Week 1. Introduction

Second Language Acquisition
• A person’s native language (L1 or NL) is the language s/he learned first, as a child growing up.
• A person’s second language (L2) is a language learned after L1 (includes third, fifth, …)
• Second Language Acquisition (SLA or L2A) is concerned with studying how people learn an L2.

Why study L2A?
• Linguistics
  L2A is a component of the broader study of the uniquely human faculty for language.
• Language pedagogy
  Designing effective teaching methodologies; assessing reasonable expectations.
• Language policy
  Bilingual education, language laws, …

What is L2A?
• Consider:
  – What is the goal state of L2A?
  – What actually happens?
• Is a second language learner trying to wind up with the same knowledge that a native speaker has?
• Do they get there? Do they learn something else? What do they learn (in either case)? How? In what order? What helps, what doesn’t help?

What needs to be learned?
• If we’re studying how L2A proceeds, we should have some idea what needs to be learned.
• Simply speaking, one needs to learn “grammar” and the “lexicon”, but what is the grammar?
• How do we characterize the knowledge that speakers have of language?

Why this is potentially difficult
• The knowledge we have of language (at least our native language) is largely unconscious.
• Very young children can form complex constructions; e.g., I want the toy that that boy is playing with. But they couldn’t tell you it’s a relative clause, and they couldn’t even tell you what makes something a possible relative clause vs. an impossible relative clause.
• We can only study this knowledge from the outside.
Knowledge of language

- We’ll spend some time looking at some properties of native speaker knowledge of English (native speaker knowledge of other languages is similar).
- Some questions we will want to consider:
  - What bearing does this have on L2A?
  - Is a person’s knowledge of a second language the same kind of knowledge as a native speaker’s knowledge of their first language?
  - What differentiates L1A from L2A?

Language is (surprisingly?) complicated…

1) Tony threw out the couch.
2) Tony threw the couch out.

Prepositions can go on either side of the object.

3) Tony stormed out the door.
4) * Tony stormed the door out.

…and yet it turns out that people know all of this…

5) What did Mary say John bought?
6) What did Mary say that John bought?

Ok, that is optional.

7) Who did Mary say bought coffee?
8) *Who did Mary say that bought coffee?

Speakers of English know…

9) Bill thinks Mary is a genius.
10) Her mother thinks Mary is a genius.
11) She thinks Mary is a genius.
12) I asked Mary to buy coffee.
13) What did you ask Mary to buy?
14) I saw the book about aliens on the table.
15) *What did you see the book about on the table?

Prescriptive vs. descriptive

- This is a different kind of knowledge from the sort of rule that we learned in school, like:
  - Prepositions are things you don’t end a sentence with.
  - (*This is the sort of pedantry up with which I will not put” is Winston Churchill’s take on this, according to legend)
  - Remember: Capitalize the first word after a colon.
  - Try to not split your infinitives.
  - Don’t be so immodest as to say I and John left; say John and I left instead.
  - Impact is not a verb.

Prescriptive vs. descriptive

- In general, prescriptive rules are pretty much just a “secret handshake” to allow educated people to identify each other. They tell you how to modify what you would have said in order to conform to the convention.
  - (Incidentally, rules like “don’t split an infinitive” and “don’t end a sentence with a preposition” have their historical roots in a belief that English was inferior to Latin, and was an attempt to make educated English more Latin-like….)
Prescriptive vs. descriptive

- Descriptive rules are not rules that you were taught, not rules that you would generally know how to articulate (until you study Linguistics), but they are rules which people nevertheless seem to follow (and therefore know).
- Descriptive rules are scientific hypotheses; we can only know that they are right by seeing what the rule would predict and checking to see if the predictions are borne out.

How do people know these things?

- Every native speaker of English knows these things; they have the same intuitions about the possibility vs. impossibility of these sentences.
- No native speaker of English was taught (growing up) “You can’t question a subject in a complement embedded with that” or “You can’t use a proper name as an object if the subject is co-referential.”
- But they know it anyway…

Grammar is a system

- What people eventually end up with is a system with which they can produce (and rate) sentences. A grammar. Even if you’ve never heard these before, you know which one is “English” and which one isn’t:

  16) Eight very lazy elephants drank brandy.
  17) Eight elephants very lazy brandy drank.

Many kinds of linguistic knowledge

- Syntax. Knowing what sentences are English and what sentences are not.
- Phonology. Knowing that *pnick is not a possible English word, but that snick is.
- Morphology. Knowing how to form words out of smaller parts, e.g., antidisestablishmentarianism (anti+dis+establish+ment+arian+ism) predictable from the meaning of establish and a knowledge of morphology; like reteachability or xeroxification. Knowing that you say impossible not *unpossible.

Many kinds of linguistic knowledge

- Lexicon. Knowing the word for apple, knowing that learn is a verb, …
- Semantics. Knowing what’s wrong with That bachelor is married, knowing that We have something for everyone can mean either ‘there is something we have that everyone will like’ or ‘for anyone you mention, we have something (perhaps different) for that person’ but Someone said that John bought everything can’t mean ‘for every thing, someone said that John bought that thing.’
Many kinds of linguistic knowledge

- Pragmatics. Knowing how to use language in context; e.g., *Is John there? Do you know what time it is? Could you pass the salt?* Knowing that you can answer *What did you give to Mary?* with *I gave a book to Mary* but not *I gave a book to Mary* or *I gave a book to Mary*. Knowing that this implies that you didn’t give anything else (that you might otherwise have given) to Mary.

Competence vs. performance

- To the extent that we’re studying a speaker’s knowledge, we’re studying their language competence.
- This is conceptually unrelated to how a speaker’s ends up making use of that knowledge, their performance (except to the extent that can only discover the existence of the knowledge via use of the knowledge).
- For example, the fact that a person’s speech may be different when drunk doesn’t change the fact that they know the phonology of their native language.
- Performance includes not only production but also comprehension.

So…

- So, our knowledge of our native language is many-faceted and very complex.
- Anyone who grew up in an environment like ours learned these many complex facets just as successfully as we did.
- Consider how we came to know all of this stuff. How do kids pick it up?

Do kids learn the grammar by listening to their parents?

- *What did you see the book about on the table?*
- *Who did Mary say that bought coffee?*
- Eight very lazy elephants drank brandy?
- Linguists’ theories: built by considering both grammatical and ungrammatical sentences.
- Kids: Don’t hear ungrammatical sentences, nor even all of the grammatical sentences.

Positive and negative evidence

- Adults know if a given sentence S is grammatical or ungrammatical. This is part of the knowledge kids gain through language acquisition.
- Kids hear grammatical sentences (positive evidence)
- Kids are not reliably told which sentences are ungrammatical (no negative evidence)

Kids often ignore explicit negative evidence…

McNeill (1966)

- Nobody don’t like me.
- No, say ‘nobody likes me.’
- Nobody don’t like me.

(repeats eight times)

- No, now listen carefully; say ‘nobody likes me.’
- Oh! Nobody don’t likes me.
Kids often ignore explicit negative evidence…

Braime (1971)
  - Want other one spoon, daddy.
  - You mean, you want the other spoon.
  - Yes, I want another one spoon, please Daddy.
  - Can you say ‘the other spoon’?
  - Other…one…spoon
  - Say ‘other’
  - Other
  - ‘Spooon’
  - Spoon
  - ‘Other spoon’
  - Other…spoon, Now give me other one spoon?

How about implicit negative evidence, then?
  - Do kids get “implicit” negative evidence?
  - For example: Do adults understand grammatical sentences and not understand ungrammatical ones?
  - Do adults respond positively to grammatical sentences and negatively to ungrammatical ones?

Feedback by approval or comprehension?
  - Adults understood 42% of the grammatical sentences.
  - Adults understood 47% of the ungrammatical ones.
  - Adults expressed approval after 45% of the grammatical sentences.
  - Adults expressed approval after 45% of the ungrammatical sentences.

This doesn’t bode well for comprehension or approval as a source of negative evidence for kids.

Maybe some do, but kids’ experiences differ…
  - Different parents respond differently (Adam, Eve, and Sarah are children whose early utterances were transcribed and are available in a database called CHILDES, allowing us to study questions like this)
    - Eve & Sarah’s parents ask clarification questions after ill-formed wh-questions.
    - Adam’s parents ask clarification after well-formed wh-questions…and after past tense errors.
  - How can kids figure out what correlates with grammaticality in their situation?

And what feedback there may be disappears…
  - Adam and Sarah showed almost no reply contingencies after age 4
  - But they still made errors after age 4
  - Yet they still stopped making those errors by the time they became adults (learning didn’t cease).

Maybe some do, but kids’ experiences differ…
    Trackton adults do not see babies or young children as suitable partners for regular conversation…[U]nless they wish to issue a warning, give a command, provide a recommendation, or engage the child in a teasing exchange, adults rarely address speech specifically to young children.

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And what feedback there may be disappears…
• Adam and Sarah showed almost no reply contingencies after age 4
• But they still made errors after age 4
• Yet they still stopped making those errors by the time they became adults (learning didn’t cease).
And in a way, it’s moot anyway…
- One of the striking things about child language is how few errors they actually make.
- For negative feedback to work, the kids have to *make* the errors (so that it can get the negative response).
- But they don’t make the errors in the first place.

Do kids already know everything?
- Well, no. Clearly. No matter where a person is born (i.e. to parents speaking whatever language), the person will pick up the language spoken in the ambient childhood environment.
- Languages can be described in terms of rules (i.e. form plural noun in English by adding -s), and languages differ in what rules describe them.
- Kids must somehow come to know these rules, different for each language.

Let’s try figuring out some rules…
- 1 3 5 7 …what’s next?
- 1 2 3 5 …what’s next?
- 1 3 5 7 …what’s next?
  - Hmm.

Let’s try this out…
- ABCAE
- CABAE?
- DCABFCAE
- CDABFCAE?
- ABFCAED
- ———

Let’s try this out…
- ABCAE
- CABAE?
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- ABFCAED
- ———?

Yes-no questions
18) The man is here.
19) Is the man here?
20) The man who is here is eating dinner.
- **Hypothesis 1**: Move the first *is* (or modal, auxiliary) to the front.
- **Hypothesis 2**: Move the first *is* after the initial noun phrase to the front.
Yes-no questions

21) The man who is here is eating dinner.
22) *Is the man who here is eating dinner?
23) Is the man who is here eating dinner?

• No kid’s ever said (22) to mean (23). Why?
• Kids don’t even entertain Hypothesis 1.

Some hypotheses:

• A linguistic capacity is part of being human.
• Like having two arms, ten fingers, a vision system, humans have a language faculty.
• The language faculty (tightly) constrains what kinds of languages a child can learn.
• =”Universal Grammar” (UG).

Supporting evidence…

• Children go through stages during acquisition of their first language.
• These stages are quite consistent across children learning the same language. For example, the acquisition of grammatical morphemes in English seems to follow a consistent order: progressive *ing*, prepositions, plural, irregular past tense, possessive, articles, regular past tense, third person singular agreement, auxiliary *be*.

Supporting evidence…

• Moreover, children across languages go through similar stages, fairly well tied to age (although rate does vary). E.g., babbling at 6 mo, intonation contours at 8 mo, one-word utterances at 1 year, two-word utterances at 1.5 years, word inflections at 2 years, questions and negatives soon after, complex constructions by around 5 years, mature speech around 10 years.

Supporting evidence…

• As we will explore in much more detail, there seems to be a correlation between age of language learning and eventual success—kids learn languages pretty much automatically, adults learn languages only with difficulty (a “critical period” for language acquisition).
• This all points to a biological component to language.

Supporting evidence…

• Language ability does not seem to be correlated with intelligence.
• Perhaps the most striking evidence of this comes from children suffering from Williams syndrome; these children have a great deal of impairment in general cognitive abilities, but their language development goes basically normally.
Supporting evidence…

• The dissociation goes the other way too; some kids who are otherwise cognitively normal suffer from Specific Language Impairment, which manifests itself in slower language development, often resulting in long-term language impairment.

So, how come we don’t all speak the same language?

• Languages differ.

• But in light of the learnability problem (and from empirical observation) they must differ only in limited ways.

Word Order

• English, French: Subject Verb Object (SVO)
  – *John ate an apple.
  – Pierre a mangé une pomme.

• Japanese, Korean: Subject Object Verb (SOV)
  – Taroo-wa ringo-o tabeta.
  – Chelswu-ka sakwa-lul mekessta.

• Irish, Arabic (VSO), Malagasy (VOS), …

Word order—adverbs

• English: Adverbs before verbs
  – John often watches television.
  – *Mary watches often television.

• French: Adverbs after verbs
  – Jean regarde souvent la télé.
  – *Jean souvent regarde la télé.

Parameters

• We can categorize languages in terms of their word order: SVO, SOV, VSO.

• This is a parameter by which languages differ.

• The dominant formal theory of first language acquisition holds that children have access to a set of parameters by which languages can differ; acquisition is the process of setting those parameters.

Word order parameter

The “head parameter” specified the order between the head and complement:

• Japanese: verb follows object

• English: verb precedes object

Kids can hear evidence for this, they can set this parameter.
Another parameter: The domain for anaphors (like *himself*)

24) Sam believes [that Harry overestimates *himself*]

25) $\text{Sam-wa [Harry-ga zibun-o tune-ta to] it-ta]}
\text{Sam-top Harry-nom self-acc pinch-past-that say-past}$

'Sam said that Harry pinched (him)self.'

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Principle A

- **Principle A.** An anaphor must have a higher antecedent in some domain.

- **Parameter:**
  - Option (a): domain = smallest clause containing the reflexive pronoun
  - Option (b): domain = entire sentence containing the reflexive pronoun

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The model of language

- Part of the genetic endowment (UG) is a specification of the parameters by which languages can vary from one another.

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What kids need to do

- Learning the L1, a kid needs to hear what’s going on in the Primary Linguistic Data and set the parameters to the setting which corresponds to the target language.

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Returning for a moment to L2A…

- How is this relevant for learning a second language...?
- Is acquiring a second language like acquiring your first language? Is it a matter of setting parameters?
- If this is how languages differ, doesn’t it have to be?
- Is the knowledge of an acquired second language the same as the knowledge of a native speaker of the target language?
- We can only really get at these questions by starting with what we know about human language capacity, partly on the basis of L1A (that is—what is the knowledge of a native speaker of the target language)?

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So what is the language faculty?

- Part of being human (genetic).
- Provides parameters by which languages may vary (constrains the possible human languages).
- Provides universal principles of language (either parameterized or invariant).
- Also includes a component for first language acquisition (effortless, fast).
Modularity

- This also points to a modular view of language; there is something specific to language (not used for other cognition) involved. General problem-solving processes would not yield the observed uniformity.

Clarifying a model of UG

- UG in a sense constrains the “shape of our linguistic knowledge.” We can’t learn/know a language that doesn’t conform to this shape. Things of this shape have the universal properties of language (e.g., X-bar syntactic structures).

Clarifying a model of UG

- Certain variation is possible within the confines of this shape; these are the parameters.

Clarifying a model of UG

- The Language Acquisition Device (LAD) takes the Primary Linguistic Data (PLD) to determine the settings of the parameters (in L1 acquisition).

Clarifying a model of UG

- The LAD is also part of the language faculty, part of being human, so (Warning!) sometimes the LAD is lumped together with UG when people refer to “UG” (“UG” as “genetic endowment”).

Clarifying a model of UG

- UG and the LAD are conceptually separate, however. This will be important to keep in mind as we look at second language acquisition.
Clarifying a model of UG

- **UG provides** the parameters and contains the grammatical system that makes use of them.
- **LAD** sets the parameters based on the PLD.

UG and LAD and L2A

- One of the major questions investigated when studying second language acquisition: To what extent is UG involved in L2A?
- That is: How much like L1A is L2A? (How similar are the end states of knowledge? How similar are the processes involved in getting there?)

L1 acquisition, in sum.

- We posit a genetic predisposition for language, something which guides the kinds of languages kids learn (Universal Grammar):
  - Kids learn fast
  - Kids end up with systems that are more complicated than the input data justifies (they can judge ungrammatical sentences in the same way as other native speakers).
  - Kids don’t fail to learn language despite differences in environment
  - Kids seem to go through stages of acquisition which are similar across kids.

But L2 acquisition…

- Adults seem to have a harder time learning language than kids do learning their first language (is there a **critical period**?).
- Adult second language learners rarely reach a native-speaker-like level of competence.
- Adult second language learners already know a language.
- Adult second language learners are often given negative evidence (“you don’t say it that way”) when taught in a classroom.

L2A seems very different from L1A.

- Is L2A like learning to play chess? Like learning calculus? Do we just learn the rules of the language and apply them (sometimes forgetting some of the rules, never quite learning all of them, etc.)?
- It’s very tempting to think that’s true. (It feels intuitively plausible to anyone who has attempted to learn a second language).

L2 competence

- Learners of a second language have some kind of linguistic knowledge. They have retained their L1 knowledge, and they have knowledge of a sort which approximates (perhaps poorly) the knowledge held by a native speaker of the learner’s L2.
- This knowledge is often referred to as an **interlanguage grammar**—not (solely) L1, not (strictly) L2, but something different (…and to what extent this knowledge might be related to or influenced by L1 or L2 is yet to be determined).
Many questions to address…

• To what extent is knowledge of a second language like a native speaker’s knowledge of their native language?
• What are the mechanisms of second language learning?
• Are there ways to optimize the learning process? Do certain things make learning easier, faster, more effective? Are certain kinds of input better than other kinds of input?
• What determines how “well” a learner learns a second language? Are there limits to second language knowledge attainment in principle? (Perhaps age related?)

Theories of L2A

• We’ll consider some theories of second language acquisition, and so it is worth touching on what makes an adequate theory.
• A good theory:
  – Clearly defines its scope.
  – Makes testable predictions.
  – Provides an explanation (rather than simply a description) of the phenomena.
  – Interacts with other theories, where feasible.

Some properties of L2A

• Systematicity. Although the result of (partial) L2A is often full of “errors”, the knowledge (IL) of the learner is still systematic, as is the process of learning. We will explore some of these systematic properties, in hope of explaining why they exist.
• Variability. At the same time, there is also a great deal of variability both in the productions of second language learners and between second language learners (rate, errors)—significantly more than found in L1A.

Some properties of L2A

• Routines/chunks. It is common for second language learners to initially use memorized “chunks” (keskesay “chien”?) which appear grammatical but are unanalyzed (qu’est-ce que c’est “chien”?). Of course, any eventual successful knowledge of the target language requires knowing the internal makeup of such chunks.

Some properties of L2A

• Incomplete success. The norm in second language learning is for a learner to achieve only a partial knowledge of the target language. Almost no second language speakers reach a point where they are indistinguishable from native speakers of the target language. A few people seem to achieve this level (or near this level) of knowledge, but by far the majority fall short of this “goal.”

Some properties of L2A

• Fossilization. It is often observed that second language learners will reach a certain “plateau” at which point they do not have complete knowledge of the target language but will nevertheless persist in making certain grammatical errors no matter how much training and interaction they receive after that; this is usually referred to as “fossilization.”
Some properties of L2A

- L1 influence. It is commonsense knowledge that a person’s first language has an effect on their learning of a second language. You can often guess fairly accurately if a non-native speaker’s first language is, for example, Hindi, or Japanese, or Chinese, or Russian. It is common for English speakers learning French to say “I am 12” (in French) rather than the appropriate “I have 12 years”, almost certainly due to the fact that in English “I am 12” is the way this thought is expressed.

- L1 influence—language transfer. An effect that L1 has on a learner’s IL is often called “transfer”—something has been transferred from the knowledge of the first language and imposed on the learner’s view of the target language. This might be vocabulary, this might be syntactic structure, this might be parameter settings—what is transferred and how important it is the acquisition process are important questions in the field.

- Negative evidence? Often, providing corrections to second language learners seems surprisingly ineffective. Why would this be? There are different takes on this; perhaps the learner “isn’t ready” to be able to incorporate this evidence into their knowledge of the language, perhaps negative evidence doesn’t actually play a role in L2A, …

- Individual learners are different. Perhaps more than in the process of L1A, there are differences between people learning a second language.

- Exposure: They may or may not use it in everyday life (e.g., to communicate with a community). They may be learning it in a classroom setting or “picking it up” from their environment.

- Intelligence. Learners may differ in their overall cognitive abilities, which may have an effect on their language learning abilities (but note this does not seem to carry over to L1A).

- Language aptitude? There may be a difference between individuals in their skill with learning languages (again note that this does not seem to carry over to L1A).

- Strategies. Different learners may employ different strategies in trying to learn a language; this may make a difference in the outcome/rate of acquisition.

- Motivation. Different learners have different levels of motivation for success; someone taking a language course casually to fulfill a language requirement will be in general less motivated than someone plunked in the middle of Macedonia with no community that shares the learner’s native language.
Some properties of L2A

• Language anxiety/confidence. Different learners will vary in their self-confidence in their ability to learn/speak the second language, which seems to affect success.

Consider Principle A again

• Principle A. An anaphor must have a higher antecedent in some domain.

  • Parameter:
    – Option (a): domain = smallest clause containing the reflexive pronoun (English, …)
    – Option (b): domain = entire sentence containing the reflexive pronoun (Japanese, …)

Wait… how can a kid set this parameter?

• Every sentence a kid learning English hears is consistent with both values of the parameter!

• If a kid learning English decided to opt for the “sentence” version of the domain parameter, nothing would ever tell the kid s/he had made a mistake.

• S/he would end up with non-English intuitions.

Wait… how can a kid set this parameter?

• A kid learning Japanese can tell right away that their domain is the sentence, since they’ll hear sentences where zibun refers to an antecedent outside the clause.

Wait… how can a kid set this parameter?

• The set of relevant sentences allowed in English is a subset of the set of sentences allowed in Japanese. Starting with the English value, you could learn the Japanese value, but not vice-versa.

Sentences allowed in Japanese (domain = sentence)

Sentences allowed in English (domain = clause)

Wait… how can a kid set this parameter?

• A possible way out for a kid would be to start supposing the English parameter setting (the subset) and move to the Japanese setting if there is evidence for that in the Primary Linguistic Data.

Sentences allowed in Japanese (domain = sentence)

Sentences allowed in English (domain = clause)
Subset principle/defaults

• Hypothesis: A child obeys the Subset Principle and selects the most restrictive parametric value consistent with experience.

• A similar hypothesis: A child starts out with a default setting for the parameter (the default being the subset setting), changing the setting only if presented with evidence.

What it takes to set a parameter

• Subject drop parameter
  – Option (a): Subject drop is permitted.
  – Option (b): Subject drop is not permitted.

• Italian = option a, English = option b.

What it takes to set a parameter

• The Subset principle says that kids should start with the English setting and learn Italian if the evidence appears.

• English-learning children do indeed start off producing a lot of sentences without subjects; perhaps this is why…? (Hyams 1986)

Points

• Language is complex beyond what kids are taught growing up; kids learn L1 quickly and uniformly.

• This is made possible by UG, which delimits the set of possible languages; UG provides parameters by which languages may differ, LAD sets those parameters based on PLD.

• L2 acquisition is typically “less successful” presuming the goal is native speaker-like knowledge of the language. Also typically harder.

• L2 acquisition is affected by various things (motivation, intelligence, strategies, confidence) which don’t seem to affect L1A.

Coming up

• Seems like almost a “no-brainer”— whatever UG is doing for us in L1A, it seems not to be doing for us in L2A. All signs seem to point to L2A as a general learning process.

• Next week, we’ll see some more-or-less recent history of L2A research (primarily 1960s and 70s)

• Then we’ll look at issues related to a “critical period” for language—a window of opportunity within which L1A must occur if it is to occur properly—and its possible implications on L2A.

• People have actually argued that UG is still driving L2A, though, and we’ll spend a couple of weeks exploring why; this is one of the most active areas in L2A research today.