

Book Review / Évaluation des ouvrages écrits

Handbook of Phonological Development from the Perspective of Constraint-Based Nonlinear Phonology

Barbara Handford Bernhardt and
Joseph P. Stemberger (1998)

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Cost: \$94.95 (US)

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Bernhardt and Stemberger's *Handbook of Phonological Development* offers an excellent, scholarly tutorial on constraint-based nonlinear phonology and its application to phonological development. In the preface, Bernhardt and Stemberger write that "this book is meant to contribute to the convergence and reconciliation of various perspectives on phonology" (p xii), and the authors achieve their purpose with comprehensive discussions of developments from the fields of linguistics, psycholinguistics, and speech-language pathology.

In addition, the authors state that their book is aimed at readers with a general knowledge of phonological theory and phonetics but with no knowledge of nonlinear or constraint-based theories or of phonological development. With this audience in mind, the first four chapters (pp 1-276), plus the appendices, review twentieth century theories of phonological development, particularly those that are common in speech-language pathology, and introduce nonlinear and constraint-based theories, especially Optimality Theory. The final six chapters (pp 277-691) examine acquisition data in light of these more recent theories. Throughout the book, the authors attempt to show that nonlinear and constraint-based theories are the most applicable and provide the least arbitrary and least complex explanations for development.

Chapter 1 is a basic introduction. Chapter 2 works through four main issues in phonology: phonological variation, units of analysis (feature, segment, or word), storage of phonological representations, and innateness, including the possible origin of constraints. One of the main purposes of the book is to argue for the importance of constraints to phonological acquisition, and the chapter begins with a discussion of this issue. The authors go into detail describing the similarities and differences between theories that rely on rules or processes only, rules plus constraints, or just constraints (Optimality Theory). Rules or processes are procedures that describe how pronunciation changes in one way with one set of conditions and in another way with a different set of conditions. The authors argue that these rules or processes

add unnecessary complexity to the system and do not have an explainable, non-circular reason to exist. In contrast, constraints are generalizations about things that either are impossible or are required in a language; they separate rules or processes into independent parts. Ranking of constraints determines phonological variation. Constraints that are ranked lower in the hierarchy may be violated so that other, higher ranked constraints will not be violated. In all cases, constraints act to keep the spoken word (surface pronunciation) as faithful to the underlying representation as possible. The authors argue that the constraints-only approach to phonological development offers a more general explanation for variation than do other the approaches.

Chapter 3 provides a tutorial on phonological units from the perspective of nonlinear phonology. The authors present difficulties with standard generative phonology, such as in explaining coarticulation, and provide examples of how nonlinear phonology can be useful. The authors begin with the most basic unit, features, including the use of tiers and association lines, and then continue with segments, timing units, syllables, feet, and finally prosodic words. Throughout the chapter, the authors once again emphasize the explanatory value of nonlinear phonology.

Chapter 4 continues the discussion of constraints, including their role in phonological theory and the actual constraints used in this book. The information in this chapter may be the most unfamiliar and difficult of the four background chapters; however, the authors do a good job of presenting constraints in a relatively simple manner, making them as accessible as possible to speech-language pathologists and others who are trying to find research or clinical value in modern phonological theories.

Following the tutorials in the first four chapters, the second half of the book uses both the theories they describe and extensive real data to discuss phonological development. Chapters 5 through 7 discuss segmental development, prosodic development, and sequences of elements. Chapters 8 and 9 apply Optimality Theory to real data sets from children with both phonological disorders and normal phonological development. Chapter 10 provides concluding remarks.

For clinicians, chapter 8 will be particularly interesting. The authors demonstrate how nonlinear phonological intervention can be used in clinical practice. For example, they present a case study of Dylan from one of the author's studies of nonlinear phonological intervention (Bernhardt, 1994). The results reported here are exciting. However, because of its design, the study cannot show that the use of nonlinear phonology produces better outcomes than more traditional approaches. A large-scale study needs to be performed before comparable outcomes can be determined.

In chapter 8 and elsewhere, the authors suggest that their book can be used clinically for diagnostics; they wish Optimality Theory to replace older theories as a basis for clinical practice. This may happen as more speech-language pathology students are taught about OT. However, clinicians might be more interested in the authors' related book, *Workbook in Nonlinear Phonology for Clinical Application*, which is more accessible clinically and provides worksheets for diagnostics.

The *Handbook of Phonological Development from the Perspective of Constraint-Based Nonlinear Phonology* is a valuable resource for any serious student of phonological development. This book is written primarily for researchers, who will want it in either their personal collection or their university's library. It will also make a useful text for doctoral-level seminars in phonological development. In addition, readers of this book will have the vocabulary and understanding to enable access to the current theoretical literature in the fields of linguistics and psycholinguistics. The authors wish to encourage the use of modern phonological theories in the study of phonological development, and this volume helps to make that application possible.

References

- Bernhardt, B. (1994). Nonlinear phonological intervention: Group and case study results. Paper presented at the Canadian Association of Speech-Language Pathologists and Audiologists Annual Conference, May 1994, Winnipeg, Manitoba.
- Bernhardt, B.H. & Stemberger, J.P. (1999). *Workbook in Nonlinear Phonology for Clinical Application*. Austin, TX: Pro-Ed.

Recrutement d'un rédacteur ou d'une rédactrice en chef pour la ROA – 2008 **Rédacteur ou rédactrice en chef, Revue d'orthophonie et d'audiologie**

On invite les membres de l'ACOA à postuler l'emploi de rédacteur ou rédactrice en chef à temps partiel de la *Revue d'orthophonie et d'audiologie (ROA)*.

Il incombe au titulaire ou à la titulaire de planifier le contenu des quatre numéros par année de la *ROA* (printemps, été, automne et hiver) et de coordonner la collection, le processus d'examen par les pairs et les manuscrits soumis. Cette personne doit aussi se charger d'organiser et de réviser les manuscrits en plus de travailler en étroite collaboration avec le bureau national de l'ACOA. Le rédacteur ou la rédactrice en chef devra consacrer en moyenne 1.5 jours par semaine aux tâches de production de la *ROA*. Des fonds sont alloués pour de l'aide administrative à temps partiel. Ce poste d'une durée déterminée de trois ans sera soumis à une évaluation annuelle. Le titulaire ou la titulaire relèvera de la directrice des communications de l'ACOA. Le traitement prévu s'élève à 15 000\$ par an, payé en quatre versements qui correspondront aux délais de production. Pour obtenir plus d'information sur la *ROA*, consultez le site web de l'ACOA à: www.caslpa.ca/francais/resources/jslpa.asp. Une description de travail complète est disponible sur demande.

Ce contrat de travail débutera en janvier 2008 et couvrira les numéros du printemps 2008 à décembre 2010. Avant de signer le contrat, le titulaire ou la titulaire devra se soumettre à une période de formation débutant en septembre 2007. Durant cette période, il ou elle devra se rendre à Ottawa pour assister à une réunion de planification et pour observer le déroulement du processus de production du numéro de l'hiver 2007.

Le candidat reçu ou la candidate reçue devra être membre de l'ACOA (une préférence sera accordée aux candidat(es) qui sont membres agréés) et pourra travailler de n'importe où au Canada. L'expérience du processus éditorial d'examen par les pairs constitue un atout précieux. Le candidat ou la candidate doit posséder au moins 10 ans d'expérience dans son domaine. Il est préférable d'être titulaire d'un doctorat en orthophonie ou en audiologie ou un domaine lié, mais les candidats et les candidates ayant une maîtrise ou un diplôme équivalent ainsi qu'un intérêt certain envers la recherche seront pris en considération. Le bilinguisme est un atout.

Toute demande doit être accompagnée d'un curriculum vitae et d'une lettre d'accompagnement dans laquelle le candidat explique brièvement les raisons qui motivent sa demande et fait ressortir les points saillants de son expérience pertinente. Il faut envoyer les demandes avant le 15 mai, 2007 par courrier, par télécopieur ou par courriel au :

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Resource Review / Évaluation de ressources écrits

Preschool Language Scale – 4th Edition

Authors: Irla Lee Zimmerman, Violette G. Steiner, and Roberta Evatt Pond (2002)

Publisher: The Psychological Corporation
19500 Bulverde Road
San Antonio, TX 78259 USA

Canadian distributor: Harcourt Assessment
The Psychological Corporation
55 Horner Avenue
Toronto, ON M8Z 4X6
www.PsychCorp.com

Cost: \$395.00 with manipulatives
\$325.00 without manipulatives

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The Preschool Language Scale – 4th Edition (PLS-4) is a standardized test for which the stated purpose is to identify children between the ages 0;1 and 6;11 who have a language disorder or delay. The test includes two core subscales in addition to three supplemental assessments. The Core subscales are Auditory Comprehension and Expressive Communication. The supplemental assessments include a language sample checklist, an articulation screener and a caregiver questionnaire. The complete test package includes an examiner's manual, picture manual and 15 scoring forms. The test does require the use of some toys. Most of these are available for purchase in an additional kit or the examiner may collect the items her/himself.

The PLS-4 is an individually administered test. The estimated administration time is between 20-45 minutes, varying slightly based on the age of the child. The plates in the picture book are colourful and appropriately diverse, including people of various ethnic backgrounds and some with disabilities. The use of real objects for a number of test items serves to engage the child, particularly those at the younger ages. A number of the test items include practice tasks which allow feedback to ensure that the child understands the task.

In the manual, there are clear instructions for calculating the child's age and determining the starting point, basal and ceiling for the test. The response form itself includes sufficient information that a clinician reasonably familiar with the test could administer it without referencing the manual during testing. Most items are easily scored and for those which allow more open ended responses, there are examples of both acceptable and unacceptable answers in the manual. The manual also includes information on accommodations for children with special needs and those who do not speak with a standard dialect of English. It includes examples of accommodations that allow the use of the

norms and also ones that do not as they significantly alter the task difficulty or level of support provided.

There are a variety of ways in which the PLS-4 results are summarized. Raw scores from the Auditory Comprehension and Expressive Communication subtests can be converted into standard scores and percentile ranks. Furthermore, the 90% and 95% confidence bands are included in the tables for standard scores and percentile ranks. There is also a table to determine age equivalent scores. A Total Language Scores can be calculated by combining the scores from the Auditory Comprehension and Expressive Communication scales. In addition to these standardized scores, the PLS-4 includes a Checklist which summarizes the child's performance on test items onto two pages to allow identification of patterns of errors. Finally, the PLS-4 Profile organizes items into 12 areas of language skills (e.g., vocal development, syntax, social communication, phonological awareness). The test items are arranged developmentally in each category. By completing this form, the examiner is able to see if the child demonstrates a relatively flat profile or if there are areas of particular strength or weakness.

The supplemental measures are not included in the determination of Auditory Comprehension, Expressive Communication or Total Language scores. The authors recommend that you administer the Articulation Screener when you have concerns about the child's articulation. The Language Sample Checklist is included to give the examiner information about the child's language skills in conversation and the Caregiver Questionnaire provides information about the child's communication at home.

I question the utility of these supplemental measures. The Articulation Screener consists of 38 words, elicited through immediate imitation (e.g., Say X). Imitated productions are not the preferred way to elicit words for articulation assessment as they do not always represent a child's spontaneous productions. Furthermore, there are not adequate norms to interpret the child's performance. The authors recommend that full assessment of the child's speech production skills be done if there is a concern. I would suggest that a clinician can determine the need for an assessment of articulation skills more efficiently through informally interacting with the child.

A language sample is a critical part of any language assessment. However, a fuller analysis of the child's sample should be conducted than that done using the Checklist. The manual recommends that you tape-record and transcribe a language sample of greater than 50 utterances. Completion of the Language Sample Checklist would not take full advantage of the rich source of information the sample would represent.

The Caregiver Questionnaire might provide some useful information. It is designed for children under 3;0. Very young children often do not display their best performance in unfamiliar situations. For a child who has cooperated for the PLS-4, the Caregiver Questionnaire would not add much. If it was not possible to elicit the child's cooperation or if the examiner felt that he/she did not elicit the child's best performance, the Caregiver Questionnaire would add useful information.

As the name implies, this is the fourth edition of a test, one which is commonly used in language assessment of preschool children. The authors identify four reasons for the revision: an increased focus in assessing very young children, response to clinicians' needs and feedback, best practice in assessment guidelines and changing demographics.

The response to the first two reasons can be seen most clearly in changes made in the organization and content of the test. The test items above 1;0 are divided into sections representing 6 month age levels, as in the PLS-3. On the PLS-4, they are divided into 3 month groupings below 1;0. The Auditory Comprehension (AC) subscale includes 62 items and the Expressive Communication (EC) subscale includes 68 items. This represents a substantial increase over the number of items in the PLS-3 (48 for both scales). Many of these extra items are for children below 1;0. On the AC scale, there are 16 items below the developmental level of 1;0. On the PLS-3, there were 8 items. On the EC scale, there are 13 items below 1;0 and another 12 items between 1;0 and 2;0. This compares to 8 items for each year span on the PLS-3. There are also substantial content additions in the upper age levels. Items targeting similes, analogies, and metalinguistic skills such as phonological awareness and grammatical judgements have been added. In addition, there have been many changes to the items throughout the test.

In addition to the content changes, the PLS-4 allows caregiver report for many of the items below 2;0 and it has increased the number of items for which observation of spontaneous behaviours are scorable. When testing very young children, allowing caregiver reports generally provides a more accurate picture of the child's skills.

The response to the third and fourth reasons (i.e., changing demographics and best practice) can be most clearly seen in changes to the test norms and standardization. The authors note that the standardization sample of the PLS-4 is more diverse than that of earlier versions. This reflects the increasing diversity of the American population. Although not a direct reflection of the Canadian population, this too is increasingly diverse.

A more relevant change for Canadian speech-language pathologists comes in the actual standardization. The authors note that a primary goal of the revision was to improve the psychometric properties of the PLS. There have been a number of

improvements in this version. There is a much more substantial description of the standardization and steps taken to document reliability and validity than in the PLS-3. There are twice as many divisions for children below 1;0 and those over 6;0. This provides more adequate coverage for these ages. The improvements can be seen in smaller Standard Errors of Measurement (SEM) and thus smaller confidence intervals for standard scores representing a more reliable test.

The PLS-4 also has improved sensitivity, and the sensitivity and specificity of the test are more clearly reported. Although not directly reported, the sensitivity of the PLS-3 (the odds that a child who has a language disorder would be identified as such) ranged from .36 to .65. In the PLS-4, sensitivity and specificity (the odds that a child who is typically developing will be identified as such) are reported for Auditory Comprehension, Expressive Communication and Total Language Scores. These are reported for ages 3-years, 4 years and 5 years. The sensitivity values range from .74 to .83. Specificity values are higher, ranging from .75 to .96. Although this represents a significant improvement and it is in line with other language tests, it is important to remember that these numbers suggest that only $\frac{3}{4}$ of children with language impairments will be identified if a speech-language pathologist relied solely on the PLS-4 results.

There remain some concerns about the psychometrics of the PLS-4. Test-retest reliability is only reported for ages 2;0 – 5;11. Thus, speech-language pathologists should be cautious in interpreting the results of children under 2;0. More troubling is the recommendation that a speech-language pathologist may wish to use a lower ceiling level than was used during standardizations. The recommended ceiling is seven consecutive errors. The authors note that this may seem 'burdensome' and suggest that the speech-language pathologist may choose to stop after five or six errors and if so, that they consider reporting this in the child's report. When a ceiling of less than seven is used, the norms reported in the manual should not be applied. If adequate psychometric properties could have been achieved using a smaller ceiling, the test developers would have reported their norms and reliability and validity information using the lower ceiling. The fact that they did not suggests that a ceiling of seven was necessary to achieve acceptable psychometric properties and speech-language pathologists should use a ceiling of seven if they wish to report standard scores.

In summary, the PLS-4 is the latest edition of a popular test for the assessment of language disorders in preschool children. The changes made in the 4th edition represent significant improvements. The test items are more numerous and have greater breadth. The psychometric properties of the test are much better (if the appropriate ceiling is used) and there is better reporting of reliability and validity information. Anyone who is using the PLS-3 should strongly consider purchasing the newer edition.

While a review gives an evaluation of the book along with the background information about the author, a summary is to describe what the book is all about. A summary usually presents the main idea of the book and may list one or two intrigues developed in the text. The purpose of a summary is to help people who have never read the book, understand what it is all about, how the author developed his/her thought, and what are the key ideas that are interwoven within the text. Book digitized by Google from the library of the New York Public Library and uploaded to the Internet Archive by user tpb. "Hujus operis centum et duodecim exemplaria typis mandata sunt." A reprint of "Centoniana, ou Encyclopédie du centon, par Octave Delepierre" in Miscellanies of the Philobiblon society, London, 1866-68, v. 10-11. A book review is more substantial than a book report. As with literary criticism and term papers, the writer usually argues for a thesis, e.g., that the book's author has an excellent understanding of the hip-hop music scene but misunderstands the relationship of hip-hop to music history in general. A book review also requires that you critically examine the author's arguments. In short, you judge the quality of the book.