Research, Clinical, and Educational Applications of AphasiaBank

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A few facts:

- Persons with aphasia (PWAs) experience difficulties with a range of speech and language tasks
  - Communication for transmission
  - Communication for ritual

- Communication difficulties negatively impact quality of life and prevent participation in life (roles, activities, etc.)

- Traditional speech-language assessment measures and intervention approaches do not always identify/treat communication deficits that impact life participation.
A few facts (cont.):

- Discourse analysis measures consistently reveal significant differences between PWAs and controls.

- Discourse is the foundation for everyday interactions, functional conversations, and fulfillment of life roles.

- AphasiaBank focuses heavily on discourse, as discourse/narrative performance is likely the best candidate for predicting outcomes that matter most to the patient (e.g., return to work, improved quality of life, return to life roles, etc.).
  - *Life, and participation in it.*
• What is AphasiaBank?

• AphasiaBank Protocol

• Research with AphasiaBank

• Clinical tools on AphasiaBank

• Academic training and AphasiaBank

• AphasiaBank and you
Disclosures

- Richardson: No relevant financial or nonfinancial relationships to disclose.
- Forbes: No relevant financial or nonfinancial relationships to disclose.
- Fromm: No relevant financial or nonfinancial relationships to disclose.
- Holland: No relevant financial or nonfinancial relationships to disclose.
Introduction to AphasiaBank

- What is AphasiaBank?
- AphasiaBank Protocol
- Research with AphasiaBank
- Clinical tools on AphasiaBank
- Academic training and AphasiaBank
- AphasiaBank and you
AphasiaBank is ...

right here – let’s go for a live tour!

http://talkbank.org/AphasiaBank/
AphasiaBank is ...

- a shared database
  - of multimedia interactions
  - for the study of communication in aphasia
AphasiaBank’s overarching goal is...

- to improve patient-oriented treatments in aphasia

This means we must...

- solidify the empirical database that supports our understanding of communication in aphasia
AphasiaBank’s overarching goal is...

In other words...

• collect lots of data

• from lots of sources

• that can be analyzed efficiently, systematically, and transparently
AphasiaBank’s Lineage

- Child Language Data Exchange System (CHILDES), directed by Brian MacWhinney
- funded by NIH since 1987
- over 1800 researchers
- 35 countries
- 5,000+ articles based on use of CHILDES data
The data exchange system provides access to:

- a set of programs (CLAN)
- a database (CHILDES)
- a transcription system (CHAT)
- documentation
- mailing list (Info-CHILDES)
AphasiaBank Status

- **292** transcribed discourse samples (approximately 40 minutes each) from PWAs
  - from 19 different sites around the country
- **172** transcribed discourse samples from controls
  - from 3 different sites around the country
- **298** researchers (members of AphasiaBank)
- **27+** countries
- **35+** articles based on use of AphasiaBank data
- What is AphasiaBank?
- **AphasiaBank Protocol**
- Research with AphasiaBank
- Clinical tools on AphasiaBank
- Academic training and AphasiaBank
- AphasiaBank and you
Choosing the Protocol

- 20 researchers
- Consensus decision
Protocol

Free Speech Samples

1. Stroke Story and Coping

2. Important Event
Picture Description: Broken Window
Picture Description: Umbrella
Picture Description: Cat
Procedural Discourse: Sandwich
Tests (on video, not transcribed)

1. AphasiaBank Repetition Test
2. Boston Naming Test
3. Northwestern Verb Naming Test
Tests (not on video)

1. Western Aphasia Battery
2. Complex Ideational Material
3. Sentence Comprehension Test
Famous People Protocol—to be discussed later
● What is AphasiaBank?

● AphasiaBank Protocol

● **Research with AphasiaBank**

● Clinical tools on AphasiaBank

● Academic training and AphasiaBank

● AphasiaBank and you
AphasiaBank Research: Past


Turkstra, L. S., Quinn-Padron, M., Johnson, J. E., Workinger, M. S., & Antoniotti, N. (in press). In-Person versus telehealth assessment of discourse ability in adults with...
Past Research (cont.): Highlighted studies

- Comparing functional features in Broca’s aphasia from English and German-speaking participants - Theobald-Ellner, 2008

- Comparing productive vocabulary across discourse types in young vs older adults - Fergadiotis et al., 2011

- Comparing lexical diversity across discourse types in PWA and non-aphasic participants -- Fergadiotis & Wright, 2011
141 PWAs and 145 non-aphasic participants

groups DIFFERED on:

- MLU -- PWA lower (mean = 5.5 vs. 8.5 words)
- total # of words -- PWA lower (38.5 vs. 87.7)
- total # of utterances -- PWA shorter (mean = 6.75 vs. 10.4)
- task duration -- PWA longer (mean = 37.7 vs. 30.3 seconds)
Groups DID NOT DIFFER on:

- top 10 nouns
  - bread, butter, peanut, jelly, slice, knife, piece, jar, side, sandwich
- top 10 verbs (with 1 exception)
  - put, get, take, spread, have, cut, go, make, eat
  - PWAs used like, Non-aphasic participants used open
- proportion of nouns, verbs, pronouns, and determiners used
“Better but no cigar”: Persons with aphasia speak about their speech

- 71 PWAs
  - WAB AQs ranges from 20.3-97.6 (mean = 68.7)
  - all types, but mostly Anomic (30%), Broca (22%) , Conduction (18%)
- “How do you think your speech is these days?”
Present Research (cont.): Attitudes

- analyzing verbal and nonverbal communication

- 59% positive responses
  - characterized by words like fine, good, pretty good, really good, great, normal, excellent

- 17% negative responses
  - characterized by words like awful, terrible, not good, not well, none

- 18% neutral responses
  - characterized by words like average, fair
Present Research (cont.): Attitudes

- Over \( \frac{1}{3} \) mentioned specific speech problems
  - getting stuck, having words spinning around in my head, speaking slowly, not rushing, not being able to talk at all, needing to work on reading

- Almost \( \frac{1}{3} \) specifically mentioned “improvement”
  - getting better, improving, getting clearer
Automated Analysis of the Cinderella Story

- 24 PWA and 25 non-aphasic participants
- paper illustrates:
  - CHAT transcription conventions
    - repetitions
    - revisions
    - word fragments and fillers
    - pauses
    - target words for word errors
    - etc.
Present Research (cont.): Methods

- paper - illustrates:
  - CLAN commands for
    - automatic part-of-speech coding
    - extraction of Cinderella segment of discourse task
    - word frequency analysis
    - type-token ratio and VOCD
    - error type and frequency analyses
      - correct and variant forms of the production of Cinderella
  - Detailed lexical analyses
    - lexical diversity
    - light vs. heavy verb use
    - etc.
Present Research (cont.): Highlighted studies

- Comparing production of nouns and verbs in various discourse tasks to BNT and VNT scores - Johnson et al., 2012

- Relationship of aphasia type and gestures production - Sekine & Rose, 2013


- Using the Fluency Profiling System Measurement (pauses and speech segment duration) in Broca’s aphasia vs. controls -- Hird et al., 2012

- Evaluation of speech entrainment therapy in Broca’s aphasia -- Fridriksson et al., 2013
Present Research (cont.): Clinical Tools

- Development of discourse analysis tools that are not only informative but also are feasible to implement/use in everyday clinical practice
  - Standardized
  - Norm-referenced
  - Non-transcription-based
Present Research (cont.): Clinical Tools

- Core Lexicon

  - MacWhinney et al. (2010) suggested that comparing PWAs noun and verb lexicon during narrative tasks to a created core lexicon = time-efficient and informative assessment method.
Core Lexicon

- Using their tools (AphasiaBank and CLAN), Richardson et al. (in prep) has created core lexicon lists for 3 discourse tasks:
  - Cinderella (story)
  - PB & J (procedural)
  - Breaking Window (picture sequence description)

- Details:
  - Based upon all control transcripts in database
  - Lemmas shared by 50% of controls

- But what would these values mean? How informative are they?
Present Research (cont.): Clinical Tools

- Core Lexicon – Limitation
  - Contextual use of core words?
  - Narrative adequacy?
  - Conveys the gist?
Relationship between Core Lexicon and Main Concepts

- Main concept analysis (Nicholas & Brookshire, 1995)
  - Proven method of assessing narrative adequacy
  - Reliable (within and between judges)
  - Socially valid

- If Core Lexicon correlates highly with Main Concepts, then there is support for Core Lexicon as an efficient assessment tool that could predict functional communication ability
Relationship between Core Lexicon and Main Concepts

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  - Socially valid

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- And........ ........ There is a strong relationship between these measures, though some interesting differences are revealed when examining subtypes.
AphasiaBank Research: Future

Core Lexicon and Main Concept Lists available on AphasiaBank
“Cinderella was a pleasant young girl. Her father married a nasty woman who had two nasty daughters and they treated her like dirt………and the prince of the area was planning a ball…… “

“She was, uh… sisters, they ain’t real. They ain’t married really but they’re…Anyway, she uh they wanted the the ball and the prince yeah they wanna go see him…..”
Future Research: Discourse and Life Participation

- **WHO-ICF framework**
  - Limitations in body function and structure
  - Activity limitations
  - **Participation limitations**
    - For PWA and caregivers
    - Contextual factors (environmental and personal)

- It is hypothesized that discourse measures will strongly predict life participation (e.g., do main concept scores predict life participation as assessed by ALA, CIQ, etc.)
  - Triangle Aphasia Project – University of North Carolina, Chapel Hill – University of South Carolina
Future Research: Discourse in Acute Stroke

- Acute and Sub-acute Discourse as a predictor of recovery and life participation.
**WAB-R Bedside**

### Sequential Commands

**Materials:** Coin, piece of paper, pen

**Directions:** Place a coin, a piece of paper, and pen in front of the patient. Say, *See the coin, the paper, and the pen? I will ask you to point to them and do things with them. Are you ready?* Read each item.

<table>
<thead>
<tr>
<th>Item</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Point to the coin and the pen.</td>
<td>2</td>
</tr>
<tr>
<td>2. Point with the pen to the paper.</td>
<td>2</td>
</tr>
<tr>
<td>3. Point the pen with the paper.</td>
<td>2</td>
</tr>
<tr>
<td>4. Put the pen on the paper and turn over the coin.</td>
<td>4</td>
</tr>
</tbody>
</table>

**Sequential Commands Score** 10
### Discourse: PBJ

**Directions:** Let's move on to something a little different. We would like to make a peanut butter and jelly sandwich. (It's important to note that you may feel hungry for a peanut butter and jelly sandwich.)

<table>
<thead>
<tr>
<th>Concept</th>
<th>Action</th>
<th>Location</th>
<th>Quantity</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Get</td>
<td>bread</td>
<td>from (location)</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Get</td>
<td>two slices of bread</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Get</td>
<td>the peanut butter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Get</td>
<td>the peanut butter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Put</td>
<td>the two pieces together</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. **Get bread from (location).**
   - a. Take out, remove, grab
   - b. Loaf, bread loaf, bread bag
   - c. Cupboard, pantry, refrigerator, freezer, breadbox

2. **Get two slices of bread.**
   - a. Take out, remove, pull out
   - b. A couple slices, two pieces
   - c. Must indicate more than one piece of bread

3. **Get the peanut butter.**
   - a. Take out, remove, find, grab
   - b. A jar of peanut butter
   - c. A concept like "take off the lid on the peanut butter" or "open the peanut butter" cannot be used for this concept. This was a relevant concept that did not reach significance.

4. **Get the jelly.**
   - a. Take out, remove, find, grab
   - b. A jar of jelly, jam, preserves, honey
   - c. See 3.c.
Future Research: Other Topics

- Discourse in NABW = Not Aphasic By WAB
- Investigating measures of social validity
- Verb argument structure in spontaneous speech
- Automatization of main concept analysis
- And more....

http://www.talkbank.org/AphasiaBank/publications/

This is an bibliography of published studies that use AphasiaBank materials.

Here is a list of further suggested studies.
- What is AphasiaBank?

- AphasiaBank Protocol

- Research with AphasiaBank

- **Clinical tools on AphasiaBank**

- Academic training and AphasiaBank

- AphasiaBank and you
What is EVAL?

- CLAN language analysis program for clinical use
- For adult language samples (KIDEVAL for children)
- Streamlined transcription
- Simplified coding designed to flag aphasic errors
What does it do?

- Analyzes transcripts of discourse
- Displays 25 language characteristics in excel spreadsheet
- Compares results to comparison group selected from AphasiaBank
- Tracks therapy progress
Language Sampling: Con

- Time consuming
- Complex
Language Sampling: Pro

- Discourse level for “real” communication
- Gives “the big picture” of language/communication
- Identifies language problems in context
- Guides treatment planning
For aphasic adults

- Not “developing” like child language
- DOES change post stroke
- EVAL can help to capture change
EVAL Goal

Make adult language sampling and analysis easier and faster with simplified transcription, computerized analyses.
Using EVAL

1. Record a “Gem”
   - Free Speech
     - Speech, Stroke or Important Event
   - Picture Descriptions
     - Window, Umbrella or CAT
   - Story Narrative -- Cinderella
   - Procedural Discourse -- Sandwich
2. Transcribe and code

Follow instructions in the EVAL Manual for CHAT format and EVAL coding
@Begin
@Languages: eng
@Participants: PAR EVALdemo Participant, INV Investigator
@ID: eng|EVALdemo|PAR|55;6.|male|Anomic|EVALpar|Participant|||
@ID: eng|EVALdemo|INV||| Investigator|||
@G: Sandwich
*PAR: take two pieces of bread and separate them.
*PAR: on one place [*] of bread spread peener@n [*] butter.
*PAR: on [//] and on the other peats@n [*] of bread & spread some jelly.
*PAR: and put the two peazits@n [*] of bread tagetter@n [*].
*PAR: pinten@n [*] butter jelly make. [+ *]
@End
3. Run check, MOR and POST to automatically complete the morphophonemic tagging of each utterance

- Follow instructions in the manual
- Save completed transcript in a folder
@G: Sandwich
*PAR: take two piece of bread and separate them.
%mor: v|take det:num|two n|piece prep|of n|bread coord|and v|separate
pro:obj|them.
*PAR: on one place [*] of bread spread peener@n [*] butter.
%mor: prep|on det:num|one n|place prep|of n|bread v|spread&ZERO
neo|peener n|butter.
*PAR: on [//] and on the other peats@n [*] of bread &sp spread some jelly.
%mor: coord|and prep|on det|the qn|other neo|peats prep|of n|bread
v|spread&ZERO qn|some n|jelly.
4. Run EVAL
EVAL

```
working: /Applications/CLAN/work
output
lib: /Applications/CLAN/lib
mor lib: /Applications/CLAN/work/eng
```

```
Progs Option

eval
```

Recall 06nov13  Run
PLEASE SELECT AT LEAST ONE SPEAKER CODE:
Speaker: *PAR

Database types:
- Anomic
- Broca
- Global
- Wernicke
- Control
- Conduction
- TransSensory
- TransMotor
- NotAphasicByWAB
- Fluent
- Nonfluent
- All Aphasia

Age range:
- Male only
- Female only

Gem choices:
- Speech
- Cinderella
- Important_Event
- Cat
- Umbrella
- Stroke
- Flood
- Sandwich
- Window

[Buttons: Deselect Database, Update Database, Deselect all gems, Select all gems, Cancel, OK]
PLEASE SELECT AT LEAST ONE SPEAKER CODE:
Speaker: *PAR

Database types:  
- Anomic  
- Broca  
- Global  
- Wernicke  
- Control  
- Conduction  
- TransSensory  
- TransMotor  
- NotAphasicByWAB  
- Fluent  
- Nonfluent  
- All Aphasia

Age range: 55–75

Gem choices:  
- Speech  
- Cinderella  
- Important_Event  
- Cat  
- Umbrella  
- Stroke  
- Flood  
- Sandwich  
- Window

[Buttons: Deselect Database, Update Database, Deselect all gems, Select all gems, Cancel, OK]
EVAL

Commands

- working: /Applications/CLAN/work
- output
- lib: /Applications/CLAN/lib
- mor lib: /Applications/CLAN/work/eng

Progs
Option

eval @ +t*PAR: +d"control|55-75" +g"Umbrella" +u|

Recall 08nov13
Run
> eval @ +t*PAR: +d"control|55-75" +g"Umbrella" +u
Database File: /Applications/CLAN/work/eval_db.txt
65
eval @ +t*PAR: +d"control|55-75" +gUmbrella +u
Fri Nov 8 15:32:39 2013
eval (08-Nov-2013) is conducting analyses on:
  ONLY speaker main tiers matching: *; *PAR;;
  and those speakers' ALL dependent tiers
  and ALL header tiers
*****************************************************************************
From file </Applications/CLAN/work/eval_demo02a.cha>
Output file </Applications/CLAN/work/eval_demo02a.eval.xls>
<table>
<thead>
<tr>
<th>File/DB</th>
<th>Speaker ID</th>
<th>Duration</th>
<th>Total Utts</th>
<th>MLU Utts</th>
<th>MLU Words</th>
<th>MLU Morphs</th>
</tr>
</thead>
<tbody>
<tr>
<td>eval_demoEngEvalPA</td>
<td>0:01:03</td>
<td>12</td>
<td>12</td>
<td></td>
<td>4.833</td>
<td>5.417</td>
</tr>
<tr>
<td>+/-SD</td>
<td></td>
<td>1.142</td>
<td>-0.615</td>
<td>-0.608</td>
<td>-1.396</td>
<td>-1.608</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td></td>
<td>*</td>
<td></td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

|            | Mean Database | 0:00:44 | 15.677 | 15.631 | 7.193 | 8.653 |
|            | Min Database  | 0:00:18 | 5      | 5      | 4.679 | 5.64  |
|            | Max Database  | 0:01:29 | 33     | 33     | 12.2  | 15.2  |
|            | SD Database   | 15.893 | 5.982  | 5.968  | 1.691 | 2.013 |

+/- SD  * = 1 SD, ** = 2 SD

Database gems: Umbrella

Database keywords: control|55-75

# files in database: 65
What else is on the spreadsheet?

- Duration of sample (if timed)
- Total utterances
- Number of utterances used to calculate MLU
- MLU in words
- MLU in morphemes
What else is on the spreadsheet?

- Number of types
- Number of tokens
- TTR
- Number of clauses per utterance
- Percentage of words that are errors
- Number of utterances that are errors
What else is on the spreadsheet?

- Number of words on the mor line
- Percentage of words that are: nouns, plurals, verbs, third person plural, first/third person singular, past tense, perfect, progressive, prepositions, adverbs, conjunctions, determiners, pronouns
- Number of retracings and repetitions.
Spreadsheet option

- To see raw numbers of errors and parts of speech rather than percentages, add +04 to the automatically generated CLAN command line in the command box, run eval, and click three times on the output line.
EVAL is a work in progress

Please let us know if you would like to add (or subtract) measures. What would be helpful to your clinical practice?
EVAL

● Manual at TalkBank.org/AphasiaBank
● Help available at forbesmm@cmu.edu; fromm@andrew.cmu.edu
● Phone: 412-268-2656
The Famous People Protocol

Developed through NIH--NIDCD grant R01-DC008524 for 2007-2017
Brian MacWhinney, Ph.D., PI, to Carnegie-Mellon University
The AphasiaBank discourse transcript database includes:

- 82 with anomic symptom patterns
- 62 with Broca symptom patterns
- 22 with Wernicke symptom patterns
- 45 with conduction symptom patterns
- 4 with global symptom patterns

*as measured by WAB*
• The small number in the latter category (global) results from their inability to participate in AphasiaBank’s discourse tasks.

• Their under-representation in AphasiaBank results in a skewed sample of aphasic language (or lack thereof) in the aphasia population

Range of WAB severity ---16.1-99.6
s.d.= 20.2

only 19 have WAB scores below 35
Only the BASA (Helm-Estabrooks, et al) measures the extent of impairment in severe aphasia.

No measure specifically looks beyond impairment, to describe how individuals with global aphasia and severe limitations in the ability to speak, convey their competence.

Hence, the development of our Famous People Protocol.

--A similar measure has recently been developed for people with PPA (Gefen, T, Weinecke, C., Whitney, K., Weintraub, S, Mesulum, M-M., & Rogalski, E., 2013)
FPP: Goal ONE

1. To determine WHAT individuals with aphasia actually know about a topic, and
   a) HOW they communicate it.
   vs.
   b) WHEN they really don’t know
FPP: Goal TWO

- To provide others with techniques that can help them to differentiate what individuals with aphasia KNOW from what they KNOW but CAN’T SAY.

- This information can be used by clinicians to:
  a) determine what strategies they probably should work on --a form of supported communication
  b) assess their clients’ true limitations v. “just giving up”

- To accomplish this, FPP should be
  a) videotaped
  b) viewed and discussed with PWAs and significant others --first step in conversational coaching
Let’s practice. If I showed you this person

You could say or write his name.

Or you could say or write “The King of Rock and Roll”

Or say or write the name of a movie he was in.

Or sing a bit of a song he was famous for.

If those things don’t work, I’ll start the name for you.
Stimuli

Pictures of 24 famous people, recognizable to USA residents
--10 entertainers, 4 world figures, 5 athletes, 5 US presidents
(maximum score 3 pts each)

28 related questions, answerable by 1-2 words (or humming or gesturing)
(maximum score 1 point each)

Thus.... $24 \times 3 = 72$
$28 \times 1 = 28$
Total possible score = 100
Scoring guidelines for 3-point items

Full credit--3 points

If the person says either the first or last name (typically people say both) recognizably or demonstrates that s/he knows)

eg, “relativity, genius, physics”

Please note: some people are known by the characters they inhabit...eg, “Dorothy” or “Dirty Harry”

These are scored correct
Scoring guidelines for 2 points

2 points -- for correct identification with first name cuing or by providing at least two bits of relevant information (e.g., “China, long ago”).

Feel free to use a minimal encourager if they give one. cue ..eg, “can you tell me a bit more?”

If cues don’t work, ask the yes/no questions provided
Scoring guidelines for 1-point items

Scoring is on yes/no questions: either correct or incorrect (1 or 0 points).

ALL 3 must be answered correctly for one point.*

Note to younger clinicians: You better know what the answers are!!!

#4

Was he famous for Reggae?

Is he Otis Redding?

Is he Bob Marley?
Concerns

Q: Is FPP too steeped in US pop culture?

A: Although Aphasic Canadians (and controls) did well on it, we encourage users from outside the US to change people to represent their culture more appropriately.

Eg, for Canadians, Wayne Gretsky for Peyton Manning Canadian leaders for US Presidents, etc.

One Spanish-English bilingual aphasic speaker, in US for only 5 years, scored 99

On the other hand, who is this woman?

#5
FPP: Concerns (cont.)

Q: Will FPP work across the aphasia age span?

Our 2 youngest aphasic subjects (1 in the pilot version, and 1 in the database, scored 99)*

Our youngest comparison S (age 18) scored 98
The FPP Today

- Current version finalized late 2012, put on AphasiaBank website (with guidelines and scoresheet) June 2013
  - Members of AphasiaBank encouraged to participate in data collection

- Finalization:
  - Score range determined (3-0)
  - Pilot items/responses reviewed
  - Maximum score = 100
  - Scoring reliability > .97 (two experienced SLP raters)
The FPP Today (cont.)

- 80 speakers with aphasia involved in project to date
  - 30 = pilot data
  - 50 = in current final database

- 10 comparison non-aphasic individuals

- Although designed to furnish a task in which persons with severe aphasias/AOS can participate, the database includes all other aphasia subtypes
Comparison

<table>
<thead>
<tr>
<th></th>
<th>PWA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong> M (range)</td>
<td>56.3 (18-79)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>40% F</td>
</tr>
<tr>
<td><strong>Education</strong> M (sd)</td>
<td>16.7 (3.3)</td>
</tr>
</tbody>
</table>

**WAB Scores (PWA)**

- **Mean** = 69.9
- **Range** = 16.8-98.9*
- **sd** = 19.6

**FPP**

<table>
<thead>
<tr>
<th></th>
<th>PWA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comparison</strong></td>
<td>96.8</td>
</tr>
<tr>
<td><strong>Range</strong> 91-100</td>
<td>20-99</td>
</tr>
<tr>
<td><strong>sd</strong></td>
<td>2.8</td>
</tr>
</tbody>
</table>

**Stem and Leaf Display – FP Scores**

Aphasia FP Score Range = 20-99
Comparison FP Score Range = 91-100

<table>
<thead>
<tr>
<th>Comparison Scores</th>
<th>20-100</th>
<th>Aphasia Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
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</table>

**Correlations**

- **Age**: -0.49 (low/mod, neg)
- **Education**: 0.34
- **WAB Aphasia Quotient**: 0.66 (moderate, positive)
FPP is a work in progress

Here are your last two

Score your performance and we will move on to brief demo!
- What is AphasiaBank?
- AphasiaBank Protocol
- Research with AphasiaBank
- Clinical tools on AphasiaBank
- **Academic training and AphasiaBank**
- AphasiaBank and you
Academic Training

- Resources on AphasiaBank
  - Hundreds of videos of PWAs and controls performing various tasks/assessments
  - Recent addition – videos of group treatment
AphasiaBank Project (40 points)

**Description:** The purpose of this project is to expose you to transcribed narratives of persons with aphasia and to have you utilize and think about measures used to analyze discourse. For this project, you will read two real (but brief) narratives available via AphasiaBank. The individuals are telling the same event/story. You will calculate the type-token ratio of these narratives (in excel, in a table, handwritten, however you like) and answer the questions in the document below. **Due before midnight on 4/11/13.**

1. TTR of Narrative 1 = 53% (please see work below)
2. TTR of Narrative 2 = 39% (please see work below)
3. These individuals were telling/narrating a story about: Cinderella
4. **Narrative 2** provided more details about the story so that I was able to understand what it was about.
5. Narrative 1 is likely someone with **nonfluent** aphasia
6. Narrative 2 is likely someone with **nonfluent** aphasia
7. If more lexical variety (aka lexical diversity) is better, then **Narrative 1** would be judged as the “better narrative.
8. I disagree with #7 because even through narrative 2 has a calculation of a less lexical diversity, he was able to communicate his thoughts and ideas more effectively by using less words that pinpointed main ideas from the story line.
9. When judging the “goodness” of a discourse transcript and trying to score it in some way to provide descriptive information about your patient and potentially chart treatment outcomes, what other elements of their transcript could possibly be considered in an analysis that might be more useful and informative?

Other elements that could be considered in an analysis that might include useful and informative information may be to analyze the type of speech in a given transcription. Such as if the patient was able to use pronouns, verbs, and adjectives correctly. I would also consider the usage of vocabulary, complexity of vocabulary, and whether or not the person is able to stay on topic.
- What is AphasiaBank?
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**AphasiaBank and you**
Acknowledgements
Thank You!!!