

Abstract Innate Interfaces Are the Heart of Universal Grammar and Guide Acquisition

Tom Roeper

1. Abstract Perspective

Chomsky (1965) claimed that linguistic principles are innate.¹ If we ask how linguistic theory has guided acquisition research, the first question that many would ask is: How does the innate component of language ability manifest itself? What does that claim entail and how would it determine the input the child hears, often referred to as Primary Linguistic Data? (see Aspects (1965)). In Aspects, Chomsky distinguished between Substantive and Formal Universals. It is commonly assumed that Substantive Universals involve notions like: Noun, Verb, Adjective, Adverb and perhaps a host of fundamental semantic notions like Event, Telicity and Thematic Roles (Agent, Theme, Possessive, Experiencer, etc.) which, not surprisingly, are still evolving concepts. Formal Universals include presumably the capacity to build syntactic hierarchies through specific operations like Merge, Labelling, movement all of which follow Phrase-Structure Rules, which determine what kinds of structures can be built and the constraints on those structures. They include both universal and potentially language specific constraints, such as “island constraints” which sharply limit the kinds of movement that are allowed.

1.1. Interfaces within UG²

In current theory, the notion of interfaces has assumed a prominent role, although in most domains it has not received a clear definition. We will not provide explicit details on how interfaces should be formulated but instead approach the question from another angle. Our core claim is that:

- 1) Interfaces are essentially innate

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¹ See Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-Semantics. Edited by: Uli Sauerland and Hans-Martin Gärtner Mouton (2007).

² See Christer Platzack (2001), Multiple Interfaces, for further discussion.

We shall argue that they are part of presupposed knowledge—not acquired language-specific knowledge, hence they should appear spontaneously from the earliest stages. This view is implicitly presupposed by many, but it deserves some explicit discussion.

To articulate this claim, it is valuable to begin with a broader biological basis where critical analogies are intuitive. Consider vision or walking. Infants are able to see at once after birth and within two or three months command the 3-dimensional interaction between angles, shapes, color, and the principles of motion. Moreover, these capacities have important cross-modular representations so that an infant can form a 3D image visually which can then be translated into a set of instructions to a complex muscle system such that an infant can instruct his muscle system to reach for an object that is located visually. This action entails a very complex and precise information transfer between inherently unlike biological systems: visual image construction and muscle co-ordination. The visual image interfaces with muscle organization in real time. That interface must be utilized for reaching with ongoing feedback loops so that muscular reaching can be constantly revised by new incoming visual information, which facilitates reaching accuracy. The interface itself does not seem to show a separate path of acquisition.

Walking seems more complex for humans. While infants go through several preparatory stages of organizing and coordinating muscles to walk, other species can walk immediately at birth (camels, elephants, zebras, giraffes etc.), providing clear evidence of innate organization of knowledge. The fact that some biological forms of innateness emerge late, such as walking in humans, and may be contingent on specific muscle development does not make them less innate, just as late-emerging sexual characteristics are nonetheless completely innately determined.

1.2. Cognitive assumptions

More fundamentally, other interfaces are also routinely assumed. Although such assumptions could be questioned, the possibility of innate interfaces is clearly plausible for many domains that we will briefly review:

- 2) a. that sounds have meaning (entail reference),
 - b. that audible expression seeks communication among living entities,
 - c. that there are therefore interpersonal Speech Acts and
 - d. interpersonal presuppositions and expectations

All of these seem to have innate origins. They are operative in, for instance, Imperatives (“don’t” or “no”) or Biased Questions (“Can’t you put your shoes on?” =speaker thinks you can put your shoes on and implies that you should feel shame).

1.3. Non-acquired Presuppositions

All these important discourse presuppositions are present in successful communication between 1-2 years in humans. Moreover, animals and cross-species communication also appear to be immediate for certain expressions: a growl is automatically perceived as a warning between a dog and a cat. Dogs may comprehend “sit”, and some other syntactic forms (Hauser (pc)), but as far as I know they do not understand forms like “don’t sit”.

No one (to my knowledge) has claimed that these dimensions of initial communicative activity are subject to a stepwise acquisition path. One could imagine that children assume at first that communication is a one-on-one event. That is, a child can only conceive of one person talking to one person at first, but there is no evidence that in a family of three children a child assumes that a parent must be talking to only one when they say, “come eat dinner”.

Here are some plausible candidates among many for innate knowledge, although each may also engage ongoing new information in particular situations:

- 3) Discreteness (words are each separate),
Merge (words combine to create new phrasal objects)
Compositionality (the phrases combine systematically semantically),
Phonetics-Phonology (phonetic representations imply phonemic ones)
Non-locality (interpret non-adjacent items as a lexical and
Idiomatic unit (look-up in “look it up”)

Recognizing how they are manifested across a variety of structures, themselves largely innate interfaces, requires experience— as we detail now.

Before we address those connections, we should first observe that conceptual notions can be linked to discrete lexical items. For instance, Thematic roles arguably emerge spontaneously with noun phrases at the one-word stage in acquisition, even with only obscure contextual support, leaving parents often puzzling over what a child means. In particular, some of the earliest work in acquisition at the one-word stage from Bowerman (1973) indicated that thematic roles like AGENT, THEME, LOCATIVE, and INSTRUMENT are arguably present at the one-word stage. An infant who says “cookie” can communicate to a parent that it is an intended THEME of a VP eat or give and a parent can make the same assumption when they say “cookie”.

More abstract concepts are presumably innately available and triggered by the right pragmatic experience:

- 4) Modification (adj-noun),
Telicity (up, out),
Intentionality (gonna),
Degree variation (more),
Request (“please”)

These notions are present at the earliest stages (2yrs) when a child just says “more” or for instance, grasping telicity for words like “up” when a parent says “eat it up”.

Let us consider these factors in more refined detail. When a child is in some situation with an adult what assumptions are putatively available? Aside from the notion of autism to which we return, if an adult says something to a child or a child just hears something, they can make various Speech Act assumptions:

- 5) Perhaps children initially assume that adult utterances are all **expressives**, like saying “ow” if something hurts. It is a fair guess from experience that children do not assume initially that utterances are interpersonal communications rather than personal expressives (which can occur without another person). Here again an innate assumption may be present:
- 6) Sounds by another person, or animal, are linked to the *inner* state of the creature making them.

Again, a reasonable, but not necessary assumption. If a child giggles when a dog licks his face, this is expressive not communicative. While in other situations a giggle is definitely communicative e.g., after someone says something surprising (“you look like a “happy frog” (giggle)). Infants most often do not respond to words spoken. They are only presupposed by parent and child after a triggering experience: a context where that notion can apply: simply a noticeable object? It is here that other theories are easily proposed: for instance, frequency. If the child has the experienced a word a number of times, say five, then they generate the idea of possible reference for that object from them. This is not inherently implausible but not empirically supported. Children learn at least ten thousand words by the age of six. Someone claimed they learn one word every hour. Our common experience is that if we say “this is a truck” or “this is Mary” we do not have to repeat it, so they are innately expecting words to refer to something contextually available in vision or dialogue with a single use. It would be very odd if I introduce you to my friend Sally (this is Sally), and then felt I had to say twice again (“once more this is Sally, this is Sally”).

- 7) We assume an utterance has “meaning” in the situation.

This assumption may hold even if what we “mean” by meaning is very undetermined. With “meaning” we must presuppose extensive contextual referential possibilities and social assumptions as well: **other minds**—at least one—are present that share (or may not) presupposed assumptions. Note that “other minds” is again an abstraction that requires scrutiny (and it is a lively topic in psychology) and must include when we talk to ourselves (or claim that we are “of two minds about this”), What kind of mental construct does “another mind” entail? On the one hand, all by ourselves, we have many inconsistent ideas that lack common presuppositions, and on the other hand we know that

communication between minds is a possibility where a complex “common Ground” is entailed. This is hard to know with precision, but situations entail intricate attitudes: goals, intentions, interpersonal expectations that are not always coded into language. An utterance may be a declaration, a command, or an expressive reaction (wow, gee, no, etc.) not intended as a communication. This referential diversity does not seem to trouble children (usually).

Is it conceivable that some such interfaces are absent? The varieties of autism are a possible domain. It has been argued that uncommunicative infants may somehow lack the “idea” that they can communicate with other human beings or complex language can carry communicative intentions. This has led to the recognition of “Silent Autism”—children who do not speak at all. It could be that the deficit is at the interface level---not the thought-level itself: “I want Mom to know that I need help, should I use words to convey this?”

8) Inference

Suppose an infant starts to chew on the couch and the parent says. “stop” or “don’t” the effect on the child may be to stop just because some new event occurred. They might stop even if it is just the doorbell ringing. Any interruption of an event by another event probably signals to all present that they have to re-evaluate what they are doing. This is not language comprehension but situational inference.

2. Complex Interfaces

2.1. Merge and Compositionality

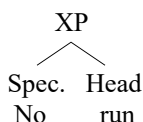
Where do more intricate interfaces play a critical role? If we can see a spontaneous connection across dissimilar notions, it supports the idea of innate interfaces. A crucial question for all new ideas is whether they appear as overt creations anywhere. When Chomsky initially introduced the idea that “merge” was a fundamental linguistic concept, it seemed that it could be a reflection of a general cognitive capacity of combining things. Could there be independent evidence of it, what every science looks for to justify a new theoretical dimension? In fact, acquisition evidence meets this criterion. Children at the two-word stage things like³

9) “no run”

Without any adult models—since adult negation is always embedded in other kinds of syntax (“don’t”). Examples like these can obtain a syntactic structure

³ Thanks to Noam Chomsky for support for this idea that these early two-word expressions are independent support for the notion of Merge and its innate availability for compositional interpretation.

10) “no run”



And shortly thereafter examples from 2yr olds include non-adult forms like from (Childes):

11) * CHI 2;00.17

no Mommy doing.

No lamb have it. No lamb have it.

No dog stay in the room. Don't dog stay in the room. (2-1-2)

No my play my puppet

This is ideal evidence of spontaneous non-imitative examples of both Merge and the capacity for compositionality meet the classic scientific goal of “independent” demonstration of core concepts. This evidence is also compatible with the claim by Deprez and Pierce (1993) that a NEGP syntactic projection is innate.

2.2. Syntax and morphology carry thematic roles

Consider now the notion of AGENT. It is projected from a putative thematic grid on the verb in various ways. First of all, if it may be generated as a subpart of the abstract notion of EVENT, which itself has subparts:

12) Event => [Agent verb Theme (Manner) (instrument)(location)]

If so, the child can generate a systematic projection onto syntax in at least 3 possible ways:

1. Subject of verb (I run)
Agent => syntax Subject (John sang)
2. implicit agent
3. Object of PP (the game was played by me)

At the morphological level the Agent projection allows a variety of morphemes to carry it (13):

13) Morphology, nominal -er, -ist (winner, violinist)

Adjective: -ent, -ant, (persistent, contestant)

Nominalization: -ing, -tion (he enjoys swimming, evasion)

Importantly these projections are syntactically active. They can be used in control structures (Roeper (1987)):

14) *Meat is easily eatable to gain weight.* Implicit agent in eatable controls subject of *to gain weight* (eater and weight-gainer are the same).

It is interesting to ask if there is a natural acquisition order or if they can trigger one another. And now we must ask what exactly is innate?

We take the associated interfaces to be fulfilled by language particular information to establish acquisition challenges where the potential interfaces are already present:

- 15) a. is there a VP projection that is an Agent?
- b. is there a morphological projection that is an Agent?
- c. is there an operation like control which presupposes an Agent?

These questions are derived directly from the innate possible interfaces where particular lexical and contextual variants are left open.

2.3. Small Clauses Trigger a notion of Propositionality

Propositionality lies at the core of declarative sentences. The notion must be innate. Less obvious is the syntax which can trigger it. In fact, as David Lebeaux and Andrew Radford first pointed out, small clauses immediately deliver a propositional interpretation for a number of thematic combinations:

- 16) a. Baby highchair. ('Baby is in the highchair.') [agent–location]
- b. Mommy sock. ('Mommy's sock.') [possession],
 ('Mommy wants a sock.') [agent–object]
- c. Mommy eggnog. ('Mommy had her eggnog.') [agent–object]
- d. sweater chair (sweater is on the chair) [object–location]

We do not find just any combination, for instance we do not find two-word verb combinations that are reductions of embedding:

- 17) *said ate (=I said I ate)

Nor as Bloom (2000) has pointed out do we find: adjective+pronoun while pronoun-adjective is possible:

- 18) a. *big it
- b. It big

That is, predicative adjectives but not attributive adjectives are possible with pronouns. This shows again that UG properties are honored at the two-word stage although it is not completely clear why UG has this constraint. To put it provocatively, children know and presuppose this constraint even though adults do not understand it perfectly. Nor does it seem possible—perhaps debatable—to have recursive cases:

- 19) ? *John considers Bill to consider Mary clever smart.

These small clauses are all understood as asserting a proposition. Although it was originally assumed that there is a deleted “is” in such cases, the small clause option where a proposition is an immediate default interpretation looks like a direct use of a UG default syntax/semantics connection available to children from the outset—an innate interface. The appearance of copulas apparently initiates access to other speech acts. Jill de Villiers (pc) pointed out that as soon as her son added copulas (It is big), he generated questions: “is it big”. This sequence deserves more careful research.

3. Principles of Dialogue: conversational ellipsis

A child of 1.8 yrs says “yes” when asked by his mother “do you want to give him a hotdog?” This simple exchange already presupposes that a child grasps conversational ellipsis. The child assumes the question content rather than stating it (“yes [I want to give him a hotdog]”). Conversation without this assumption would be impossible (too much repeated to be maintained). So, this is another important form of ellipsis which we argue is an innate interface.

3.1. Ellipsis in conversation is in fact much more complex and seems to be ever present

In general, we suggest that:

- 20) The acquisition of Phrase-structure carries the capacity for empty categories with it.

That is soon as the child acquires a Verb phrase with an object the object can be empty to be inferred or located in context:

- 21) [VP [V NP]] => [V (empty NP)]

They generate the possibility that the NP or VP can be “understood” even when the object or verb or verbal adjuncts are empty. They can therefore answer a question with just an NP: “what do you want?” => “milk” reconstructing the missing object for “want”. This holds for virtually most but not all categories. We cannot utter an article by itself in English (but it is possible in German): If asked “do you want a cookie?” in English, we cannot answer [*”a”], although it is possible in German [“ein”].

Variability in ellipsis produces an interesting acquisition challenge for children. Santos (2009) reports ellipsis in Portuguese for children below. 2yrs:

22) “unambiguous VP ellipsis found at 2.0”

MAE: está sujo? is dirty ‘Is it dirty?’

INM: (es)tá . i s ‘ Yes. ’ => yes it is dirty

Inês M. 1;7

MAE: o cavalo vai papar? the horse goes eat ‘Is the horse going to eat?’

TOM: vai. goes ‘ Yes. ’ = yes it is going to eat

Tomás 1; 9. 14

3.2. Reconstruction material can be itself recursive

23) “What do you want?” => “cookies”

can be followed by “how many?” => two [=I want two cookies], then followed by “which cookies do you want?” {which two cookies do you want}. This complex reconstruction in a typical conversation is easily managed by 2yr olds.

There is also language variation. L2 speakers holding a cookie sometimes say “do you want __” using an empty object (Roeper, personal experience), while native speakers understand that in English not every object can be empty and we must say “do you want this?”. On the other hand, behind a stuck car, one might hear “ok everybody push__” (the car). Nominalizations typically require no object [“we’ll need a big push__ to help us finish by five”]. There is language particular and contextual variation, but the idea that ellipsis is available is the presupposed interface, which means that NPs and VPs can be partially elided. It is also noteworthy that recursive ellipsis can occur with bound empty categories:

24) promotion__[NPx] without evaluation __[NPx] is unwise

Again, such extensions are presumably automatic with an efficient interface.

4. Speech Acts (SA)

SA seem to seek an interface with syntax and Prosody. SA linked to distinctive syntax are the usual starting point:

25) Declarative: in tensed propositions [John is here]

Imperative: deleted second person [Come here! = (you) come here]

Question: subject-verb inversion. [can you come here?]

There seem to be instinctive utterances which carry SA force:

26) “Ouch!”, “yum”, “yikes”, “oops”, “uh-oh”

And those that can operate across species, often as a warning, reflecting innate interfaces on both sides:

27) Growl, hiss, buzz

Within grammatical frameworks a lot of current work has been aimed at capturing more complex speech acts that are represented within syntax. Krifka (2024) is a prominent current example whose Speech Acts are linked to the left periphery and allow novel combinations of Negation and Question.⁴ Located on the left periphery it dominates Logical Form which in turn dominates propositional CP.

We will illustrate some of Krifka's more complex SA with examples from children, showing early capacity for these more complex forms:

28) English high negation interrogative structures (Woods and Roeper (2024))

(a) Close to Rachel's feet, wasn't it? Anne (Manchester), 1;11.

Negative Tag question

(b) There, don't you see it? Ross (MacWhinney), 2;4.

Biased Question

(c) Isn't it sweet! Anne (Manchester), 2;5.

Polar Exclamative

(d) Can you don't sit on it? Anne (Manchester), 2;7.

Suggestion/Persuasion

A biased question (28b) is one where the speaker's Point of View is entailed and the question seeks agreement or confirmation or an action (can't you put your boots on? => put your boots on).

Tag questions also seek hearer agreement. These are communicated in part by distinctive prosody as well as question-syntax. Again, we propose that—although individual languages may vary—the existence of a Speech Act-Prosody connection reflects an innate interface.

4.1. SA and phonology

Could Speech Acts interact with phonology at a more refined level? If we look at Contractions, they may reflect SA differences that can limit a speech act. Foucault, Javedi, Roeper (2024, 2025) looked at the pair *let's* and *let us*: *Let's* has an inclusive reading for contracted '*s* [we let us] while an uncontracted reading is ambiguous, allowing a subject object contrast:

29) a. Let's go in = we let ourselves go in

b. Let us go in = you let us go in or we let ourselves go in

⁴ The speech act approach originated with Austin's work on performatives. See also Krifka, Trinh, Woods and Roeper, Heim (others: also UMass (Foucault, Javedi, Roeper (2024, 2025))).

The contracted form *excludes* one reading. Naturalistic data seems to conform—all the children, including 2yr-olds, appear to take the coreference reading (a) in:

- 30) a. let's get more chair
 b. let's get over that table
 c. let's play up there
 d. let's put it all back in
 e. let's sit down

In an experiment contrasting these forms, Foucault and Javadi found that preschool children **never** take

- 31) scenario
 [children before a door with someone inside]
 “let's” $\neq$ (you) let us [go in]

Rather, it means “we let ourselves” [go in]. Moreover, preschool children **never** take:

- 32) “let's” $\neq$ (will **you**) let us go in

4.2. Inferences and Judgements

A further important interface is present: *inferences* and personal *judgements*. An expression like “can't you put your boots on” can carry an implication of “ought” which in turn can be intended to induce guilt. Biased speech acts trigger many inferences beyond language. Are they present from the outset?

This is a promising domain for experimental research. The core interface is that there is a link between Intonation and Speaker attitudes and expectations which our examples suggest children compute very early in part because the prosody-attitude interface is already innately set up and therefore does not have to be acquired.

5. Conclusions

There are many domains we have not addressed where some level of interface connections should be innate:

- 33) a. Binding [the boys and girls helped each other [boys=> girls, girls => boys]
 b. Distributivity (each of the children has a hat)
 c. Exhaustivity (***CHI 2;07.13** who ate **it up?**)
 d. Implicatures (some=> not all)
 e. Entailment (it is a big cat *entails* it is a cat)
 f. Pairing (who ate what)
 g. Quantifier Scope (No one thinks no one can do it=everyone thinks someone can do it)
 h. Long Distance Rules (wh-movement) [what did John say Bill did ___]

All recognized grammatical domains have innate principles at the core, including presupposed interfaces. Therefore, consistent with the UG innateness thesis, the learning task is very small. Acquisition evidence, production and experimentation, provides strong support for this perspective. Connections with all of the major submodules of grammar are engaged:

34) Anaphoric binding, movement, quantifier-scope, thematic roles

The precise properties of each interface remain largely unspecified because each has been formulated with different formal primitives. Syntax involves hierarchical labelled nodes on trees, semantics captures thematic relations, Semantics: Event components, and coreference, and pragmatics relates Point of View. Pragmatics engages Speech Acts, Question-under-discussion, and Common Ground, etc. The diversity of formalisms makes the representation of interfaces far from obvious. The fact that they seem to be obvious to a child remains, as always, the ongoing challenge in formulating UG.

It is the innateness of the interfaces which one can argue is the strongest argument for innateness. It is where language is manifestly complex not merely in the separate modules but in the complex mechanisms they serve. That knowledge most dramatically creates linguistic efficiency not only in acquisition but in the thought processes carried out in parallel with them.

5.1. The Larger Question of Mental Interfaces

A more fascinating but difficult question/challenge lies behind all of our discussion: how does the mind bring its various dimensions together to lead to knowledge and action? How does the mind put together abstract goals (winning a game) with human emotion (desire to succeed) with knowledge (the rules of the game) awareness of physical space (a basketball court) and one's sense of the opposition (personality of opponents) to decide what your next move will be (pass or jump shot)? The capacity to build an interface between these disparate mental dimensions, each of which operates with its own "grammar", within a range of mental notations in a way that allows one to reason across them, is an enormous question. It is again the same question we have been asking: how do we build and utilize these mental interfaces? We do not yet know how to state the question in

detail. We can, however, hope that efforts to conceptualize the challenge as we are doing will eventually lead to progress for all mental interfaces.

References

- Bloom, Paul (2000). How children learn the meanings of words. Cambridge, MA: MIT Press.
- Bowerman, Melissa (1973). *Early syntactic development: a cross-linguistic study with special reference to Finnish*. Cambridge University Press, Cambridge
- Chomsky, Noam (1965). Aspects of the Theory of Syntax. MIT Press
- Chomsky, Noam (1999). Derivation by phase Cambridge, MA: MIT.
- Chomsky, Noam (2001). Beyond explanatory adequacy. Cambridge, MA: MIT Press
- Chomsky, Noam (2007). Approaching UG from below in Sauerland and Gartner *op cit*.
- Deprez, Viviane and Amy Pierce (1993). Negation and Functional Projections in Early Grammar. *Linguistic Inquiry* 24, no. 1: 25-67.
- Foucault, Deborah, Shalaleh Javadi, Thomas Roeper (2024). To perform[ative] or not to perform[ative], that is the question! Speech Act Workshop. UMass Amherst
- Foucault, Deborah, Shalaleh Javadi, Thomas Roeper (2025). To perform[ative] or not to perform[ative], that is the question! LSA Proceedings Annual Meeting
- Krifka, Manfred (2024). Performative updates and the modeling of speech acts. 23 Synthese (2024) 31. doi: 10.1007/s11229-023-04359-0
- Platzack, Christer (2001). Multiple Interfaces. In Cognitive Interfaces: Constraints on Linking Cognitive Information. Emile Van Der Zee (ed.), Urpo Nikanne (ed.), Oxford
- Roeper, Tom (1987). Implicit Arguments and the Head Complement Relation" (1987) *Linguistic Inquiry* 118.2 57
- Santos, Ana (2009). Minimal Answers: Ellipsis, syntax and discourse in the acquisition of European Portuguese. Benjamins
- Sauerland, Uli and H.M. Gartner (2007). eds. Interfaces + Recursion = Language? Chomsky's Minimalism and the view from syntax–semantics (Studies in Generative Grammar) Mouton and Gruyter
- Trinh, Tue. (2018). Keeping it simple. *Natural Language Semantics*, 26, 111–124.
- Woods, Rebecca, Tom Roeper (2024). Children's acquisition of English "high" negation: A window into the logic and composition of bias in questions. In *Biased questions: Experimental results and theoretical modelling*. In Topics in the Grammar-Discourse Interface. Mouton. Tue Trinh (ed), Anton Benz (ed), Daniel Goodhue (ed), Kazuko Yatsushiro (ed), Manfred Krifka (ed).

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