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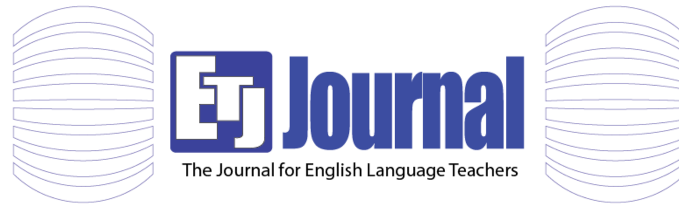

The Wug Test and Major Developments Since Then: The Jean Berko Gleason Interview

Interview by Robert S. Murphy (January, 2011)

Dr. Jean Berko Gleason is best known for creating the Wug Test in 1958 as a means to gauge children's knowledge of English morphology. With this test Gleason was able to demonstrate that young children had a tacit understanding for the patterns of language within English. For example, children were shown a picture of an unknown creature and were told it was a "wug." Then, when two of the creatures were shown, children often automatically referred to them as "wugs" without adult or peer modeling. After having written extensively about language and language acquisition Gleason continues her research into language as a Professor Emerita in the Department of Psychology at Boston University.

Robert S. Murphy: RM
Dr. Jean Berko Gleason: JBG

RM :Your work has spanned six decades (since the 1950s). Considering how much psychology and neuroscience has changed over the past 50 years or so, can you walk us throughout how your *Wug* work's interpretations have changed?

JBG: I'm going to have to give you the short version here! When we first set out to investigate children's acquisition of the English morphological system we were inspired by the work of descriptive linguists, who gave us a clear picture of how English works. Our aim was to find out if there was an isomorphism between the linguist's description and the internal system of speakers of the language. In the case of children, we wanted to know if they had a system, at what age it could be shown, and how it compared with the ultimate adult system. So when we set out to find 'rules' we were really talking about their ability to generalize forms they knew to new words, and not making claims about innateness, instincts, etc. I think that the Wug study showed clearly that young children *do* have rules: they know more than memorized individual words and this is shown by the fact that they can inflect words that they have never before heard, and thus could not have memorized.

What followed, and not from me, were claims from some that this 'proved' Chomsky's theory that children have an innate language acquisition device. On the other hand, connectionists used these findings to try to model how a child, or a machine, could learn the system through exposure to appropriate examples. Within the linguistic world, a whole controversy arose about whether children are actually operating with higher order rules (abstractions or algorithms) or if they are doing something a little less complex by looking for analogies. I think the rules vs. analogies controversy is still an unsettled question, and a matter of interpretation.

You can also view the Wug test results as evidence that children have the ability to abstract and generalize as part of their all purpose cognitive armamentarium, or you can think that the results are more evidence that language is a separate faculty, because what children are doing linguistically seems so much more sophisticated than their other cognitive attainments.

RM: What were the major turning points in your life? What did you learn from them that you would like to pass on to younger teachers and researchers in your field?

JBG: I'm going to stick to three intellectual turning points here, with the understanding that around the time I wrote my doctoral dissertation I also got engaged and married and subsequently had three wonderful daughters and a 49-year marriage to a distinguished mathematician.

The first major intellectual turning point in my life was going away to college and majoring in history in literature. My parents were immigrants from Hungary who had not gone to college, so this was a really mind-opening experience. I got to take courses in Proust, Joyce, and Mann. In Sanskrit! I wrote my honors thesis on Gypsies in British literature. I'm very grateful for the liberal arts education I got. It made me feel like a citizen of the world.

Another turning point was a course on the psychology of language that I took as a college senior with Roger Brown. In that course I realized what I really wanted to do—that my interest in language that had led me to study French, Spanish, Latin, Sanskrit, Norwegian, German, Russian, etc. was really an interest in psycholinguistics, a field that, of course, did not yet exist! This led me to go to graduate school and get a joint doctorate in linguistics and psychology.

The third turning point came when I was invited to teach a course in language development at Boston University in 1972. I had been doing research since getting my doctorate, but this was the first teaching I had done and I discovered how rewarding it is. Within a very short time, I was invited to join the faculty and took on the full time academic career that has been the intellectual focus of my life.

I learned that life sometimes has a zigzag course, but that even diversions can be interesting and useful paths. It's hard to give advice to younger researchers and teachers. I guess what I would say is that you should follow what truly interests you and what you love to do. And that we all should be mindful that life is short, so we need to make the best of it, personally and professionally.

RM: What questions are on your mind these days?

JBG: I have been thinking about language and socialization for a while now, and am interested in the role of parents in children's acquisition of language as well as

the ways that parents affect their children's cognitive style, gender role, and other characteristics.

RM: As an academic, you have met and worked with many fascinating people. Can you tell us about who impressed you the most and why?

JBG: You are right—I did study with or work with many remarkable people, including Roman Jakobson, Harold Goodglass, Jerome Bruner, and many others. But it was Roger Brown, hands down, who impressed me most. Roger was intelligent, creative, and incredibly generous. He also had a wonderful sense of humor. Roger was the kind of person who insisted that *you* be first author on a joint paper. He was a superb mentor, the kind of academic we all hope to be.

RM: Which books should people read to get a better understanding of your field?

JBG: Well, of course, they should read our books! (*The Development of Language*, and *Psycholinguistics*) There are really too many books out there for me to make definitive suggestions. Our field is pretty divided, with quite different theoretical approaches, so I guess it is important to know what innatists, interactionists, behaviorists, connectionists believe, and to keep a critical eye on what they say: always ask "What are the data?"

RM: What can we expect to see from you in the future? (books, articles, etc.)

JBG: My co-authors and I are currently working on the 8th edition of our textbook on language development, which will be out in 2012, I think. I'm also working with colleagues on the lexicon, especially parents' role in children's acquisition. Right now we are writing a paper on what it is that parents tell very young children to look at. I've toyed with the idea of writing a trade book, but don't know if I will get to it.

Jean, next are questions gathered from around the globe (the majority happens to be from Japan).

Vick L. Ssali, Nagoya, Japan: Is knowledge and fluency in a second language an advantage in learning a third or fourth language?

JBG I think it is. Some people become 'expert learners', though there is some controversy about how much easier knowing more than one language makes acquiring additional ones. But experience in studying a second language can help individuals develop strategies for learning a next language—like the importance of using routines, of imitating native speakers, of asking questions, etc.

Philip Brown, Kobe, Japan: How do you become fluent in another language, and what do you feel are the connections with confidence and motivation?

JBG: I am a natural 'rehearser', by which I mean that when I am learning another

language I tend to talk out loud to myself when no one is around. This practice really helps with fluency. I think that motivation is essential—when there is little reason to learn a language there will be little effort put into it. Confidence is helpful, but sometimes you just have to take a chance as well, even if you aren't confident that what you say is right. Willingness to speak even if you may make mistakes will get you a long way!

Steven Morton, Seoul, South Korea: Is it appropriate to use a communicative approach to teach elementary/primary school age children?

JBG: Yes, I think that interactive methods like the communicative approach are a very good way to teach young children. That doesn't mean that you can't also incorporate some other features into what you do in the classroom, but in general I think kids do better with conversations than with drills.

Linda Morgan, MA Applied Linguistics Student, Maple Ridge, B.C., Canada: Do young children transfer the morphological inflections from one language to another in multilingual households? For example, do they inflect past tense endings 'ed' from English into another mother tongue such as Spanish? (walked/caminoed). As an L2 Spanish teacher, I certainly see this with older students and wonder if the same process would have taken place if they had learned Spanish as a first language concurrently with English.

JBG: I have not done research on this myself, but I know that there is a good deal of code switching that goes on in multilingual households at all levels, so my assumption is that kids do this, too.

Colin Skeates, Yokohama, Japan: Speaking several languages, I would imagine, has provided you with insight into psycholinguistics that monolinguals do not have. How have these experiences affected your understanding of key concepts, such as fluency, accuracy and complexity?

JBG: I wish I could answer this in a cogent way. Knowing several languages has not affected me so much in the ways you describe as in providing insights into the different ways that different languages split the world up, into categorization. For instance, English has one word 'bottle' for what the French call 'flacon' if it is little, and 'bouteille' when it is larger. I'm sure that the way language categorizes the world affects the way speakers see the world.

Steven Herder, Osaka, Japan: Have you ever been to Japan? Would you be interested in riding on the shinkansen (Bullet Train)? What would you like to share with EFL language teachers in Japan if you came for a visit?

JBG: I have been to Japan—I've been to Kobe and to Kyoto and also spent a few days in Tokyo. I'd love to ride the Bullet Train. EFL language teachers might be interested in some of the work I and my students have conducted on the lexicon in various languages. For instance Miki Sumitomo, who did her dissertation with me on Japanese children's acquisition of inner state words, found some real differences

between Japanese and American children's lexical development. For example, Japanese mothers talked to their children about the taste of foods much more than American mothers did.

Tim Murphey, Japan: 1. Do you think the agency/dopamine rushes you get from being able to drive fast are similar to learning to see that your words in a foreign language (or the L1 for small children) actually can have an impact on the world?

JBG: That may be true for some people, but it's not, for me, the impact on the world that does it. If I were to look for a common factor, it would be mastery, the feeling of control or competence. It's pretty close to what you say.

2. In retrospect was your fascination with language as a child partially an agency rush? A desire to gain more control over your world and understand it?

JBG: That may be part of it, but I think part of my early interest was in phonology—I've always loved different sounds that languages use. And part of it was that my older brother, who was very smart and very sensitive, had cerebral palsy and found it difficult to make his speech understood. I always understood him and often served as an interpreter when he needed one. I think this heightened my awareness of language

3. Would please consider coming to Japan and letting us host you at a conference? Or least please make more of your charming videos!

JBG: Thanks very much for those kind words—I would consider coming to Japan if I could do it in a fairly leisurely way (it is a very long distance from Boston!) And I will probably not be making more of the *Secret Life* type videos, but I have been doing some work with the PBS science program *NOVA* and am currently in a show called "How Smart Are Animals" with a small part in a segment on Alex, the parrot who did so many amazing things. Here's the link: http://www.pbs.org/wgbh/nova/nature/how-smart-are-animals.html

RM: It has been a great honor. Thank you so much Jean!

Visit Jean's website:
http://sites.google.com/site/jeanberkogleason/home

Watch an adorable video interview:
http://www.youtube.com/watch?v=fx8F8lV8_2Y