Thoughts about Future Directions in Cluttering

Kenneth O. St. Louis
West Virginia University
Morgantown, WV, USA

Lessius University College
European Symposium on Fluency Disorders • 2010
Antwerp, Belgium
April 23, 2010
Acknowledgments

The “Bunnies”
Ken St. Louis, Larry Raphael
Klaas Bakker, Florence Myers
USA

Kathy Scaler Scott
USA

Emily Garnett
USA

Katrin Schulte
GERMANY
A Plan

✦ Cluttering & its re-emergence
✦ Brief review of symptoms & coexisting disorders
✦ Progress on 7 targets I identified three years ago
✦ Questions
I Wish I Could Cover…

✦ Descriptions of common cluttering symptoms
✦ Differentiation of cluttering from stuttering
✦ Diagnostic protocol for cluttering
✦ How to treat cluttering

But there is not enough time!
Metaphors

✶ Weiss’s multi-peak iceberg
   ✴ Central language imbalance

✶ The orphan of speech-language pathology
   ✴ Likely time to retire that metaphor

✶ The puzzle of cluttering
   ✴ Some pieces have been fit
   ✴ Others have not
   ✴ Used by nearly all presenters at the Congress in Brazil in a seminar
Current (More Popular) Status of Cluttering

✦ Why?
- Historical relevance of stuttering-cluttering relationship
- Evidence from coexisting communication disorders
- We’ve kept the pressure on

♦ Evidence
- More numerous presentations
- 1st international conference: Bulgaria, 2007
Evidence (more)

✧ International Cluttering Association
✧ 1st online conference (Right now!)
✧ Self-help initiatives for cluttering
   ✧ Yahoo group (Joseph Dewey)
   ✧ Parent of clutterers (Jonathon Wong)
   ✧ Collaborations with stuttering self-help
     (Peter Kissagizlis & Helene Kvenseth)
✧ Existing & new publications
Progress on a Research & Clinical Agenda

♦ Proposed at the 1st World Conference on Cluttering-2007

✦ Definition matters
✦ Rate is central
✦ Start with pure clutterers
✦ Epidemiology is critical
✦ Improve assessment
✦ Systematize therapy
✦ Advocacy must grow
1. Definition: A Little Progress

✧ Consensus that failure to agree has prevented advances in cluttering

✧ Approaches to definition
  ✧ Consensus (e.g., WHO & ASHA Terminology Guidelines)
  ✧ Expert (e.g., Daly’s Checklist)
  ✧ Clinical symptoms (e.g., Weiss; Myers)
  ✧ Spectrum (e.g., Ward)
  ✧ Frequency of symptoms (e.g., Bakker)
  ✧ Lowest common denominator (e.g., St. Louis)
1. Definition: Refined “Lowest Common Denominator” Definition

“Cluttering is a fluency disorder wherein segments of conversation in the speaker’s native language typically are perceived as too fast overall, too irregular, or both. The segments of rapid and/or irregular speech rate must further be accompanied by one or more of the following: (a) excessive “normal” disfluencies; (b) excessive collapsing or deletion of syllables; and/or (c) abnormal pauses, syllable stress, or speech rhythm.” (St. Louis & Schulte, in press)
1. Definition: LCD Notes

✧ Where cluttering occurs

✦ Must occur in naturalistic conversation
✦ But it need not occur even a majority of the time
✦ A few clear but isolated examples that exceed those observed in normal speakers are sufficient for diagnosis
✦ May also apply to the speaker’s mastered and habitual non-native language, especially in multilingual living environments

✧ Rate, disfluency & prosody symptoms

✦ Syllable rates may not exceed those of normal speakers
✦ Irregular rate seen in “jerky,” or “spurty” segments
✦ Disfluencies are often observed in normal speakers—but less—and typically not observed in stuttering
✦ Collapsing syllables includes—but not limited to—excessive shortening, “telescoping,” or “over-coarticulating” syllables, especially in multisyllabic words
1. Definition: Coexisting Disorders

Attention-Deficit/ Hyperactivity Disorders

Learning Disabilities

Language Disorders

Fluency Disorders

Stuttering

Cluttering

Rate Disorders

Articulation Disorders
1. Definition: Is Cluttering a Fluency Disorder?

✦ Currently, 3 points of view

❋ Yes. Cluttering is a fluency disorder
❋ No. Cluttering is a language disorder
❋ Yes, but… Cluttering has elements of both fluency & language disorders

✦ Why the disagreement?

❋ Depends on one’s purpose
  ➔ Blind men & elephant analogy
1. Definition: Reasons for Cluttering as a Fluency Disorder

- **Historical**
  - Grew out of work on stuttering

- **Theoretical**
  - Pure cluttering not considered a language disorder

- **Political**
  - Cluttering may get lost in Language, Autism Spectrum Disorders, etc.
  - Value of agreeing on fluency disorder designation until cluttering is very well established
1. Definition: Next Steps

✧ Develop consensus!

✦ Convene a “blue ribbon” task force on definition to recommend a standard definition that can be used anywhere

✧ Advocate for

➜ ASHA Terminology guidelines revision

➜ ICA consensus

➢ Scaler Scott & St. Louis: LCD definition is the best place to start

➢ See discussion by St. Louis & Ward on online conference

✧ Design an international, multi-institutional study using the definition
2. Rate: Some Progress

- Measured rates of speaking
- 8 triads of clutterers (CLUT), exceptionally rapid speakers (ERS) & controls (CON)
  - All females in this study; mostly mild
- DDK rates ("comfortable", slow modeled, maximum, "even faster"): no significant differences among groups but...
  - CLUT most variable
  - Hints that CLUT "maxed out" at 1st max rate
    - Increased .05 syl/sec (.27 ↑ for ERS; 1.11 ↑ for CON)
2. Rate (more)

✧ (Topbaş: DDK rates related to $F_0$)
✧ Reading orally, reciting nursery rhymes & imitating sentences after models
  ✧ CLUT & ERS faster than CON
  ➔ Some not significant due to small sample
✧ Conversation
  ✧ Compared to modeled sentences, all 3 groups faster
  ✧ CLUT & ERS faster than CON
2. Rate (more)

✧ Conversation-Recent data
★ CLUT ("Cluttered" vs "Fluent" segments) & CON ("Fluent")
★ Trends for faster speech in...
   ➔ CLUT "Cluttered" vs CON "Fluent"
   ➔ CLUT "Fluent" vs CON "Fluent"
   ➔ CLUT "Cluttered" vs CLUT "Fluent"
2. Rate (more)

✧ Spontaneous speech time estimation

★ 6 pairs of CLUT & CON (5 M & 1 F each)

➔ Identical on PPVT & self-awareness of speech

➔ CLUT had more articulation errors & more problems in life perspectives (quality of life)

★ CLUT regarded as faster speakers than CON

➔ Perceptual ratings by experimenter, participant & close friend/relative
2. Rate (more)

✦ S/M during oral reading, conversation & short responses to scenarios ("Do you prefer cats or dogs and why?")

★ CLUT faster than CON in conversation

★ CON faster than CLUT in oral reading & scenarios

✦ Likely that clutterers normalized
2. Rate (more)

✦ Speaking time estimation during scenarios

✦ Estimated times longer than actual times for both groups
  ➔ Greater for CLUT
  ➔ Not statistically significant likely due to small sample size

✦ Individual profiles similar for both groups
  ➔ 4/6: overall effect; 1/6: reverse effect; 1/6: equal
2. Rate: Some Implications

✧ Clutterers more likely to faster than normal when they self-select their rates in normal conversation
✧ Clutterers may require more formulation time in constructing utterances than normal
✿ Not likely that they speak fast because they underestimate their speaking time
2. Rate: Next Steps

✧ Develop standard measures of measuring rate (Lickley)
✧ In the same international multi-institutional study…
   ✧ Measure rate during a variety of speaking tasks for clutterers (& clutterer/stutterers) compared to exceptionally rapid speakers & controls
   ✧ Possibly explore brain differences among these groups
3. Pure Clutterers: A Little Progress

✧ Hard to find!
✧ Pure clutterers occur but are rare
  ✧ Daly suggested 5% of fluency disorders
✧ Most studies must deal with coexisting disorders
3. Pure Clutterers (more)

- Study of nonstuttering clutterers in Germany (Schulte)
- 15 participants (12 M; 3 F; 11-44 yr)
  - Relatives with stuttering, cluttering, language development problems: 73%
  - Excessively rapid rate: 100%
  - Irregular rate: 33%
  - Excessive normal disfluencies &/or coarticulation: 87%
- Coexisting problems
  - Reading nonsense words: 0%
3. Pure Clutterers (more)

- Rote speech w/ multisyllabic words: 20%
- Speech rate in oral reading: 33%
- Auditory processing skills
  - Suspect from case history: 86%
  - Auditory processing testing: 20%
- ADHD
  - From questionnaire: 100% (mostly severe)
  - Rapid discrimination of visually similar designs: 67%
- Writing common words: 100% (mostly severe)
- Oral-facial movements: 47%
3. Pure Clutterers: Next Steps

✦ In the same multi-institutional international study...

✦ Document pure cluttering in comparison to pure stuttering & coexisting cluttering / stuttering

✦ Describe other symptoms from detailed & careful testing as Schulte did
4. Epidemiology: Limited Progress

✧ Prevalence is unknown

✦ Past: thought to be < stuttering
✦ Recent: may be ≥ stuttering

➜ Fibiger & associates in Denmark: 11-16% by self report of speaking too fast or stumbling over words & omitting syllables

➜ St. Louis & associates: individuals known by conveniences samples in 4 countries

➢ Not a good measure of prevalence but...
➢ Average adult respondent knew 0.6 persons who stutter, 0.3 who clutter & 0.1 who stutter and clutter
4. Epidemiology (more)

✧ Sex ratio

✧ Clutterers: equivocal

➔ Past: assumed ≈ to stutterers (3:1 or 4:1 M:F)
➔ Fibiger et al.: ≈ 1:1 M:F
➔ St. Louis et al.

 ➤ Adults
   ✓ Clutterers: .7:1 to 3.4:1 M:F (Mean = 1.6:1)
   ✓ Stutterers: 4.5:1 to 10:1 M:F (Mean = 5.7:1)
   ✓ Clutter-Stutterers: 1.5:1 to 3.4:1 M:F (Mean = 3:1)

➤ Children
   ✓ Clutterers: .9:1 M:F to all M (Mean = 1.3:1)
   ✓ Stutterers: 1:1 to 4.7:1 M:F (Mean = 2.2:1)
   ✓ Clutter-Stutterers: 4:1 M:F to All M (Mean = 6.1:1)
4. Epidemiology (more)

✦ Onset

✦ Clutterers: not sure, possibly after 7-8 yr
✦ Stutterers: majority ≈ 3 yr

✦ Heredity estimates (Fibiger et al.)

✦ Cluttering: .53/.65 M/F
✦ Stuttering: .78/.80 M/F
✦ Childhood speech disorders: .71/.87 M/F
4. Epidemiology: Coexisting Disorders

✦ Comparison of fluency & other symptoms of Asperger’s Disorder (AD) vs stuttering & normal (Scaler Scott)

✦ 12 triads of 4th-7th graders with AD, “pure” stuttering & normal speech

✦ 4 AD children (1/3) had fluency problems
  ➔ 1 clutterer
  ➔ 1 stutterer
  ➔ 2 clutterer-stutterers
4. Epidemiology: Next Steps

✦ With the same multi-institutional, international cross-sectional study...

◆ Develop a probability sampling model to identify individuals who clutter, stutter, or both clutter & stutter

◆ Identify prevalence according to age, sex, family history, etc.

◆ Document prevalence of common coexisting disorders

✦ Use results to design a longitudinal study

◆ Estimate recoveries
5. Assessment & Diagnosis: Some Progress

- Clutterers often undiagnosed or misdiagnosed
  - Many (most?) normalize during screening/testing
  - Fast & jerky rate more salient than disfluency
- Stutterers usually correctly & readily diagnosed
5. Assessment & Diagnosis (more)

- New procedures/measures
  - Daly: *Predictive Cluttering Inventory*
    - Prediction accuracy unclear
  - Ward: *Checklist of Cluttering Behaviours*
  - Bakker: *Cluttering Assessment Program (CLASP)*
    - Downloadable software to count & time cluttering episodes & to make perceptual judgements
5. Assessment & Diagnosis (more)

- St. Louis & Atkins: Self-Awareness of Speech Index
- St. Louis Inventory of Life Perspectives and Speech/Language Difficulty
- Van Zaalen: Quantitative measures of rate (speed & variability), coarticulation/articulation & disfluency
- Bakker & Myers: Cluttering Severity Instrument
5. Assessment & Diagnosis: Next Steps

✦ Test different methods to measure irregular rate
✦ In the same international, multi-institutional study…
  ✦ Field test the various measures to determine their
    ➔ Test-retest reliability
    ➔ Concurrent & construct validity
6. Therapy:
Very Limited Progress

✧ The SFA DVD *Cluttering* (Myers & St. Louis) probably will help in getting more clutterers in treatment

✦ Suggestions for therapy provided
6. Therapy: Next Steps

✦ Select a small number of “standard” approaches, assigned randomly, to small groups of clients using multiple baselines & probes

✦ Possibilities

✴ Rate control using AAF
✴ Rate control using modeling & contingent reinforcement
✴ Improved speech monitoring
✴ Improved language planning
7. Advocacy: Considerable Progress

✦ Self-help for clutterers currently in its infancy

✦ Challenges

★ The name “cluttering” is confusing

MORGANTOWN CLUTTER-BUGS SUPPORT GROUP: 6 p.m., 206 High St. For individuals with organizing dilemmas, informal setting, facilitated by a professional organizer. No cost. Info: Julie Mills, 304-290-9952.
7. Advocacy (more)

➤ Webster’s definition of “clutter”:
➤ (Verb) “To fill or cover with scattered or disordered things that impede movement or reduce effectiveness (cluttered space)”
➤ (Noun) “A crowded or confused mass or collection; litter; hubbub”
➤ “Hobbub”: “a noisy confusion of sound”

✦ Clutterers being overshadowed by stutterers in self-help groups
➤ But currently the only face-to-face option
✦ Unknown if clutterers will develop face-to-face groups in the future
7. Advocacy (more)

✧ Online forums have been helpful
  ✧ Cluttering Yahoo Group (Dewey, Wong, others)
  ✧ ICA website (Bakker, Scaler-Scott, others)
  ✧ Current online conference on cluttering (Kuster & others)
7. Advocacy: Next Steps

✧ Keep doing & expand current efforts
✧ Find cluttering spokespersons to get behind the efforts
✦ Famous people who clutter
Some Concluding Thoughts

✧ Sunrises, sunsets, or both
Thanks for squeezing me in!