AphasiaBank: 7-Year Interest Rate Index and Yield

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Fromm, Forbes, & MacWhinney

- salary from Carnegie Mellon University, supported by NIH_NIDCD grant R01-DC008524

Holland:

- consultant on NIH_NIDCD grant R01-DC008524
What's the 7-year return on investment?
purposes ... more specifically

- participant pool
- professional membership
- clinical applications and published/presented research
- educational applications
explained AphasiaBank project

couraged participation as researchers and educators
those contributing data:

- *Michelle Bourgeois – University of South Florida
- Gilson Capilouto – University of Kentucky
- Kathryn Garrett – private practice, Pittsburgh, PA
- Elizabeth Hoover – Boston University
- Susan Jackson – University of Kansas
- Dan Kempler – Emerson College
- Jacquie Kurland – University of Massachusetts
- Maria Muñoz – Texas Christian University
- Cindy Thompson – Northwestern University
- **Leanne Togher – University of Sydney
- Heather Harris Wright – East Carolina University

* DementiaBank
** TBIBank
centers made available for testing:

- Adler Aphasia Center – Maywood, NJ
- Aphasia Center of West Texas – Midland, TX
- Aphasia House - Orlando, FL
- Aphasia Center of California - Oakland, CA
- Aphasia Lab - University of South Carolina
- Intensive Residential Aphasia Communication Therapy (InteRACT) - Halifax, Nova Scotia
- Saguaro Speech and Language – Tucson, AZ
- Snyder Center for Aphasia Life Enhancement (SCALE) - Baltimore, MD
- Stroke Aphasia Recovery Program (STAR) - Lubbock, TX
- Stroke Comeback Center - Vienna, VA
- Triangle Aphasia Program (TAP) - Durham, NC
and yet more thanks to …

those whose labs/centers are conducting research using AphasiaBank resources:

<table>
<thead>
<tr>
<th>Mary Boyle</th>
<th>Lise Menn</th>
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</thead>
<tbody>
<tr>
<td>Leora Cherney</td>
<td>Laura Murray</td>
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<tr>
<td>Carl Coelho</td>
<td>Gloria Olness</td>
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<tr>
<td>Julius Fridriksson</td>
<td>Gail Ramsberger</td>
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<td>Alison Hilger</td>
<td>Jessica Richardson</td>
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<td>Gerasimos Fergadiotis</td>
<td>Miranda Rose</td>
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<td>Susan Jackson</td>
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<tr>
<td>Anthony Kong</td>
<td>Lyn Turkstra</td>
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<tr>
<td>Jacquie Kurland</td>
<td>Heather Harris Wright</td>
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</tbody>
</table>
some research highlights ...

- gesture and aphasia type (Rose & Sekine)
- lexical diversity across discourse tasks (Fergadiotis & Wright)
- core verb use, analysis of story grammar components (Richardson’s team)
- nouns and verbs in discourse and picture naming in English (Kurland’s team) and in Cantonese (Kong’s team)
- word retrieval measures (Boyle)
- statistical analysis of aphasia types (MacWhinney’s team)
AphasiaBank is supported by NIH-NIDCD grant R01-DC008524 for 2007-2017. The immediate goal of AphasiaBank is construction of a shared database of multimedia interactions for the study of communication in aphasia. The ultimate goal of this work is the improvement of evidence-based therapy for aphasia. Click here for a PDF of AphasiaBank at a glance.

Protocols
- AphasiaBank Protocol
- Famous People Protocol
- Control Protocol

Results
- Test Results Collection
- Demographics Collection
- Published Studies
- Posters

Links
- Open Access Videos (Excel)

Database
- Transcript Database
- Media Database
- Database Guide
- Browsable Database

The Project
- The NIH 2011 Renewal Proposal
- New Projects
- Ground rules
- Membership list
- Subscribing to the Mailing List
- IRB Guidelines

Programs and Manuals
- The CLAN Program
- CLAN Manual
- CHAT Manual
- Transcription Training Manual - Chinese
- EVAL Manual

Transcription
- Transcript Template
- Coding Cheat Sheet
- Error Coding
- CLAN Glossary
- Using IPA
- Foot Pedal for CLAN

This page provides links to information for members of the AphasiaBank consortium. Access to the data in AphasiaBank is password protected and restricted to members of the AphasiaBank consortium group. Researchers and clinicians working with aphasia who are interested in joining the consortium should send email to macw@cmu.edu. Please include a brief general statement about how you envision using the data. Students interested in using the data should ask their faculty supervisors to contact us to request permission for access. We can be reached by phone at 412-268-2656.
database guide

- Transcript Database
- Media Database
- Database Guide
- Browsable Database
AphasiaBank Database Guide

This guide provides documentation regarding the AphasiaBank corpora from the TalkBank database. All of these data are available from http://talkbank.org/data/AphasiaBank.

AphasiaBank data are only available to members of AphasiaBank.

TalkBank is an international system for the exchange of data on spoken language interactions. The majority of the corpora in TalkBank have either audio or video media linked to transcripts. All transcripts are formatted in the CHAT system and can be automatically converted to XML using the CHAT2XML convertor.

To jump to the relevant section, click on the page number to the right of the corpus.

1 English .......................................................................................................................... 4
  1.1 Aphasia .................................................................................................................... 4
    1.1.1 ACWT ................................................................................................................. 5
    1.1.2 Adler .................................................................................................................. 5
    1.1.3 BU .................................................................................................................... 6
    1.1.4 CMU ................................................................................................................ 6
    1.1.5 Elman ............................................................................................................... 7
    1.1.6 Fridriksson ........................................................................................................ 7
published/presented research, cont.

Results

Test Results Collection

Demographics Collection

Published Studies

Posters
published/presented research

national and international
(n=76)

- journal articles
- book chapters
- conference papers and posters
- doctoral dissertations
- master’s theses
- senior theses
311 PWA transcripts
• 284 were administered the complete protocol
• 27 were administered portions of the protocol

discourse protocol
• 3 free speech tasks
• 3 picture descriptions
• Cinderella story
• procedural discourse
of the 284 complete PWA transcripts ...
demographic data
AphasiaBank PWA (n=258)

- age: mean = 61.7 years (sd = 12.9)
- 58% male, 42% female
- education: mean = 15 years (sd = 2.8)
- mean time post-onset = 5.3 years (sd = 4.8)
- aphasia etiology – 97% stroke
- WAB AQ: mean = 70.2 (sd = 20.5)
172 non-aphasic controls
  - complete discourse protocols
  - transcription and media files

age: mean = 64.5 years (range = 23-90)
49% male, 51% female
education: mean = 15 years (range = 10-22)
WAB types
AphasiaBank PWA (n=260)

- Anomic: 32%
- Broca: 25%
- Conduction: 18%
- Global: 2%
- Not Aphasic: 10%
- Transcortical Sensory: 1%
- Transcortical Motor: 3%
- Transcortical Wernicke: 9%
- Wernicke: 9%
AphasiaBank, WAB-1, and WAB-2 aphasia types

<table>
<thead>
<tr>
<th>Aphasia Type</th>
<th>Percent of Sample (AB n=260)</th>
<th>Percent of Sample (WAB-1 n=150)</th>
<th>Percent of Sample (WAB-2 n=141)</th>
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</thead>
<tbody>
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<td>Anomic</td>
<td>30</td>
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<td>12</td>
<td>10</td>
<td>8</td>
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<tr>
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<td>8</td>
<td>7</td>
<td>5</td>
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<tr>
<td>Isolation</td>
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<td>4</td>
<td>3</td>
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<tr>
<td>TCM</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>TCS</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Not Aphasic</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
AphasiaBank and CAS-2 aphasia types

- Anomic
- Broca
- Conduction
- Global
- Wernicke
- TCM
- TCS
- Not Aphasic

percent of sample

AB (n=260)

CAS-2 (n=112)
51 Famous People protocol
- 27 with discourse protocol, 24 without
- video files, demographics, test scores

Script data
- Adler, Fridriksson

Non-Protocol data
- 16 corpora
stimulus: Cat in the Tree (Brookshire & Nicholas)

*PAR: that dog is &=points:dog brɔkɪŋ@u
[: barking] [* p:m] &=points:man him. [+ gram]
•788544_792473•

%mor: det|that n|dog aux|be&3S part|bark-PRESP
pro:obj|him .

%gra: 1|2|DET 2|4|SUBJ 3|4|AUX 4|0|ROOT
5|4|OBJ 6|4|PUNCT
Received Data Seal of Approval

Data protection and archiving standards
- persistent ids
- consistent metadata
- systematic backup
- documentation of methods
- contribution guidelines
- etc.
TalkBank system
(includes AphasiaBank)

- approved as member of CLARIN
- international federation of language data centers funded by grants from the European Union and member countries.
University of South Carolina Aphasia Lab – Fridriksson et al. (2012)

13 PWA with Broca aphasia

speech entrainment -- comparing audio-visual feedback to audio-only feedback and spontaneous speech

CHAT transcripts in AphasiaBank SCRIPT database
Brain Research on Chronic Aphasia (BRoCA Lab) - Kurland

“Overcoming Learned Non-Use in Chronic Aphasia: Behavioral, fMRI, and QoL Outcomes”

baseline and 4 post-treatment assessments

AphasiaBank discourse protocol

54 transcripts (20 participants) in Kurland folder in AphasiaBank database
Show what aphasia looks and sounds like

- hundreds of transcriptions linked to videos
- 17 videos of group treatment
- plus many non-protocol resources
- database can be searched by aphasia type, WAB AQ (severity), errors, tasks, etc.
educational applications, cont.

- Transcript Database
- Media Database
- Database Guide
- Browsable Database
#2 – learn how to transcribe, code, measure, etc.

- transcription training
- coding/annotation procedures
- linguistic analyses – errors, rate of speech, etc.
- phonological analyses, phonetics, ear training
- acoustic analyses
- discourse analyses
  - e.g., TTR class assignments – nonfluent aphasia vs fluent aphasia on the same narrative task
#3 – student research

- thesis and dissertation material
- conference/convention posters and presentations
AphasiaBank professional membership

- 331 members of AphasiaBank
  - including researchers, professors, clinicians

- from 29 countries
  - including Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Greece, Iceland, India, Iran, Ireland, Italy, Japan, Netherlands, New Zealand, Oman, Philippines, Scotland, Serbia, Slovakia, Spain, Sweden, Turkey, United Kingdom, Ukraine, USA
email Brian MacWhinney

macw@cmu.edu
wish list

- more severe PWA
- more pre-post treatment protocols
- more repeat administrations of the protocol
- more Famous People protocols with speech challenged Broca/AOS participants
- more discourse analysis tools
THANK YOU FOR YOUR PARTICIPATION AND INTEREST