**Viewing AAC Through Authentic Social Interactions**

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**Acknowledgements**

- Sarah Blackstone
- David Wilkins
- Mary Hunt Berg
- Lisa Bardach
- Jennifer Cornish
- Fei Luo
- Jenny Schmich
- Katrina Fulcher
- Carrie Kirkland
- Haesik Min
- Neeraja Subrahmaniyan

**Bibliography and Handouts**

are available at:
http://aac-rerc.com
(go to presentations link)

The Rehabilitation Engineering Research Center on Communication Enhancement (AAC-RERC) is funded under grant #H133E080011 from the National Institute on Disability and Rehabilitation Research (NIDRR) in the U.S. Department of Education’s Office of Special Education and Rehabilitative Services (OSERS).
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An Interaction Perspective

- Utterances are performed – in time
- Participants jointly coordinate their utterance contributions
- Utterances are multimodal
- Participants make pragmatic use of AAC technology features / affordances
- AAC devices are actively used by both participants
- Design features are not always user features

Science and Paradigms

Principle II:
Widely Accepted Theoretical Constructs are Specifically Addressed in the Design and Development of AAC Technologies and Instructional Strategies

Blackstone, Williams & Wilkins, 2007

“When we meet a fact which contradicts a prevailing theory, we must accept that fact and abandon the theory even when the theory is supported by great names and generally accepted.”

Bernard (1865)
Technology influences on communication science

Technology is imagined by culture and in turn constructs culture

Benson & Anderson, 1990

Sender-Receiver Model of Communication

Print and phone influences
Bell’s Invention

Sender-Receiver model of communication

Sender-Receiver model of communication

AAC Model

Coleman, Cook & Meyer (1980)
Technologies that have influenced Social Interaction perspective

‘LANGUAGE’ (Currently accepted definition)

* Language is a multimodal, social, semantically and pragmatically based construct. (Bates & Dick, 2002; Slobin, 2003, etc.)

* An utterance is NOT just comprised of linguistic elements alone (Clark; 2009; Higginbotham, 2009)

* Gestures critical to both linguistic and cognitive development (Goldin-Meadows, 2003; Volterra, Caselli, Capirci & Pizzuto, 2004)

* Studies of language acquisition (Bowerman, Bates, Snow, Tomasello, etc.)
Talk in Interaction

At core of all human communication is the creation of shared meaning between interactants

- It is performed
- With our bodies
- Jointly, with others
- In time
- In context
- Through a variety of media and artifacts

Clark, 1996; Gudykunst & Kim, 2003; Grove, Cilbrens, Barnett & Lonnke, F. (1998); Wilkins, 2006; Wilkins & Higginbotham, 2005; Goodwin, 2003; Higginbotham, 2009

There is order in (mundane) interaction
(Psathas, 1995)

- Human
- Ubiquitous, everyday, authentic, unremarkable
- Sequentially organized in time
- Local, situated

Shaped by:
- Participants
- Purpose
- Media
- Context

Studying Technology Use in AAC

- AAC use is not special, it shares many characteristics of other kinds of technology use
- We adapt to the technologies that we build (We rely on social interaction norms to help us find the way)
- Design features are not always user features
- We make do with what we have (there are communication costs associated with the media and strategies chosen)
What is an Utterance?

An utterance consists of one or more observable communicative acts that participants within the interaction perceive as being intentional and meaningful.

C & B: Collaborating on an Utterance

Focus on mutual understanding
Coordination through time and sequence
Use of multiple communication modalities
One species of interaction

Similarities in Interaction (Installments)

Talking on the phone (Goldberg, 1975)

C: But anyway give me your name.
L: Alright, it's Louise.
C: Louise.
L: And uh my last name is pretty long.
C: Okay.
L: B-i-l
C: B-i-l
L: e-z
C: e-z
L: i-k
C: i-k
L: j-e-a-n
C: j-e-a-n.
L: That's right.
C: Okay.

Conversation using communication board (Higginbotham and Caves, 2002)

L: What did he do?
D: AND
L: and
D: HE
L: he
D: DID
L: did
D: /mashzhma/
L: I don't understand, you'll have to do it again.

Utterances are Jointly Inter-Acted in Real-Time

Each individual's actions are coordinated with their partner’s
Participants choose the right communication tool (modalities, strategies) for particular purposes.
Accommodating temporal demands
Getting it “right”
Meeting partner needs & expectations
Meeting own needs (e.g., comprehension)
Utterances are Multimodal
(we use our bodies to talk)
- Verbal
- Vocal
- Gesture
- External Tools
  - AAC device
  - Manipulatables
  - Context
  - Other people

Communication is Distributed
- Across People, Artifacts, Contexts
- Interdependent layers of media, no single layer is coherent by itself (Goodwin, 2000)
- We coordinate multi-media displays with our partners
- Communication artifacts serve different purposes by each participant

VOCA Features and Costs

**VOCA Features**
- Participants need to be near, but not in the same place.
- Participants need to be in the same time.
- Display not permanent
- Production speed limited
- Hard to direct speech

**VOCA Costs**
- Spatial and temporal mandates of com task & context may influence modality choice
- Production delays lead to problems with listener attention and understanding
- Difficult to direct sound of VOCA to particular person

Adapted from Higginbotham & Caves, 2003; Clark & Brennan, 1991

Advice for Developers

- Communication is *Inter-action*
- Quickfries
- Voice controls
- Participant displays
- Provide task specific tools
- Design for use with other communication modalities
Advice for Practitioners

- Recognize the constraints and affordances for each modality
- Teach flexible multimodal strategies
- Appreciate
  - Sequential order
  - Time and timing