

Communication: Speech Disorders and AAC

Stanley J. Cantrell

PSYCH8040

February 22, 2017

Outline

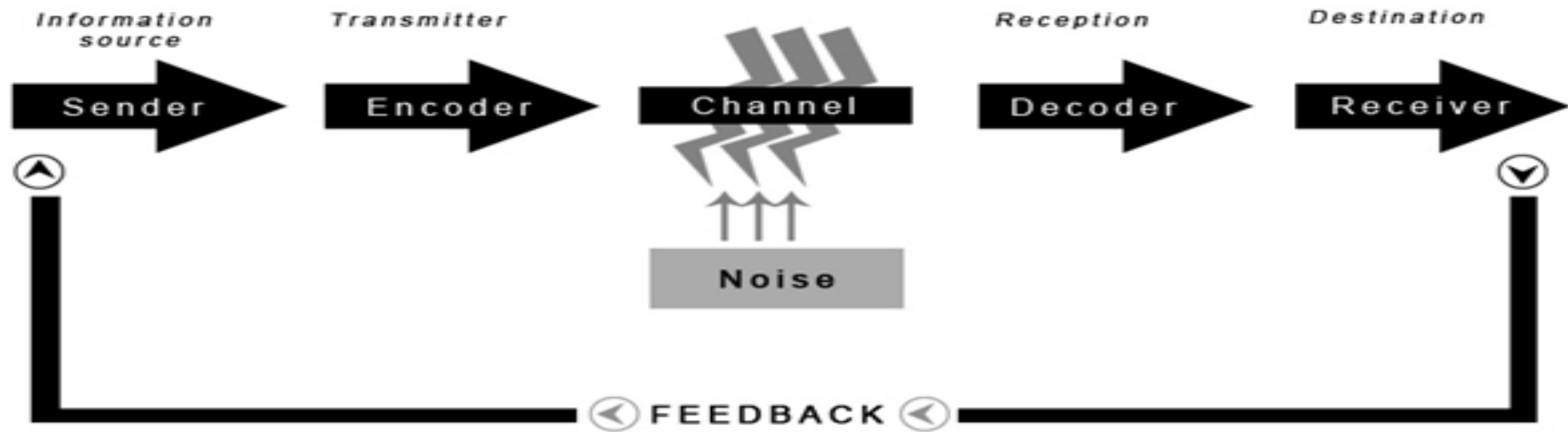
- Basics of Communication
- Intro to AAC
- Types of Disorders and/or Conditions
- Types of AAC Technologies

What is communication?

Communication

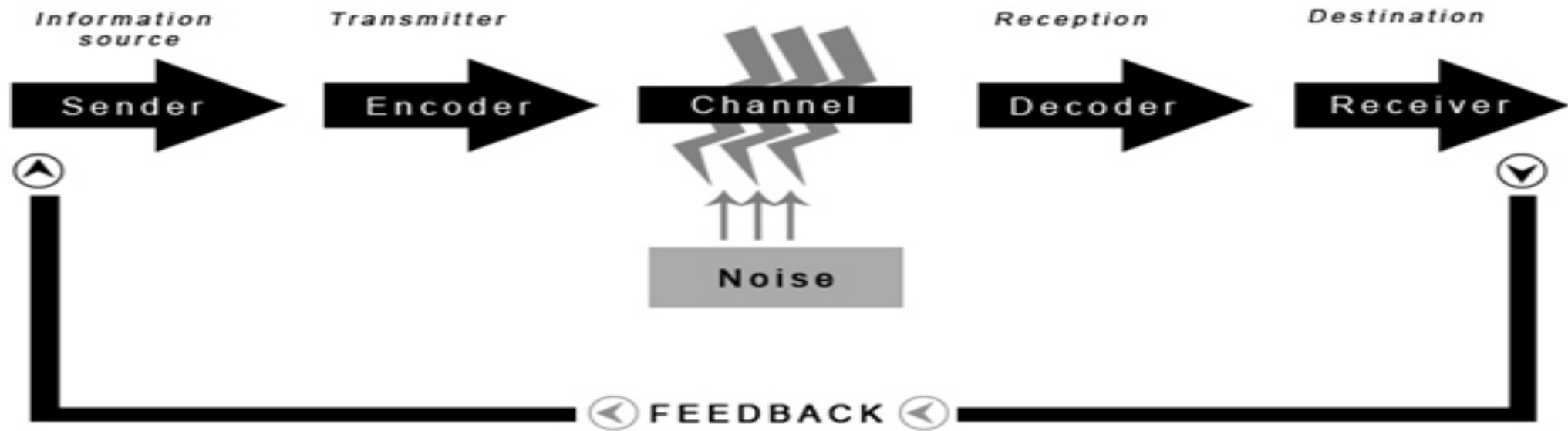
- *a process by which information is exchanged between individuals through a common system of symbols, signs, or behavior (Merriam-Webster)*





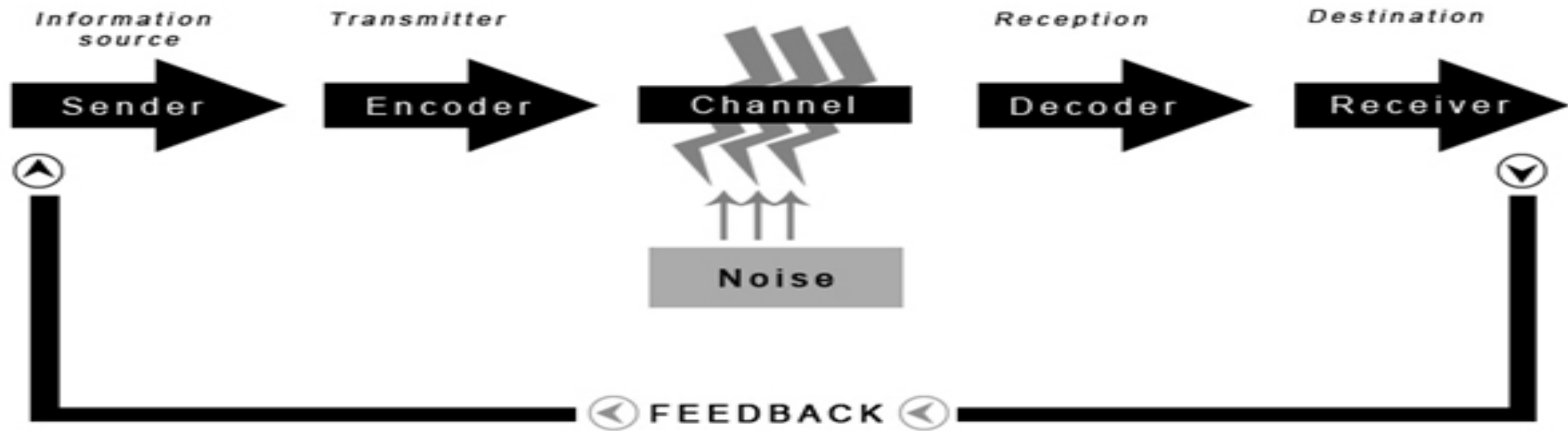
SHANNON-WEAVER'S MODEL OF COMMUNICATION

- Sender = communicator
- Encoder = means of transmission
- Channel = medium
- Decoder = means of receptions
- Receiver = recipient



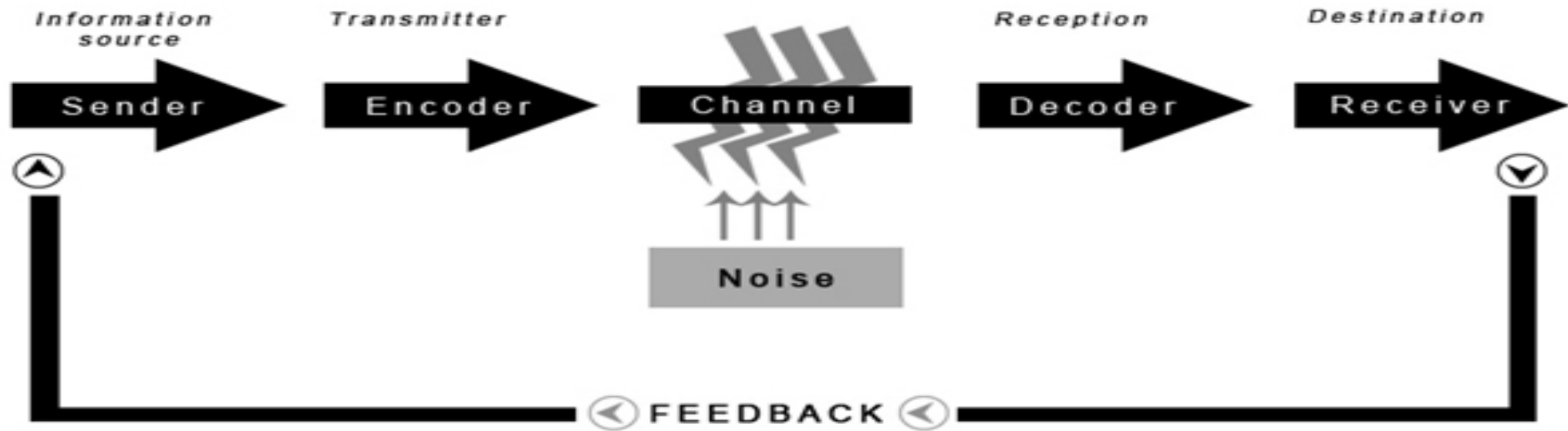
SHANNON-WEAVER'S MODEL OF COMMUNICATION

Sender	Encoder	Channel	Decoder	Receiver
Peter	Microphone, Keyboard, etc.	Internet	Monitor, Speakers, etc.	Lois
<p>----->----->----->----->----->----->----->-----></p> <p>“Buy more beer!”</p> <p>(Message)</p>				



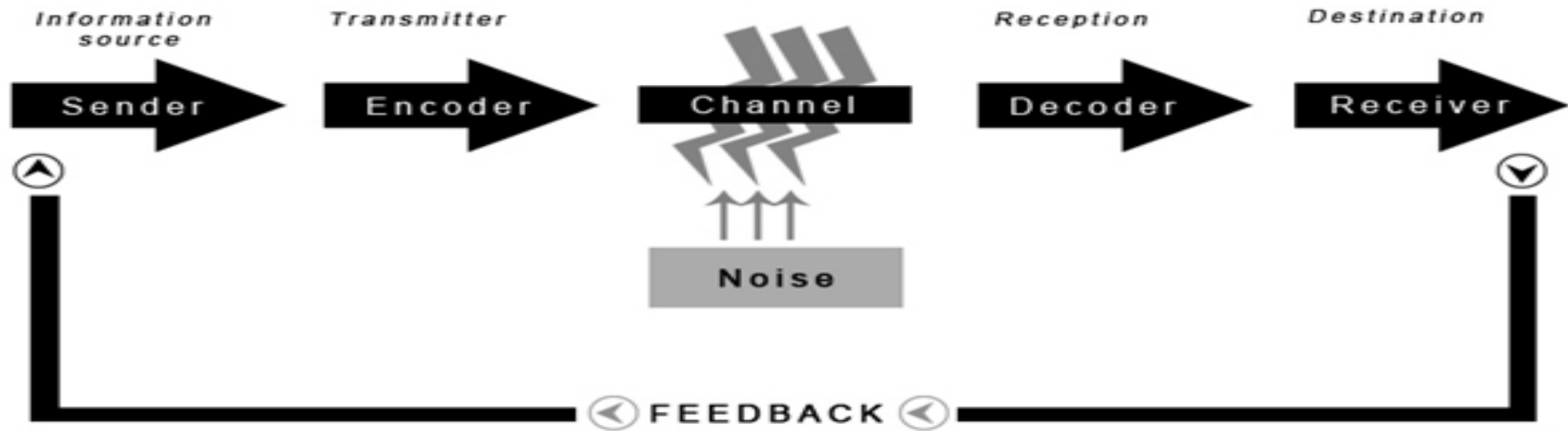
SHANNON-WEAVER'S MODEL OF COMMUNICATION

Sender	Encoder	Channel	Decoder	Receiver
Peter	Microphone, Keyboard, etc.	Internet	Monitor, Speakers, etc.	Lois
<p>----->----->----->----->----->----->----->-----></p> <p>“Buy more beer!”</p> <p>(Message)</p>				



SHANNON-WEAVER'S MODEL OF COMMUNICATION

Sender	Encoder	Channel	Decoder	Receiver
Peter	Speech, Gestures, Body Lang., etc.	Air	Eyes, Ears, (Nose), etc.	Lois
----->----->----->----->----->----->----->----->				
"Buy more beer!" (Message)				



SHANNON-WEAVER'S MODEL OF COMMUNICATION

Sender	Encoder	Channel	Decoder	Receiver
Peter	Speech, Gestures, Body Lang., etc.	Air	Eyes, Ears, (Nose), etc.	Lois
<p>----->----->----->----->----->----->----->-----></p> <p style="text-align: center;">“Buy more beer!” (Message)</p>				

What tools do you use to
communicate?

How do those tools “affect” your
ability to communicate
effectively?

AAC, Augmentative and Alternative Communication

- *AAC is:*
 - a set of tools and strategies that an individual uses to solve everyday communicative challenges
 - An area of clinical practice that aims to assist people with Complex Communication Needs (CCN)
- AAC technologies are often designed to help individuals with severe speech impairments
- Major organizations: ISAAC, ASHA

“Communication is the very essence of being human...” – Cook & Polgar

Types of AAC Systems

- Unaided:
 - Body language, facial expressions, gesturing, signing, gazing, etc.
 - Highly cultural, highly contextual, highly dependent on physical capabilities
 - No external resources
- *Youtube Video

Types of AAC Systems

- Aided:
 - Pen or pencil, flashcards, pictures, laser pointer, computer, cell phone, speech generation device (SGD)
 - External resources, often high-tech, often expensive, may require consultation with a Speech-Language Pathologist
- *YouTube video

Disorders and Conditions

- Cerebral Palsy
- Autism Spectrum Disorders
- Developmental language delays
- Traumatic brain injury
- Progressive neurological disorders, such as ALS
- Stroke
- Certain genetic disorders
- Ataxia
- dyspraxia
- Aphasia

Disorders and Conditions

- **Cerebral Palsy**
- **Autism Spectrum Disorders**
- Developmental language delays
- Traumatic brain injury
- Progressive neurological disorders, such as ALS
- Stroke
- Certain genetic disorders
- Ataxia
- **Dyspraxia**
- Aphasia

Cerebral Palsy

- An umbrella term that refers to non-progressive neurological disorders that occur while the child's brain is under development
- Cerebral = Cerebrum, Palsy = Paralysis
 - The resulting paralysis of certain body parts due to brain damage
- Cerebral palsy is the most common childhood physical disability, nearly 764,000 people in the U.S. have CP
- CP is a life-long condition
- CP affects each individual differently
- CP is a non-progressive disorder
- 4 types of CP:
 - Spastic (70%), Athetoid/dyskinetic (10%), Ataxic (10%), Mixed (10%)
- Symptoms of CP include:
 - variations in muscle tone
 - stiff muscles
 - Exaggerated reflexes
 - lack of coordination
 - Tremors
 - difficulty eating
 - difficulty producing speech
 - seizures

Autism

- Autism, or autism spectrum disorder, refers to a broad range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication
- The term “spectrum” reflects the wide variation in challenges
- CDC estimates autism’s prevalence as 1 in 68 children in the United States
 - This includes 1 in 42 boys and 1 in 189 girls
- Around one third of people with autism remain nonverbal.
- Around one third of people with autism have an intellectual disability.
- **Possible** signs include (infancy):
 - no social smiles or other warm, joyful expressions directed at people
 - limited or no eye contact
 - no use of gestures to communicate
 - no words
- **Possible** signs include (any age):
 - Struggles with understanding other people’s feelings
 - Avoids eye contact and prefers to be alone
 - Remains nonverbal or has delayed language development
 - Performs repetitive behaviors such as flapping, rocking or spinning
 - Has unusual and often intense reactions to sounds, smells, tastes, textures, lights and/or colors

Dysarthria

- Dysarthria is a motor speech disorder that results from impaired movement of the muscles used for speech production (lips, tongue, vocal folds, and diaphragm)
- Can be caused by nervous system disorders or by conditions that cause facial/tongue/muscle paralysis
- Treatment is directed at treating the underlying cause of the condition when possible
 - Speech therapy may help improve speech

Thank You!