

Psycholinguistics in the field: research methods for cross-linguistic and cross-cultural research with children

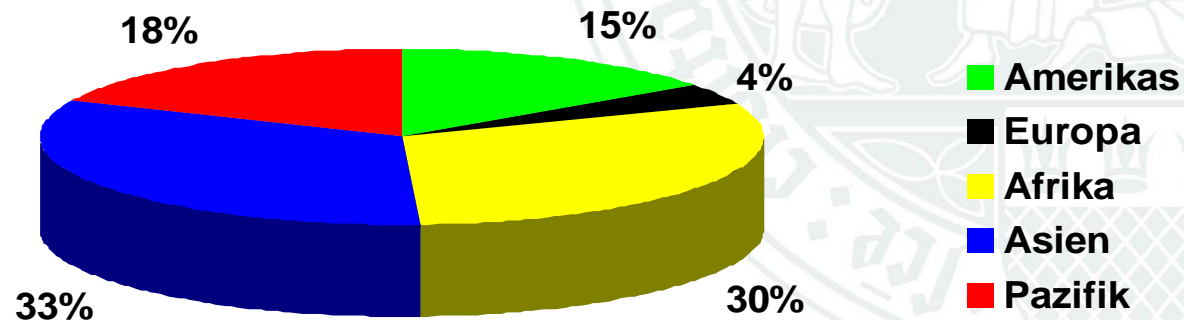
Sonja Eisenbeiß

presenting studies in collaboration with Birgit Hellwig, Henrike Frye,
Benu Pareek, Pori Saikia, Shorouq Al-Houti, Nouf Alharbi

Linguistic Diversity

“7,099 known living languages“

(Simons & Fennig 2017. Online-Version: <http://www.ethnologue.com/>)

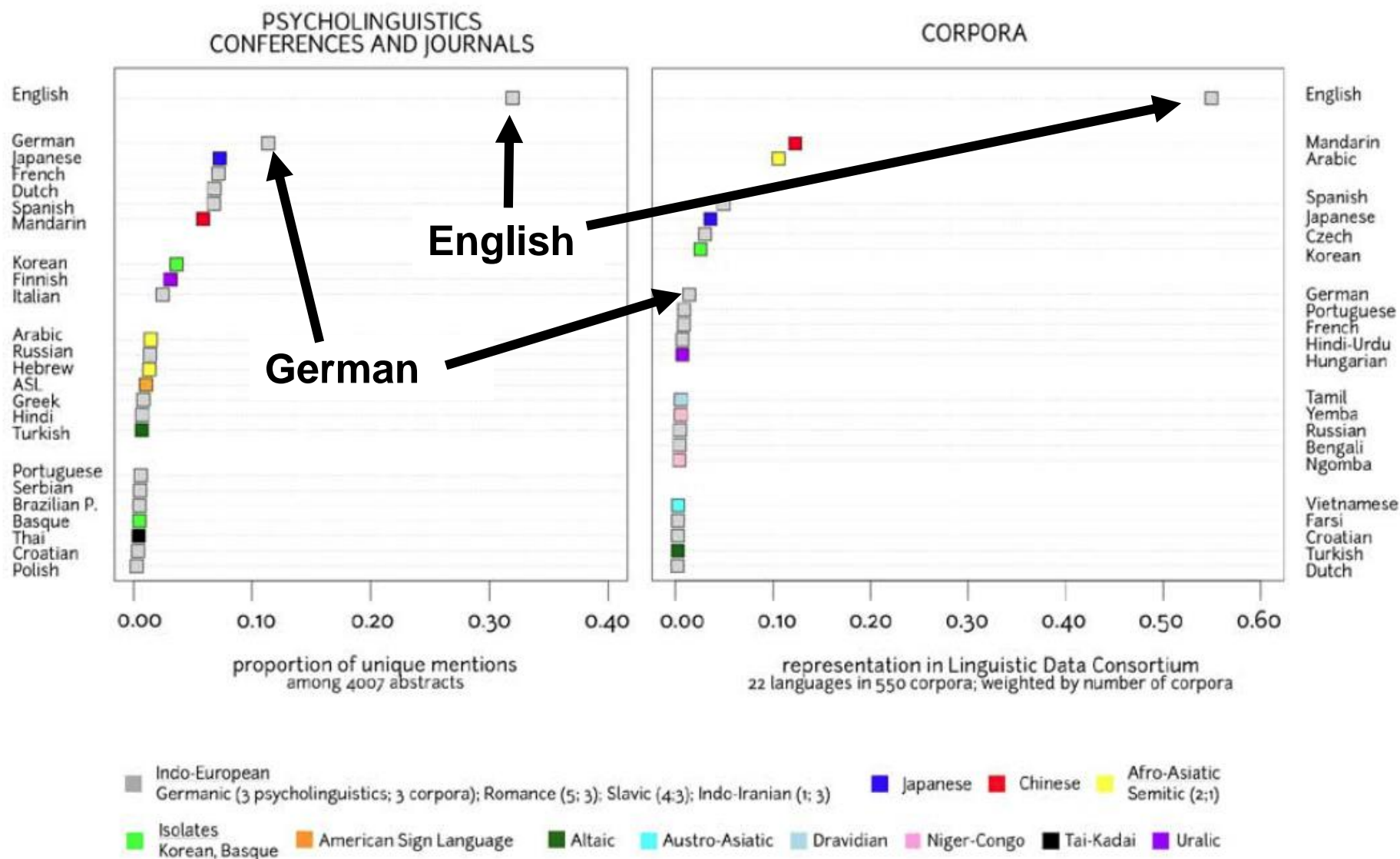


Challenge

- **“to show how the child’s mind can learn and the adult’s mind can use, with approximately equal ease, any one of this vast range of alternative systems. [...] [This] calls for a diversified and strategic harnessing of linguistic diversity as the independent variable in studying language acquisition and language processing [...]: Can different systems be acquired by the same learning strategies, are learning rates really equivalent, and are some types of structure in fact easier to use?”**

(Evans & Levinson 2009: 447)

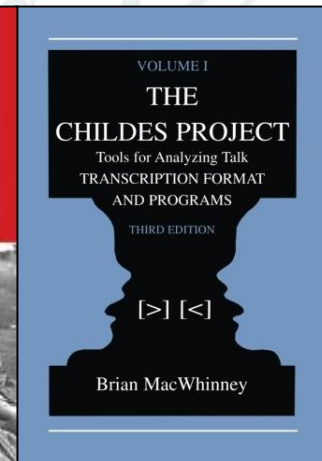
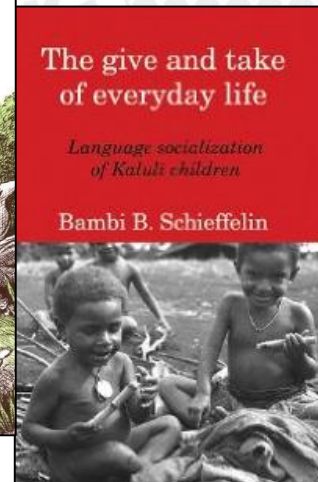
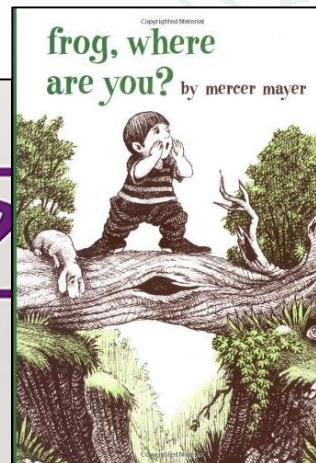
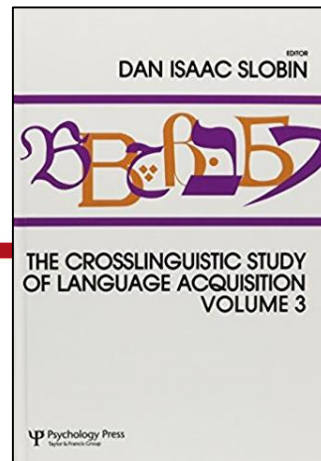
LINGUISTIC DIVERSITY in LANGUAGE EXPERIMENTS and CORPORA



(Anand, Chung & Wagers 2011: 3)

Crosslinguistic & Crosscultural Projects

- Slobin's classic series *The crosslinguistic study of language acquisition* (1985-1997)
- *Frog Story* project
- Language socialization paradigm within anthropology
- **CHILDES**



... but:

- “If we take all the acquisition studies together (experiments and longitudinal studies), we know something about the acquisition of approximately 70 to 80 languages (**i.e., approximately 1% of all the languages spoken today**). This 1% of languages also includes languages for which only one acquisition study of a single feature exists [...].”

(Lieven & Stoll 2009: 144)

Psycholinguistics in the field?

- “These conditions often make it difficult to follow the best-practice approaches to data collection which are commonly assumed in lab-based FLA research.” (Kelly et al. 2015: 287)
- “Still, specialized studies are perhaps best done in larger, less endangered language communities, especially given that many larger, unendangered language communities are also understudied.” (Whalen & McDonough 2015: 3)

Methodological Challenges

- **Adaptation to**
 - Language
 - Culture
 - Location (urban vs. rural, climate, seasons, length of days, etc.)
- **Comparability of methods, tasks, and stimuli**

Methods and Data Types in Child Language Research

- Naturalistic data, i.e. recording of spontaneous speech in naturally occurring situations
- Controlled experiments with fixed sets of stimuli, tasks, and procedures
- Semi-structured tasks or games with stimuli, but more flexibility in tasks than experiments

Naturalistic Data: Adaptations

- **Language:** not required as no stimuli involved
- **Culture:** access to communities or private spaces
- **Location:**
 - training of community members to do the recording for longitudinal recording in remote locations
 - recording schedule based on nature or work patterns (accessability during winter, harvest season, etc.)
 - lightweight equipment, solar panels etc. for remote areas

Naturalistic Data: Comparability Challenges

- Cross-cultural differences in daily activities and recording situations (e.g. no parent-child toy play, joint book reading or joint meals of adults and children)
- Cross-cultural differences in interaction patterns (e.g. frequent mother-child dyad interactions vs. larger family sizes and interactions in larger groups)
- Cross-cultural differences in locations for verbal interactions (e.g. indoors vs. outdoors, around a table vs. moving in a larger space)

Naturalistic Data: A Non-Solution to Comparability Challenges

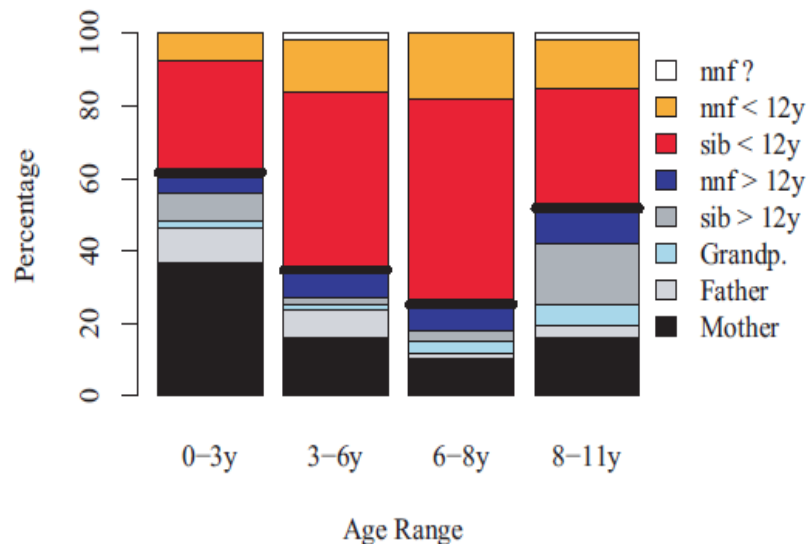
- One could select recording situations for cross-linguistic/cultural naturalistic studies that are well represented in earlier studies in Europe and the US, e.g. indoor toy play between a mother and a child without any siblings-
- However, that creates artificial situations that may be rare or non-existent in the respective society (low ecological validity).

Naturalistic Data: Achieving Comparability

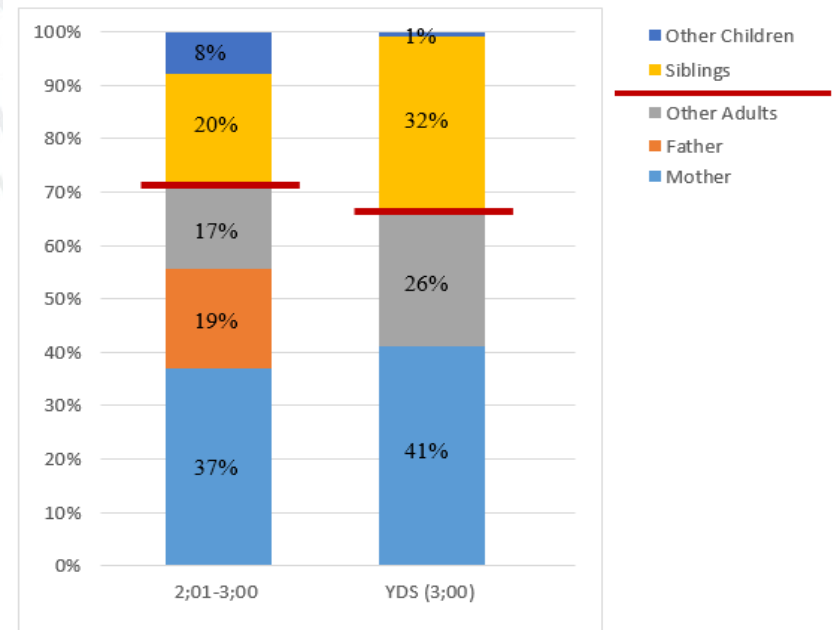
- High-density recordings with several hours per week capture a broad range of situations. Some of them may be comparable to situations in corpora from other cultures or locations (see e.g. events of putting things in places in Slobin et al. 2011).
- Entire-day samples allow us to compare what children in different cultures and locations produce or experience in a typical day.

Entire-day Recordings

Bolivia: speech to children of different ages among the Tsimane (Cristia et al. 2017: 8)



Papua New Guinea: entire-day recording of input to Qaqet-speaking child (< 3 yrs) (Frye, 2018)



Naturalistic Data: Summary

- Adaptations are comparatively easy to achieve as no stimuli or special tasks and procedures are involved.
- Creating comparable naturalistic data sets is more challenging.
- High-density recordings and entire-day recordings provide a better basis for comparisons.
- They offer a broader range of comparable situations and the option to compare the entire daily input and language production of children.

Experiments: Adaptation vs. Comparability

- Adaptations to language, culture, and location can result in incompatibility of stimuli or tasks
- Thus, basic tasks and procedures are kept identical.
- Stimuli should be as comparable as possible, through:
 - a general format/style (e.g. photos vs. drawings) and
 - a common core set of stimuli, with options that can be selected for particular languages.

The Original Contrastive Case Task (Ruijendiik, 2015)

- Created for a European project on multilingualism and language impairment: <http://www.bi-sli.org/>
- Sets of two contrasting pictures, with male and female adults as agents (optimal comparability of grammatical gender)
- Core set of transitive verbs (e.g. *push*) and ditransitive verbs (e.g. *give*), plus options for particular (groups of) languages, e.g. possessives or datives
- No intransitive verbs as no ergative languages in the European sample (Basque not targeted)
- Only present tense contexts

Original Case Task Pictures



Adaptations to the Hindi Case System (Pareek 2017, Parek, Kidwai, Eisenbeiß 2016)

- A split ergative system with the postposition *ne* on subjects of transitive verbs in perfective contexts, but not in non-perfective contexts and not on intransitive verbs
- Linguistic adaptations required:
 - a second round of picture descriptions for perfective context (*Can you tell me again what happend there?*)
 - case for intransitive verbs captured with separate additional tasks

Problems with Cultural Compatibility (Pareek 2017, Saikia 2021)

- **Many objects or people in the pictures of the European Case Task were not recognized in India, e.g. fairies, magicians or queens with European clothing, not even by children of educated families in urban New Delhi.**
- **Some pictures, e.g. kissing between adults, were considered inappropriate**

Linguistic & Cultural Adaptation to Assam(ese) (Saikia 2021)

- Split case system with agentive vs. non-agentive contrast for intransitive verbs
- Cultural adaptation even more important for rural Assam than for the Hindi study in New Delhi
- Creation of new pictures:
 - Addition of agentive vs. non-agentive intransitive verbs
 - Culturally appropriate pictures for the entire Indian context, usable for cross-linguistic research in India

Indian Constrastive Case (Saikia 2021)



Experiments: Summary

- Linguistic and cultural adaptations often require
 - changes to stimuli to match culture and linguistic system
 - changes to procedures (e.g. two rounds of picture descriptions in different tense/aspect contexts)
- Comparability can be enhanced through the use of
 - the same general task
 - the same style of drawing or the same type of toys
 - core shared sets of stimuli, potentially supplemented by optional sets of stimuli (e.g. for a particular construction that is only relevant for some languages)

Production Experiments vs. Games

- Not all children are willing to engage in "formal" tasks, especially if they are below 3 years.
- Experiments also do not allow us to evaluate how children are interacting verbally in more natural environments.
- Games with more flexible procedures can supplement or replace experiments.

The "Bag Task"

<https://languagegamesforall.wordpress.com/examples-of-games/>



- Detachable pockets of different colours and sizes for toys of different sizes and colours encourage the use of complex descriptions
- The bag acts as a natural barrier, encouraging children to explain what is on the other side

The Bag Task: Cultural Appropriateness

- **Effective:**
 - Germany (Eisenbeiß corpus)
 - UK (various UG & PG student projects)
 - Saudi Arabia (Alharbi 2015)
 - India (Pareek 2016 for Hindi, Saikia 2021 for Assamese)
- **Not effective:**
 - Remote Qaqet community in Papua New Guinea, where this type of toy play is not common (piloted by Birgit Hellwig)

Cultural Appropriate Tasks in PNG

- "Memory" Game with natural materials
- Previous introduction of memory games to adults in the community (by Birgit Hellwig)
- Successfully piloted by Henrike Frye



The Final Destination Task

(Al-Houti 2012, Saikia 2021)

- A game with a dice and a route to a final destination, a castle
- Picture description tasks on the way to the castle, with contrasts in
 - Number and Gender: depicted object(s)
 - Adapted to language (e.g. +/- Dual, +/- Gender)
 - Person: fotos of actions with child, experimenter or other person as Agent

Al-Houti (2012): The Final Destination Game



Adaptation to Location: Kuwait

- Large plastic version that could stay in daycare center or be transported in a car
- Easy long-term access to printer, children, and the recording site so that photos of children could be taken and printed before the game was played

Adaptation to Location: Assam

- foldable felt version of the castle and play mat that could easily be transported to rural areas
- no reliable access to printers or electricity, hence Polaroid camera for pictures of children (also a nice reward for children)

Saikia (2021): Final Destination



- **fieldwork-compatible**
- **foldable**
- **washable**
- **lightweight**
- **unbreakable**



Games: Summary

- Adaptations often require
 - changes to stimuli to match culture and linguistic system
 - changes to physical materials for transport
 - changes to procedures
- Comparability can be enhanced through the use of
 - the same general task
 - the same style of stimuli
 - core shared sets of distinctions (e.g. Number), even when individual features are different (e.g. +/- Dual)

Overall Summary

- All methods require adaptations to culture and location.
- Experiments and games also involve linguistic adaptations for stimuli.
- Comparability can be achieved through
 - for naturalistic data: high-density or entire-day recordings
 - for experiments and games:
 - the same general task and same style of stimuli,
 - a core shared sets of distinctions (e.g. Number), even when individual features are different (e.g. availability of Dual)

Thank you!

and all the people whose studies I mentioned:

- Birgit Hellwig & Henrike Frye (PNG)
- Shorouq Al-Houti (Kuwait)
- Nouf Alharbi (Saudi Arabia)
- Benu Pareek & Pori Saikia (India, with Ayesha Kidwai)

and all the children and their families and caretakers!