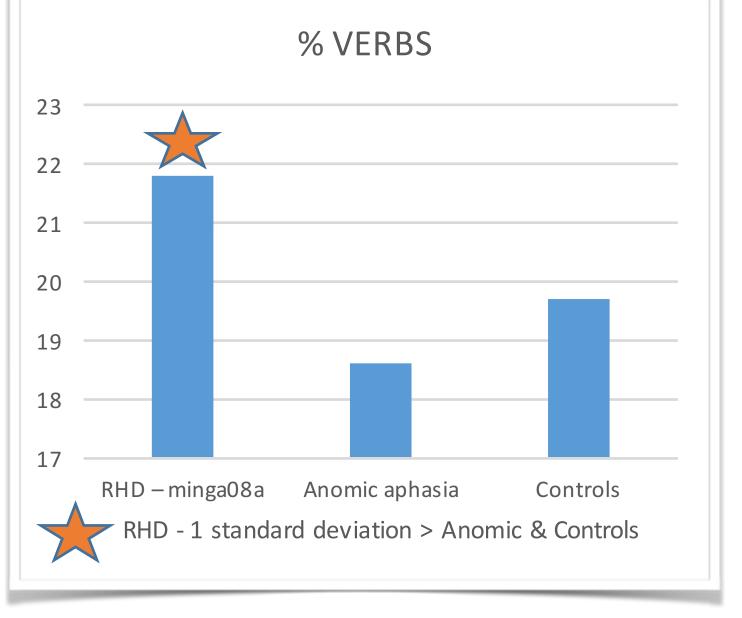
3. The CLAN EVAL program provides a variety of analyses such as DURATION, TOTAL UTTERANCES, TOTAL WORDS (types and tokens), TYPE-TOKEN RATIO, MLU, PROPOSITION DENSITY, % PARTS OF SPEECH (e.g. nouns, verbs, etc.).











IN RESEARCH?

- Measure student learning by having students view videos of adults with RHD and identify deficits before and after a RHD lecture and write perceived deficits. This can be a teaching moment about the subtlety of deficits in adults with RHD.
- Provide exemplars of discourse in RHD to students participating in neurogenic communication disorders coursework.
- Learn how to use CHAT and CLAN for efficient and reliable computer-based language transcription, error coding, and analysis.
- Assessment planning and interpretation, differential diagnosis, treatment planning for participants in the RHD database
- Case study presentations

IN TEACHING?

level reading

- Characterize discourse in a large corpus of adults with RHD
- Compare discourse in RHD to people with aphasia and controls
- Explore subsets/classification of RHD that have not yet been identified

Examine unilateral spatial neglect in paragraph

Evaluate treatment approaches for discourse in RHD

IN CLINIC?

HOW DO I USE THE RHDBANK...

- Test administration practice for video recorded assessments
- Guide treatment approaches for discourse level impairments in RHD
- Assess efficacy of treatment for discourse level impairments

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Visit <u>www.talkbank.org</u>

HOW DO I JOIN RHDBANK?

Researchers and clinicians working with RHD:

Send email to Brian MacWhinney -- macw@cmu.edu

- contact information
- professional affiliation, and
- statement of how you plan to use the data

Students interested in using the data:

Ask their faculty advisors to join as members.

References

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