

## What Are We Actually Doing in Therapy for Cognitive and Communication Disorders?

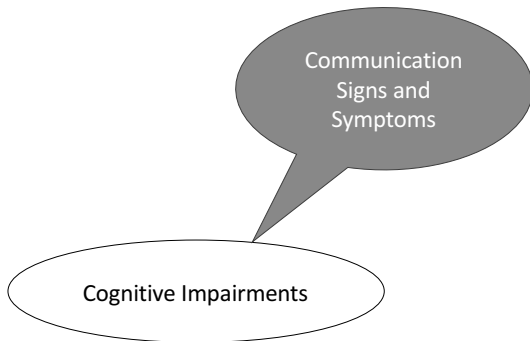
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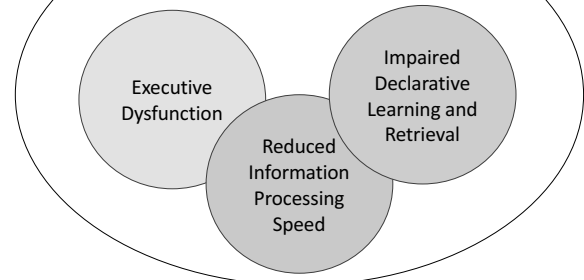
## Agenda

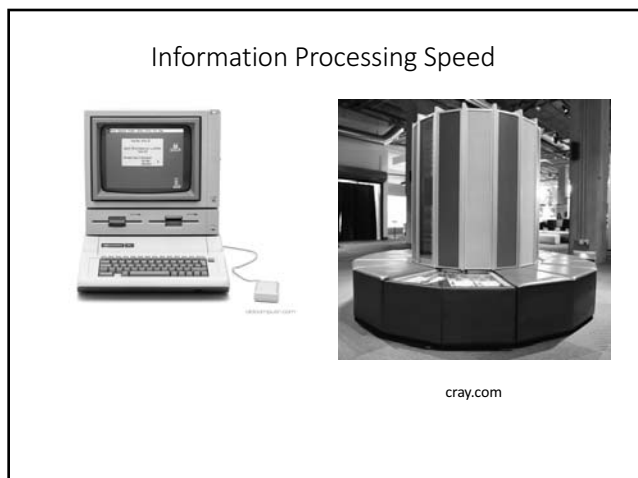
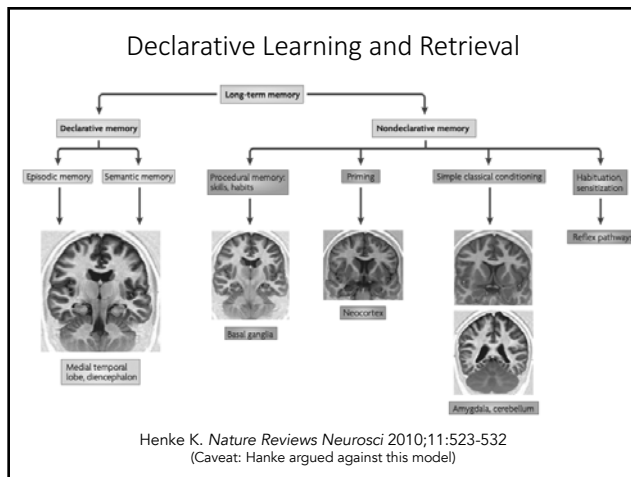
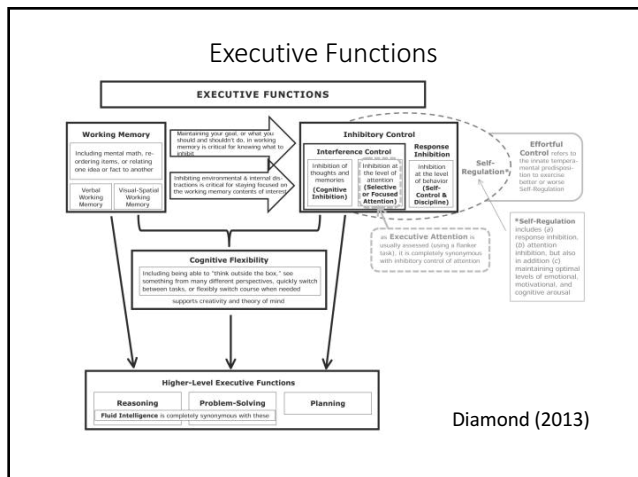
- Common cognitive impairments after TBI
- Treatment methods: the Rehabilitation Treatment Taxonomy

### Cognitive-Communication Disorders



### Cognitive Impairments





Eleanor hears about Tabitha's love affair with the builder and that the builder's sister is the woman Harper betrayed with Billy's doctor.


Hilderbrand, E. *The Identicals*. Little, Brown and Company, 2017, p. 360.  
In: *New Sentences* by Sam Anderson. NY Times Sunday Magazine 8.13.17

A distinction I wish we could drop:



<https://www.mcminnlaw.com/assets/brain-injury-photo.jpg>

## Rehabilitation Treatment Taxonomy


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SPECIAL COMMUNICATION

**Toward a Theory-Driven Classification of Rehabilitation Treatments**

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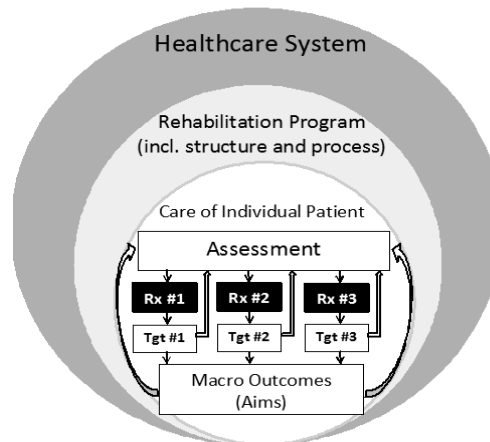
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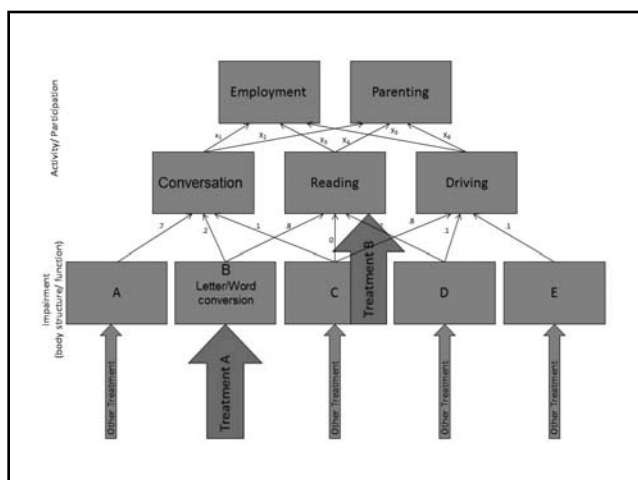
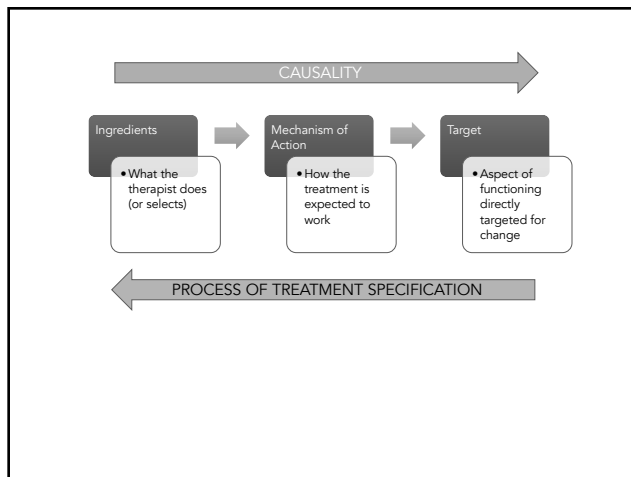
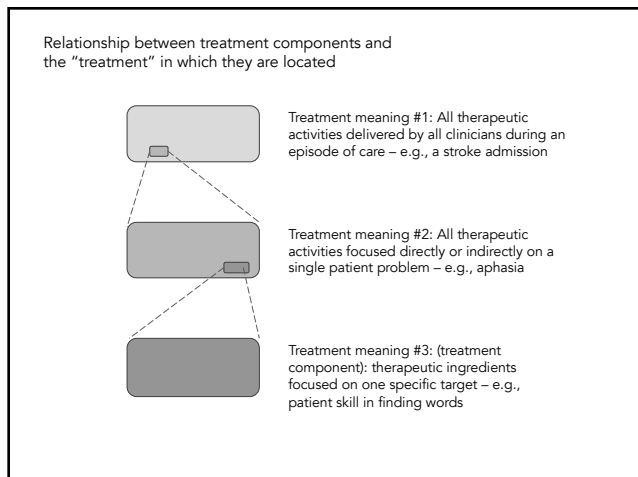
Clinical Focus

### Knowing What We're Doing: Why Specification of Treatment Methods Is Critical for Evidence-Based Practice in Speech-Language Pathology

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Treatment groups in the Rehabilitation Treatment Taxonomy				
Name of Group	Typical Targets	Typical Ingredients	Mechanisms of Action	Clinical Examples
Organ Functions	Change or replace organ functions	Varies by organ system: e.g., energy applied to soft tissues; exercise schedules for strengthening/ endurance training; stimulus exposure parameters for habituation; devices for limb replacement	Varies: Up- or down-regulation of system; passive learning mechanisms; replacement of organ with artificial one; tissue stretch	Tongue muscle strengthening, hearing aid, tracheo-esophageal prosthesis, deep brain stimulation
Skills & Habits	Improve ability to perform (at both ICF function and activity/ participation levels, and both mental and physical tasks); instill new habits	Provision of opportunities for repeated practice (with or without increasing demands); instruction, cues, guidance, feedback, etc.	Learning by doing	Training in use of a compensatory memory device, training to habitually use a louder voice, training in word-finding strategies
Representations	Enhance knowledge, modify attitudes/ emotional responses; change probability of specific behaviors	Didactic instruction, prompts to process new or previously acquired information; persuasion, motivational techniques; prompts for action	Cognitive/ affective information processing	Patient education, adjustment counseling, instruction on how to perform an activity, motivational interviewing

Examples of Organ Functions Treatments		
Ingredient	Mechanism of Action	Target
Apply force to a tight muscle →	Increased sarcomere length →	Increased joint range of motion
Provide a hearing aid →	Amplification →	Improved hearing acuity
Provide repeated exposure to stimulus →	Passive learning (habituation) →	Reduced sensitivity to stimulus

Examples of Skills & Habits Treatments		
Ingredient	Mechanism of Action	Target
Provide opportunities to practice steps from printed list →		Correct sequence of completing homework
Provide opportunities for repeated practice speaking loud with feedback →	Learning by doing	Increased vocal loudness
Provide opportunities for repeated practice using a memory notebook →		Increased use of notebook

Examples of Representation Group Treatments		
Ingredient	Mechanism of Action	Target
Explain meaning of terms related to aphasia (e.g., anomia, paraphasia) →	Cognitive / affective information processing	Increased knowledge about aphasia
Show video of typical speakers to normalize use of gestures in communication →		Increased willingness to use gestures in communication
Explain importance of home practice →		Increased motivation to practice at home

- ### Example ingredients for S and R targets
- Knowledge/performance-enhancing methods
    - E.g., providing instructions, aids, or links to prior knowledge
  - Engagement/motivational methods
    - E.g., persuasion, bargaining, self-directed goal setting
  - Feedback, reinforcement, and response to error
    - E.g., positive or negative feedback, rewards, error-minimization strategies
  - Affective/ attitudinal change methods
    - E.g., norm-based appeals, reassurance, eliciting change talk
  - Generalization via explicit instruction on when/how to perform tasks in different environments
  - Prompting of problem-solving opportunities to learn or practice

Let's try it...

Target Categories	Targets	Ingredients
Organs and organ systems (O)		
Habits and skills (S)		
Mental Representations (knowledge, attitudes, and beliefs) (R)		