1. Shinichi Suzuki’s "Mother Tongue Method" for music instruction

(1) Shinichi Suzuki’s (1898-1998) revelation
"Oh — why, Japanese children can all speak Japanese! The thought suddenly struck me with amazement. In fact, all children throughout the world speak their native tongues with the utmost fluency. Any and every Japanese child — all speak Japanese without difficulty. Does that not show a startling talent? How, by what means, does this come about? I had to control an impulse to shout my joy over this discovery.
The children of Osaka speak the difficult Osaka dialect. We are unable to imitate the Tohoku dialect, but the Tohoku children speak it. Isn't that something of an accomplishment? But no one else I mentioned it to seemed the slightest bit impressed. It was just taken for granted; people in general think that the ability children display is inborn. At my excitement, half of my listeners were startled, and others just thought me absurd. Nevertheless, my discovery actually had great significance; it made me realize that any child is able to display highly superior abilities if only the correct methods are used in training...Since [Japanese children] all speak Japanese so easily and fluently, there must be a secret; and this must be training. Indeed, all children everywhere in the world are brought up by a perfect educational method: their mother tongue. Why not apply this method to other faculties? I felt I had made a tremendous discovery....


(2) Elements of Suzuki training
a. "Repetition: Ability equals knowledge plus 10,000 time," said Dr. Suzuki. Understanding what I'm supposed to do or sound like is not enough. I must be able to consistently produce that sound or motion in order for it to be called a skill. The only way to get consistency is to repeat, gradually approximating the ideal one has in mind...

b. "Praise: All learning and all attempts at learning need to be praised, but that praise needs to be sincere and specific if it is to have any meaning for the student. It is part of creating a nurturing environment, and a way for teachers and parents to mark progress. "Wow, you didn't do that yesterday, but today you got that nailed. It's really good."

c. "Review: Just as a child doesn't stop saying one word to learn another, the children review previous pieces in the repertoire...It's much the same as learning vocabulary.


2. Linguistics

- Language acquisition is partly data-driven, but also relies on explicit support from innate knowledge and abilities.
The support offered by the innate aspects of language explain the ease and rapidity with which many data-driven aspects of language are acquired.

- An image problem:
The existence of the data-driven part is obvious, because the vocabulary, pronunciations and word order of different languages differ. The existence of the innate part is less obvious, because you have to work harder to discover it. That's why it's easy to miss (especially if you want to miss it).

The innate part ("Universal Grammar") manifests itself in several ways:

a. Arguments from acquisition: behavior of individual speakers that fails to reflect linguistic data that the speaker has heard.
   1. knowledge for which no data provided evidence ("Poverty of the Stimulus");
   2. lack of knowledge in the face of abundant evidence that should support this knowledge ("Abundance of the Stimulus").

b. Arguments from universals: there is an invariant core of structural properties, common to all languages.
An argument from "Poverty of the Stimulus": 
We know things about our language that are not learned from the data we heard.

Example: the "that-trace" effect.

(5) Rule for forming wh-questions: \( \chi \)
Move an interrogative phrase to the left periphery of the question clause.

(6) Which book did Mary buy __ ?

(7) Constraint #1: That-trace filter
A clause from which an interrogative subject has been moved may not start with the subordinating conjunction (complementizer) that.

(8) Moving an interrogative object..
a. Which book does Mary think [John bought ___]? 
b. Which book does Mary think [that John bought ___]?

(9) Moving an interrogative subject.
a. Which customer did Mary say [ __ bought this book]? 
b. but: *Which customer did Mary say [that __ bought this book]?

(10) Constraint #2 (Russian only): Short-distance constraint
In Russian, rule (5) may not move an interrogative phrase out of a subordinate clause.

Consequence #1: The Russian counterparts to all the sentences in (8) and (9) are felt to be awkward, impossible — un-Russian.

Natural speech does not contain examples of this sort.

But: Russian sentences that violate the short-distance constraint and the that-trace filter are uniformly felt to be worse than sentence that violate only the short-distance constraint.

(11) a. Russian version of (8b)

*Kakuju knigu Maša dumae, čto Vanja kupil __?
What book (obj) Masha thinks that Vanya bought
‘What book does Masha think that Vanya bought?’

b. Russian version of (9b)

**Kto Maša dumae, čto ___ kupil ėtu knigu?
Who (subj) Masha think that bought this book
‘Who does Masha think that bought this book?’

Significance:
• Russian children don't hear sentences like (9b) —
• but they also don't hear sentences like (8b) either.
• Where does Russian speakers' knowledge of the that-trace constraint come from?


An argument from "Abundance of the Stimulus": 
Russian "genitive of negation": If a noun phrase has an indefinite, non-specific meaning and is a direct object, it is marked with "genitive case" (a special form) in a negative sentence.

Children as young as 3 know this, and can use the genitive case in most instances with the facility of an adult.

Experiment (Moscow day care centers)

(12) Example: Non-specific direct object of a transitive verb with negation

Experimenter: [using a toy cat and paper with drawings of houses and bicycles on it] (English translation:)
This is a story about a cat. The cat decides he wants to paint. So he paints one house—oh, it's difficult! And then he paints another house—it's difficult! He says, "Now, I'm tired. I can't paint any more," and he goes home.

Puppet:
Ja znaju čto služilos'. Kot pokrasil dva doma
I know what happened. Cat-NomSg painted-MascSg  two-acc house-GenSg
i ne pokrasil ni...
and not painted-MascSg not...
'I know what happened. The cat colored two houses and didn’t color…'

Predicted child response:
odnogo velosipeda
a single-m-gen bicycle-GenSg
'a single bicycle.'

(13) Results (summary)
a. Story biased towards non-specific object: 73% genitive response 
b. Story biased towards specific object: 4% genitive response

Exception:
Verbs that have direct objects but no subjects (unaccusative verbs) showed significantly fewer genitive responses than normal transitive verbs.
Significant point #1:

This group includes several "bleached verbs" that lexically require genitive case, regardless of the meaning of their object.

(14) **Results: younger group**

- Regular unaccusative verbs: 40% genitive response
- Bleached verbs: 31% genitive response

(15) **Results: older group**

- Regular unaccusative verbs: 50% genitive response
- Bleached verbs: 62% genitive response

Significant point #2:

The bleached verbs in this group are outstandingly common. The most common member of the group is *net* (*nyet*):

Notable exception: Perhaps the most common word in the language. Children have a specific difficulty with constructions that involve an object noun-phrase but no subject.

One construction of this type is the construction with the existential verb *nyet*, that means "isn't there", "doesn't exist" or "we haven't got any".

(16) **The Newsstand**

Customer: "Nedelju" i "Sport" // I "Futbol" esli est'

Vendor: "Futbola" net 'We don't have Football.'

Customer: "Sport" pozhalujsta. 'Sport, please.'

Vendor: To zhe. 'Same thing.'

Customer: "Moskovskoj pravydy" net? A? 'Don't you have Moscow Pravda? Huh?'

Vendor: Ne bylo. 'Didn't have it.'

Customer: "Sel'skoj" ne bylo? 'You didn't have Agricultural Gazette?'

Vendor: Ne bylo. 'Didn't have it.'

(17) **Not an artifact of our experiment: evidence natural speech**

"[I]n negative sentences with *net*, the nominative is at the very beginning used in place of the genitive case: *net pinók* [not-is stump-NomSg] 2;9, 17 / a nás nét děn'gi [at us not-is money-NomSg] 2;8,16; / a bábůškí Mání né tsvin'ja [at grandma Manja not-is pig-nom] 2;9,17; / miktó nétu [nobody-NomSg not-is] 2;9,25. This structure for negative expressions (*net* + nominative case) is made possible by the corresponding affirmative expressions like: *vot peněk* [here (is) stump-NomSg]; / *u nas est' děn'gi* [lit. 'at us is money-NomPl', i.e. 'We have money'].*

(Gvozdëv, p. 146)

Significance:

- These results comport with arguments by Borer and Wexler that young children have a specific difficulty with constructions that involve an underlying direct object but no underlying subject.

- In this instance, the support provided by biology for one aspect of language acquisition seems to mature late.

- The failure of children to fully acquire an outstanding frequent linguistic pattern — while acquiring a related pattern of some considerable sophistication — points to the crucial enabling role of the innate component of language. Without it, even a common pattern goes unlearned.


**Arguments from linguistic universals**

The ordering of adverbs, related particles and suffixes when sorted by meaning, is invariant across languages:

(18) a. **English adverbs**

He was *once usually* willing to help

b. **Dagaare (West Africa) tense particles** - Bodomo 1993,39

O da man nmiere ma (S)he **PAST HABITUAL** beat-PROG me ('S)he was usually beating me'

c. **Canela-Crahô (Brazil) tense particles** - Popjies and Popjies 1986, 182

pê wa ajco apu to hane **PAST 1 HABITUAL** PROG do thus 'I always used to do that'

d. **Aleut (North America) tense suffixes** - Bergsland 1994,337ff

chisi-lga-qa-lgi-qa-x.. distribute-PASS-INCEPT-HABITUAL-PAST-sg .... 'it was distributed.'

e. **Khalkha Mongolian tense suffixes** (Asia) - Svantesson 1991,191ff

br: [...] moGoi-g coltöd-dög bai-sôn 1 snake-ACC throw-HABITUAL be-PAST 'I used to throw it at the snake'

f. **Turkish tense suffixes** - Kornfilt 1997,356

Hasan piyano çal-ar-di Hasan the piano play-HABITUAL-PAST 'Hasa used to play the piano'
(19) The Cinque Hierarchy
finekly Moodentence type
luckily Moodevaluative
allegedly Moodevidential
probably Modepistemic
once T(Past)
(then T(Future)
perhaps Moodimpeccable
necessarily Modnecessity
possibly Modpossibility
usually Asphabitual
finally Aspdelayed
tendentially Asppredpositional
again Aspessive
often Aspfrequentative
willingly Modvolition
quickly Aspcelerative
already T(Anterior)
o longer Asptermiative
still Aspcontinuous
just Aspretrospective
soon Aspproximate
briefly AspDurative
(?) Aspgeneric/progressive
almost Aspprospective
suddenly Aspimperative
obligatorily Modobligation
in vain Aspfrustrative
(?) Aspcomitative
completely AspsgCompletive
into AspPCompletive
well Voice
early Aspcelerative
(?) AspimperativeII
again AspimperativeII
often AspfrequentativeII
Verb
Significance:
All languages share the same somewhat hidden skeleton. Why do they share this skeleton?


Arguments from depth of explanation:
The explanation for linguistic facts is not always evident on the surface. So why are they facts?

(20) Standard English does not show verb-fronting when the subject is questioned...
a. What did Mary buy ?
b. *Who did __ buy it? [unless did is stressed]

(21) ...not even fronting of the main verb.
a. Who recently bought it?
b. *Who bought recently it?

(22) A similar fact in subordinate clauses: the that-trace filter.
a. What do you think that Mary bought ?
b. *Who do you think that __ bought it?

A proposed analysis: The clause-introducer that is a form of Tense that fronts just like an auxiliary verb in certain syntactic circumstances. (Pesetsky and Torrego 2000).

In fact, Belfast English (N.Ireland) shows actual tensed-verb fronting following this pattern:

(23) Belfast English
a. What did Mary claim [did they steal__]?  
b. I wonder what did John think would he get__?  
c. Who did John say [did Mary claim [had John feared [would Bill attack__]]?  
d. *Who did John say [did __ go to school]? [bad unless do is stressed]

Significance: Underlying language is a hidden system. How did it get there?

3. Language is special

The principals uncovered in linguists’ investigation of human language typically do not resemble anything known from the study of other areas of cognition.

(24) The Suzuki perspective on acquiring language: How do children come to know language?

Is language special?
No.
Behaviorism:
"In teaching the young child to talk, the formal specifications upon which reinforcement is contingent are at first greatly relaxed. Any response which vaguely resembles the standard behavior of the community is reinforced. When these begin to appear frequently, a closer approximation is insisted upon. In this manner very complex verbal forms may be reached." [B.F. Skinner (1957) Verbal Behavior, pp. 30-31]

But...but...but behaviorism is bad, right?
"It is simply not true that children can learn language only through 'meticulous care' on the part of adults who shape their verbal repertoire through careful differential reinforcement, though it may be that such care is often the custom in academic families. It is a common observation that a young child of immigrant parents may learn a second language in the streets, from other children, with amazing rapidity, and that his speech may be completely fluent and correct to the last allophone, while the subtleties that become second nature to the child may elude his parents despite high motivation and continued practice." [N. Chomsky, 1957 review of Skinner Verbal Behavior]

Then how come:
"...when Pablo Casals heard a Suzuki recital in Tokyo, he rushed to the stage shouting 'bravo', and hugged the children...Suzuki has done more than revolutionize violin teaching...Oberlin Professor Clifford Cook says: 'What Suzuki has done for young children earns him a place among the benefactors of mankind, along with Schweitzer, Casals, and Tom Dooley.'
[Newsweek, quoted as jacket blurb on Shinichi Suzuki, Nurtured by Love]

If Suzuki was so dead wrong, what are these kids doing playing the violin?

Answer:
- Sometimes, ignorance is bliss.
- Suzuki quite harmlessly imposed on language his common-sense knowledge about how children learn to play the violin.
- The real contribution of his "mother-tongue" revelation was the idea of starting children on music lessons at a very young age, with high expectations.
- As so often in skill instruction, high expectations yield high achievement.

Suzuki’s was lucky enough to be 100% wrong about language. Others who were less wrong have been less lucky.

4. Whole Language

"Whole language teaching is also based on scientific knowledge and theories about language." (K. Goodman, What’s Whole in Whole Language, 26)
Is learning to read more like learning to talk or more like learning to play the violin? The best evidence:

<table>
<thead>
<tr>
<th>I Learn to Read and Write the Way I Learn to Talk</th>
<th>[book title]</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;...We would think it funny if parents hovered over their newborn's crib, chanting the sounds of language one at a time. Parents are not trying to teach language, but rather trying to communicate with their child. They do not teach children individual sounds, but instead, use and share language naturally as a part of everyday experiences. They respect and accept their baby's babblings as talk. Although different from that of grown-ups, the child's language is celebrated and accepted without criticism. It is through constant interaction with family and friends--through using language and hearing others use it in everyday situations--that children learn to talk. Our research has indicated that the same is true of learning to read and write. It is through constant interaction with family and friends, teachers and classmates--through using reading and writing and observing others reading and writing in everyday situations--that children can learn to read and write.&quot;</td>
<td>[National Council of Teachers of English, Elementary School Practices]</td>
</tr>
</tbody>
</table>

**a.** The use of writing systems is parasitic on speech. Work of Charles Perfetti (http://www.pitt.edu/~perfetti/perfettilab.htm) argues that users of alphabetic and non-alphabetic writing systems alike route comprehension of written texts through the phonology of their language. For example, tongue-twisters take longer to read than non-tongue twisters for both English and Chinese readers. This research argues that written language is not just another form of language.

Significance: It might turn out that there is a UG for written language (just as it might have turned out that there is a UG for violin playing), but there is no reason to assume this. Written language is a code that represents the spoken language, but is not an instance of language itself.

**b.** A precondition for the successful learning of an alphabetic writing system is phonological awareness. Sometimes described as the ability to bring to conscious awareness the phonological units (segments/phonemes) encoded by the alphabet, it at least involves the ability to link these units (consciously or not) to written symbols. Apparently, children differ greatly in their degree of natural phonological awareness, but remediation is often possible for children whose phonological awareness is low. [Adams, M.J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: The MIT Press, 1990. See also: Gough, Philip, L.C. Ehri and R. Treiman, eds. *Reading Acquisition*. Hillsdale, NJ: Lawrence Erlbaum Assoc.]

Significance: Learning to read an alphabetic writing system has a precondition related to language that is not universal across the species, and often requires intervention to cultivate.

**c.** The overall picture of learning to read is very little like learning to speak. There are many instances of failure to acquire despite plentiful evidence, but few or no instances of acquisition in the absence of evidence.

**Common sense:**

Alphabetic writing provides a code for phonological units of speech. If children are not born knowing the code, and do not always develop the phonological awareness necessary to construct the mapping between letters and linguistic units, they need some degree of explicit, systematic assistance — often called phonics. At the very least, the assistance should be provided until proven unnecessary.

**Reminder:** The failure of Russian 3-4-year olds to master the genitive case with *net* illustrated the difficulty of detecting linguistic patterns without specific biological support.

**5. Whole language: what happened next**

"English-Language Arts I-VI is the official policy statement of the Direction Générale de Développement Pédagogique, Ministère de l'Education for the Province of Quebec. It mandates a 'whole language, child-centered, integrated approach... The Quebec curriculum guide and course of study provides an excellent model for a system-wide whole language program."

[Ken Goodman, *What's Whole in Whole Language?*, p.64]

"As the information in this table reveals, in seven provinces (British Columbia, Manitoba, New Brunswick, Newfoundland/Labrador, Ontario, Prince Edward Island, Quebec) the only textbooks on the approved lists are those that subscribe to a whole-language philosophy... Unfortunately, in many provinces unless special permission is granted to do otherwise, schools are only permitted to purchase in quantity for classroom use textbooks that appear on the approved lists."

[Marvin L. Simner, "Beginning Reading Instruction: A Position Paper on Beginning Reading Instruction in Canadian Schools", Canadian Psychological Association 1993]

"We've begun seriously to affect legislative policy in states like Michigan and Kentucky as well as all of the provinces of Canada."


"...Every three years the State Program Quality Review (PQR) team, composed of teachers and administrators from other districts, also reviews our program. During the last review, [...] recommendations were made, including suggestions for improving the reading program. As a result, the following changes have been made:

Teachers have attended workshops emphasizing strategies in the teaching of language arts.

Workbooks are being phased out of the reading curriculum.

More literature books have been added to the curriculum.

The whole language approach to the language arts has been implemented. [...]"

[Soleado Elementary School, Rancho Palos Verdes, California, 1994-95 Principal's Message; /http://www.pclab.com/soleado/ (defunct)]
"[...] In order to implement this philosophy, the Union City Board of Education recently adopted as its primary educational philosophy the "whole language approach."

["Whole Language Philosophy Guides Instruction in New Jersey", Anna Flanagan. NCTE Chronicle; http://www.ncte.org/news/chronicle/top/wholelan.html (defunct)]

"But whole language, which sounds so promising when described by its proponents, has proved disastrous when applied to - and by - real people. In the eight years since whole language swept California, fourth-grade reading scores have plummeted, according to the National Assessment of Educational Progress (NAEP). Indeed, California fourth-graders are now such poor readers that only the children in Louisiana and Guam - both hampered by pitifully backward education systems - get worse scores. The still-unfolding reading debacle stems from a tragic misapplication of the state's 1987 framework, in which bureaucrats interpreted whole language as a wholesale replacement for traditional lessons. Hundreds of grade schools banned spelling tests, saying they stifled children. Phonics was prohibited by principals who said it was meaningless to kids, citing such familiar absurdities as: 'The cat sat on a fat hat.'"

[Jill Stewart, LA Weekly, April 21, 1996]

6. The Whole Language response to linguistics

"Whole language teaching is also based on scientific knowledge and theories about language." (K. Goodman, What's Whole in Whole Language, 26)

Defensive response to linguistics:
Learning to read only looks different from learning to speak if you look at the wrong aspects of learning to speak — structure and form. If you look at how children learn to "construct meaning", the two processes look alike again.

"Meaning is now accepted as the core of language."


Consequence:
Whole-language deemphasizes the role of formal structure in the reading process. Skilled readers, it is claimed, extract meaning from the printed page opportunistically, relying on contextual clues, pictures, guessing as much as actual decoding: "sampling the text". (Goodman, K. 1967. "Reading as a Psycholinguistic Guessing Game. Journal Of the Reading Specialist 6: 126-35.) In the Whole Language literature, this view is called "psycholinguistics" -- or sometimes "psycho-sociolinguistics"!

A variety of research makes it clear that skilled readers do not read this way, though unskilled readers do. (Nicholson, T. 1986. Reading is Not a Guessing Game--The Great Debate Revisited. Reading Psychology, 7:197-210)

"In the past, research focused on the components of language -- phonological and grammatical units. As a result, we understood and taught the language processes as separate entities characterized by discrete skills. More recently, language researchers have shifted their focus to study language from the perspective of its primary function -- communication. These studies have helped us to understand that authentic language use and development is social and interactive and that learning is enhanced through the interplay of the language processes. [...]"

"By the time they enter school, most young children have acquired a working knowledge of language, an internalized set of grammatical rules that allows them to communicate. We do not directly teach this internal grammar to children -- they develop it naturally as they interact with their environment. Motivated to communicate by necessity and curiosity, they develop increasingly sophisticated ways to express themselves and make themselves understood. The child who loves cookies is motivated to progress from pointing at cookies, to trying to say the word "cookie," to putting that word into a sentence, 'I want cookie!'...Classroom studies suggest the principles underlying the development of oral language may operate similarly in the development of reading and writing, no matter what the learner's age."


Moral: Ignorance may be bliss, but a little knowledge is a dangerous thing.
The battle for language

From: Forty Massachusetts specialists in linguistics and psycholinguistics
To: Dr. Robert V. Antonucci
Commissioner of Education, Commonwealth of Massachusetts
Cc: Linda Beardsley, Curriculum Frameworks Coordinator, Dept. of Education
    Dr. Michael Sentance, Secretary of Education
    His Excellency, William F. Weld, Governor of Massachusetts
Date: July 12, 1995
Subject: Standards for Reading Instruction in Massachusetts

"We are researchers in linguistics and psycholinguistics -- and
Massachusetts residents. We are writing to raise certain questions
about the inclusion of contentious and, in our view, scientifically
unfounded views of language in the sections on reading instruction of
the draft Curriculum Content Chapter on Language Arts ("Constructing and
Conveying Meaning"), recently circulated by the Massachusetts Department
of Education. These views are presented as a principal support for the
reading curriculum advocated as an instructional "standard" in this
document.

The proposed Content Chapter replaces the common-sense view of
reading as the decoding of notated speech with a surprising view of
reading as directly "constructing meaning". According to the document,
"constructing meaning" is a process that can be achieved using many
"strategies" (guessing, contextual cues, etc.). In this view, the
decoding of written words plays a relatively minor role in reading
compared to strategies such as contextual guessing. This treats the
alphabetic nature of our writing system as little more than an accident,
when in fact it is the most important property of written English -- a
linguistic achievement of historic importance.

The authors of the draft Content Chapter claim that research on
language supports their views of reading. The document asserts that
research on language has moved from the investigation of particular
"components of language -- phonological and grammatical units" to the
investigation of "its primary function -- communication". These
supposed developments in linguistic research are used as arguments for a
comparable view of reading. We are entirely unaware of any such shift
in research.

We want to alert the educational authorities of Massachusetts to
the fact that the view of language research presented in this document
is inaccurate, and that the claimed consequences for reading instruction
should therefore be subjected to serious re-examination.

The facts are as follows. Language research continues to focus on
the components of language, because this focus reflects the "modular"
 nature of language itself. Written language is a notation for the
structures and units of one of these components. Sound methodology in
reading instruction must begin with these realities. Anything else will
shortchange those students whom these standards are supposed to help.

As linguists, we are concerned that the Commonwealth, through its
powers to set standards for schools, should presume to legislate an
erroneous view of how human language works, a view that runs counter to
most of the major scientific results of more than 100 years of
linguistics and psycholinguistics. We are even more concerned that
uninformed thinking about language should lie at the heart of a
"standards" document for Massachusetts schools."

[signatures]