

Universal Grammar and Early Childhood Education: *Towards a Synergy*

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1. Introduction

We state our conceptual framework, in terms of a simple proposition that we believe creates the grounds for creating multiple points of interface between the theories of language acquisition, and early childhood education (ECE) in pre-schools and schools. Since our aim is to make this framework accessible to both linguists and educators, we try to keep the discussion as shorn of intricate technical details and critique as possible, sticking only to the conceptual underpinnings of the theoretical formulations we consider.

2. Proposition: A child's acquisition of language is both a biological as well as a social process.

In our understanding, the insights that the Chomskyan acquisition studies programme brings to understanding the development of language in early childhood have not been correctly understood. The core insight in generative grammar, first formulated by Chomsky (1959, 1983), explored and developed in the work of Roeper (see, e.g., Roeper, 2007; Yang, 2004, 2016; Yang et al., 2017), is not as popularly believed, a hypothesis that the innately endowed dedicated module for language, which linguists call Universal Grammar (UG), that operates autonomously and deterministically to guide the acquisition of language; in other words, that it *alone* serves as the Language Acquisition Device (LAD) speculated upon in Chomsky (1957). Generative theories of the acquisition of language have always seen the growth of language as an interplay between nurture and nature, where nurture supplies the primary linguistic stimulus that 'triggers' language acquisition, but as Yang et al. (2017, p. 8) acknowledge, "...the generative study of language acquisition has not paid sufficient attention to the role of the input until relatively recently." We agree with Yang et al.'s reconstruction of the reasons why this has been the case, prominent amongst which is the very real fact that acquisitionists' have found in their studies of child

language acquisition ever since the first surveys conducted by Brown (1973): much of children's language seems to approximate adults' linguistic competence at even the earliest stages of language acquisition. These findings have tended to contribute to a narrowing of the focus of acquisition studies on the structuring of the Language Acquisition Device and the properties of UG, as what this normally excellent performance by even very young children indicates is that "...much of child language reflects inherent and general principles that hold across all languages and require no experience-dependent learning" (Yang et al., 2017).

We would like to underscore the point that Yang et al. (2017) make, that this reluctance to consider the input (and how it itself is constructed and delivered to the child) is however only empirical, and not *theoretical*. Although educationists and sociolinguistics in general, and ECE researchers in particular, are wont to selectively cite Chomsky's 'ideal native-speaker hearer' quote below as evidence of the insularity of this line of inquiry, the fact is that Chomsky here is merely arguing for the idealization that is necessary in order to identify the principles that characterize the innate principles of UG/LAD as a domain-specific innate knowledge module, which are presented to both the child and the linguist as performance. In other words, the scientific principles by which language is structured being always realized by noisy data, the only way that the linguist can determine what the true competence is by eliminating from consideration all other components of what constitutes language in the real world.

Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance... *To study actual linguistic performance, we must consider the interaction of a variety of factors, of which the underlying competence of the speaker-hearer is only one...* We thus make a fundamental distinction between *competence* (the speaker-hearer's knowledge of his language) and *performance* (the actual use of language in concrete situations). Only under the idealization set forth in the preceding paragraph is performance a direct reflection of competence. In actual fact, it obviously could not directly reflect competence. A record of natural speech will show numerous false starts, deviations

from rules, changes of plan in mid-course, and so on. *The problem for the linguist, as well as for the child learning the language, is to determine from the data of performance the underlying system he puts to use in actual performance.* (Chomsky, 1965, p. 3f)

In these comments made nearly fifty years ago then, well before the first studies of the acquisition language premised on a theory of UG were even attempted, Chomsky was putting forward the methodology by which UG could be studied by the linguist in quest of its core principles, and not as a model of how language is acquired. The intervening five decades have demonstrated that across languages, children's language acquisition provides evidence for a bioprogram of the milestones and pathways of language acquisition (Berko, 1958; Bloom, 1970; Brown, 1973; Lust & Chien, 1984; Newport & Meier, 1985; Slobin, 1973; Valian, 1991), irrespective of the type of language presented by the environment. Besides, children are found to not imitate adult speech found in their environment. This is evident from example¹ (1), where the child settles for producing a double negation in spite of being corrected by the mother eight times.

(1) Source: CHILDES database (cited in Fromkin et al., 2018)

CHILD: Nobody don't like me.

MOTHER: No, say "Nobody likes me."

CHILD: Nobody don't like me.

(dialogue repeated eight times)

MOTHER: Now, listen carefully, say "Nobody likes me."

CHILD: Oh, nobody don't likes me.

Example (2) also illustrates this lack of acceptance of correction by the child; the child repeatedly produces the ungrammatical "other one spoon" even when the parent attempts to teach the child to say "other spoon".

¹ The CHILDES (Child Language Data Exchange System), a computerized database of the spontaneous speech of children as they acquire many different languages. B. MacWhinney and C. Snow. 1985. "The Child Language Data Exchange System," *Journal of Child Language* 12:271-96.

(2) Source: CHILDES database (cited in Fromkin et al., 2018)

CHILD: Want other one spoon, Daddy.
FATHER: You mean, you want the other spoon.
CHILD: Yes, I want other one spoon, please, Daddy.
FATHER: Can you say “the other spoon”?
FATHER: Other.... one... spoon.
CHILD: Say... “other.”
FATHER: Other
FATHER: Spoon.
CHILD: Spoon.
FATHER: Other... spoon.
CHILD: Other... spoon. Now give me other one spoon?

(3) Source: CHILDES database, attributed to Chloe Gu (cited in Roeper, 2011)

Father: Up in the shelf in the closet
Child: yeah
Father: can you say that
Child: up in the shelf in the closet
Father: very good, up in the shelf in the closet in the kitchen. can you say that
Child: yeah, up in the # up in the # what
Father: up in the shelf in the closet in the kitchen
Child: up in the shelf in the # what
Father: closet
Child: in the closet in the kitchen
Father: in the jar up in the shelf? Can you say that?
Child: I can't
Father: you can
Child: up in the jar # say in the jar
Child: up in the shelf in the jar in the closet in the kitchen

The evidence from child language data conclusively indicates that the child is emphatically *not* like the adult descriptive linguist in search of the principles of UG, in that she does not mine the corpus of utterances in her experience to discover the rules that her language must follow; rather her production and comprehension of language is itself structured by the internal, individual innate endowment. This is illustrated in the example below from child language where an overgeneralization of the English past-tense rule is observed, and the child is oblivious to the adult's use of the exceptional past-tense form.

(4) Source: Courtney Cazden (1972) (cited in Fromkin et al., 2018)

CHILD: My teacher holded the baby rabbits and we patted them.

ADULT: Did you say your teacher held the baby rabbits?

CHILD: Yes.

ADULT: What did you say she did?

CHILD: She holded the baby rabbits and we patted them.

ADULT: Did you say she held them tightly?

CHILD: No, she holded them loosely.

Generativists' theoretical conception about the process of language acquisition holds it to be shaped by (a) UG, (b) experience, i.e., the language-particular input from the environment, and (c) 'third factors' which include principles that are not specific to the language faculty (Chomsky, 2005), such as "... principles of hypothesis formation and data analysis, which are used both in language acquisition and in the acquisition of knowledge in other cognitive domains" (Yang et al., 2017, p. 2). Experience, we believe, must be interpreted in two senses in order to capture the fullness of what acquiring a language entails. In the strictly linguistic sense, it is experience of the primary linguistic data (PLD) that enables the child to set the parameters of UG relevant to her language, e.g., to determine whether the language is SVO or SOV. In addition, a second sense of experience has also been flagged out as relevant, which involves the learning of those aspects of language that do not fall out from the principles and parameters of UG. In this is included the learning of phonological, lexical, and other regularities of grammar that do not fall out from UG principles. As Yang (2004, p. 451) puts it: "...it is a truism that both endowment and learning contribute to language acquisition, the result of which is an extremely sophisticated body of

linguistic knowledge. Consequently, both must be taken into account, explicitly, in a theory of language acquisition.”

In other words, the acquisition of language is an acquisition+learning process, which we will dub *acquilearning* for the remainder of this article, carried out primarily inside the developing individual child’s mind, but responsive to the positive evidence that the input provides. It is this input that serves as the basis for the child’s application of general-purpose learning mechanisms that are either innate (e.g., Yang’s probabilistic learning) or simultaneously developing in the growing human (the Piagetian operational stages). The learning of the social aspects expressed in language, such as politeness, honorification, information packaging, and perhaps even discourse relevance and sociolinguistic attitudes are also possible instances of the application of domain-general learning mechanisms, heavily dependent on the positive evidence provided in the input, although too little is as yet known about these topics in terms of crosslinguistic patterns, for even speculations to be crosslinguistically formulated.

We believe that this modern turn in learning theory that moves beyond the earlier input=trigger bias in generative language acquisition allows us to formulate an interdisciplinary research programme between early childhood studies and language acquisition research in general. At the theoretical level, there are the ‘big’ questions that can be asked from this perspective both about language in general and for individual languages: How do children use domain-general abilities to actually learn the non-UG aspects of language? What is the nature of the interaction between domain-general learning abilities and the input with regards to the *acquilearning* of language as compared to other learning during development? Are there aspects of language that are learned by instruction alone? In our view, ECE as a societal institution that mediates the cultural transmission of language is an excellent locus to ask these and other questions about both the acquisition and the learning aspect of language development, but it is also perhaps the prime location that we can see the acquisition aspect of language proceed in tandem with the learning part. The ECE domain is, in our view, the ‘field’ for investigating the robustness of both theoretical formulations of both the domain-specific properties as well as the domain-general ones involved in the *acquilearning* of language.

For this research collaboration to be productive and mutually beneficial (both theoretically and empirically), however, essential discourse conditions must be set. The first is one of mutual intelligibility, where the two disciplines must be able to talk to each other. In a spirit of confession,

it would be only honest to admit that the extreme technicality of UG-based findings renders them opaquer than ECE ones, and it is therefore this discipline that must find a more accessible idiom that is able to describe and explain to ECE theorists and practitioners the import of their findings. In our discussion of the case studies we present from Hindi and Bangla acquisition, we attempt exactly this.

3. Knowing & learning Hindi postpositions

3.1 Oblique case in Hindi

Oblique forms of nouns in Hindi contrast with direct forms, where the former appears in the form of a suffix or morphological suppletion on a declension class of nouns in the presence of a postposition (Butt & King, 2004; Spencer, 2005; Kachru, 2006, among others). The noun *baccaa* ‘male child’ and *haath* ‘hand/hands’ appear in oblique form in (6), as the subject and the object are followed by ergative (-*ne*) and accusative (-*ko*) marking postpositions respectively.²

(5) <i>ye</i>	<i>achaa</i>	<i>baccaa</i>	<i>haath</i>	<i>dho</i>	<i>rahaa</i>	<i>hE</i>
this.SG	good.M.SG	child.M.SG	hands	wash.	PROG	be.PRS
‘this good child is washing (his) hands’						
(6) <i>is</i>	<i>ache</i>	<i>bacce-ne</i>		<i>haathoN-ko</i>	<i>dhoyaa</i>	
this.OBL.SG	good.OBL.M.SG	child.OBL.M.SG-ERG		hands.OBL-ACC	WASH.PERF	
‘this good child washed (his) hands’						

Masculine nouns whose singular direct forms end in *-aa* inflect for oblique in both singular and plural form, and those that are not *-aa* ending inflect for oblique only in the plural form. As seen in (6), the oblique form for *baccaa* ‘male child’ is *bacce* (OBL.SG). In a plural context, the oblique form will be *baccoN*. Feminine nouns take oblique morphology in the plural context, such as *laRkii*

² Glossing conventions: 1P – first person, 2P – second person, 3P – third person, ACC – accusative, AUX – auxiliary, CLF – classifier, DAT – dative, ERG – ergative, F – feminine, FUT – future, GEN – genitive, L1 – level 1, L2 – level 2, L3 – level 3, M – masculine, NF – nonfinite, NOM – nominative, OBL – oblique, PERF – perfect, PFV – perfective, PL – plural, PRS – present, PST – past, SG – singular

‘girl’ (F.SG), *laRkiyaaN* (F.PL), *laRkiyoN* (OBL.F.PL) and *kitaab* ‘book’ (F.SG/PL), *kitaaboN* (OBL.F.PL).

Stem	Meaning	Direct form		Oblique form	
		SG.	PL.	SG.	PL.
<i>laRkaa</i>	boy (M)	<i>laRkaa</i>	<i>laRke</i>	<i>laRke</i>	<i>laRkoN</i>
<i>laRkii</i>	girl (F)	<i>laRkii</i>	<i>laRkiyaaN</i>	<i>laRkii</i>	<i>laRkiyoN</i>
<i>aadmii</i>	man (M)	<i>aadmii</i>	<i>aadmii</i>	<i>aadmii</i>	<i>aadmiyoN</i>

Table 1. Examples of oblique morphology

Exceptions to these general rules include kinship terms such as *naanaa* ‘mother’s father’, *daadaa* ‘father’s father’, *caacaa* ‘father’s brother’, *maamaa* ‘mother’s brother’.

Additionally, we see in (6) that the demonstrative pronoun *ye* ‘this’ and the adjective *achaa* ‘good’, which are part of the subject noun phrase, undergo concord with the noun to appear with oblique morphology, in contrast to their direct forms seen in (5). Adjectives, particles marking possession or modification (*ka* and *vaala*) take oblique morphology when ending in *-aa*. Demonstrative pronouns *ye* ‘this’ and *vo* ‘that’ display suppletion in oblique contexts, and become *is* (OBL.SG) and *us/un* (OBL.SG./PL), as do interrogative pronouns (wh- words) *kaun* ‘who’, *kis/kin* (OBL.SG./PL.) and relative pronouns *jo* ‘who/that’, *jis/jin* (OBL.SG./PL).

3.1.1 Methodology for child language data

The child language data was collected by employing a combination³ of a picture-based elicited production experiment, called ‘Case-Task’ (Ruigendijk, 2015), a semi-structured elicitation game, called ‘Bag-Task’ (Eisenbeiss, 2009), and a semi-structured picture description elicitation task, called ‘Agreement Task’ (Pareek, 2018)⁴.

³Refer to Eisenbeiss (2010) for the kinds of methods that may be used for collecting production data in language acquisition studies, and the relative advantages and limitations of the same.

⁴Refer to Pareek (2018), for a description of the tasks and methodology used.

The child language data was collected in the Delhi region for 46 participating children in the age range of 23 to 71 months⁵. Participants were selected on the criteria of parents/guardians reporting Hindi as the primary language in the household. The fieldwork was conducted in primary/elementary schools and residential localities, through personal and professional networks. Prior written consent was taken from the parents/guardians and school authorities, where applicable. A mandatory requirement for research with human participants, ethical approval was obtained before beginning the fieldwork from the relevant authority⁶.

The total number of analysable utterances from the three sets of tasks was 13,804, of which there were 14,637 overt nouns/noun phrases. The number of obligatory contexts for oblique morphology in these noun phrases was 2,521. Obligatory contexts for oblique morphology refer to those nouns/noun phrases that had either a noun, a modifying constituent, or both, belonging to an inflecting declension class, and was followed by a postposition.

3.1.2 The appearance of Oblique case in Hindi child language data

A very high rate of accuracy was seen in the use of oblique morphology in the child language data. The examples below demonstrate the grammatical use of oblique morphology on inflecting nouns and modifiers in the presence of postpositions. Masculine nouns whose singular direct forms end in *-aa*, *laRkaa* ‘boy’ and *baccaa* ‘male child’, feminine and masculine plural nouns not ending in *-aa*, and pronouns appear in the child language in oblique forms.

- (7) *laRkii* *-ne* *laRke* *-ko* *khiiNcaa* (CT-HA:4;7)⁷
 girl -ERG boy.OBL.M.SG -ACC pull.PERF.M.SG
 ‘the girl pulled the boy’
- (8) *aur* *phir* *bacoN* *-ne* (AT-AG1:4;5)
 and then children.OBL.PL -ERG
 bola *sorry*

⁵ A part of this research was funded by JNU/Essex Development Fund grant to study ‘The Acquisition of Hindi Case Marking’ in 2013.

⁶The Institutional Ethics Review Board, Jawaharlal Nehru University

⁷References to participants are made in the following format: (Task Name-Initials; Age). The task names have been abbreviated to CT (Case Task), BT (Bag Task) and AT (Agreement Task), the child’s initials are in alpha-numeric form, and age is in y:mm format.

- say.PERF.M.SG sorry
‘and then the children said sorry’
- (9) *vo to phuuloN -ko* (AT-AS4:3;7)
s/he EMPH flowers.OBL.M.PL -DAT
paanii de rahe hE vo
water.M.SG give PROG.M.PL AUX.PRS.3P s/he
‘s/he is watering the plants’ (Lit: ‘s/he is giving water to the plants’)
- (10) *inhone ThanDiyoN -ke* (AT-RS:5;2)
they.OBL.PL.ERG winters.OBL.F.PL - kaa.PL
kapRe pehne hE
clothes.M.PL wear.PERF.M.PL AUX.PRS.3P
‘they are wearing winter clothes’
- (11) *is -ne is -ko* (CT-SR;4;4)
s/he.OBL.SG -ERG s/he.OBL.SG -DAT
cup dikhaayaa
cup.M.SG show.PERF.M.SG
‘S/he showed him/her the cup’
- (12) *mere -ko ek hii naam pataa* (AT-AK2:4;5)
I.OBL -DAT one EMPH name.M.SG know
hE laRke -kaa
AUX.PRS.3P boy.SG.OBL -kaa.M.SG
‘I know only one name for the boy’
- (13) *ye kis -me rakhuuN mE* (AT-DM:2;6)
this.SG wh.OBL.SG -LOC keep.1P.SG I
‘In which should I keep this?’
- (14) *jis -me pEse* (BT-TB;4;9)
REL.OBL.SG -LOC money.M.PL
rakhte hE
keep.IMPERF.PL AUX.PRS.3P
‘in which (we) keep money’

The child language data also yielded oblique concord in modifying structures in complex nominal phrases on demonstrative pronouns and adjectives, even with a non-inflecting noun.

- (15) *is choTe baby -kaa* (BT-AG1:3;7)
 this.OBL.SG small.OBL. baby.M-*kaa*.M.SG
 ‘this small baby’s (something)’

Nouns that are exceptional to the rule of oblique morphology also appear in the child language data, as seen in the example below, where an *-aa* ending masculine singular noun does not inflect even in the presence of a postposition.

- (16) *raajaa -ko thank you bola princess -ne* (CT-CP:3;5)
 king -ACC thank you say.PERF.M.SG princess -ERG
 ‘the princess said ‘thank you’ to the king’

As can be seen in Table 2, the rate of omissions of oblique morphology is approximately 3%. There are almost no instances of oblique omissions on pronouns and *wh*-words. Oblique omissions on noun phrases consisting of only a noun (no modifier), comprised 15.09% of the errors, the highest of all types of errors, as seen in (17). Oblique omissions on modifiers of noun phrases where the noun is of a non-inflecting class were the next highest (13.53%) in the error types, as seen in (18). A very small number of omissions were seen on both modifier/s and modified noun in a complex noun phrase (6.98%), and only on the noun with grammatical oblique on the modifier (5.81%), as can be seen in (19) and (20), respectively.

Type of NP/CNP		Total	✓	*	Omissions %
Obligatory contexts for oblique	Pronouns	1,924	1,922	2	0.10%
	wh-word	13	13	0	0.00%
	A: (Hindi) N ⁰	232	197	35	15.09%
	B: mod only & a non-inflecting (English/Hindi) N ⁰	266	230	36	13.53%

	(only OBL concord)				
	C: *on mod & * on inflecting (Hindi) N ⁰ (*OBL case + *OBL concord)	86	75	6	6.98%
	D: *on mod & ✓ on inflecting (Hindi) N ⁰ (✓OBL case + *OBL concord)		-	0	-
	E: ✓ on mod & *on inflecting (Hindi) N ⁰ (*OBL case + ✓OBL concord)		-	5	5.81%
Total		2,521	2,437	84	3.33%

Table 2. Appearance of oblique in child language data (the symbols ✓ and * indicate grammatical use and omissions, respectively)

Examples of each of these types of errors can be seen in the examples below:

(17) *ek laRkii -ne laRkaa -ko khiiNcaa* (CT-HSS:5;3)

one girl -ERG boy -ACC pull.PERF.M.SG

‘a girl pulled the boy.’

(18) *vo laRkii -ne sorry bol diyaa* (AT-LV: 4;4)

that.SG girl -ERG sorry.M say give.PERF.M.SG

‘That girl said sorry’

(19) *aur ye laRkaa -ne* (AT-LV:4;4)

and this.SG boy -ERG

‘and this boy’

(20) *in bacce ko balloons cahiye* (AT-SS1:5;6)

these.OBL.PL children.PL -DAT balloons M.SG want

‘These children want balloons.’

There are no instances of errors where the omission is on the modifier with a grammatical oblique on the modified noun such as that in the hypothetical example below.

- (21) *achaa laRke -ne laRkii -ko dekhaa*
 good boy.OBL.SG -ERG girl -ACC see.PERF
 ‘the good boy saw the girl’

In other words, if the modified noun is of an inflecting class and has been grammatically inflected for oblique, children are likely to apply oblique concord on the modifier. There were, however, 4 instances of over-extension of oblique morphology to *-aa* ending nouns that do not belong to the inflecting class of nouns, as can be seen in (22) and (23) below. Additionally, there was 1 instance of an inflecting noun appearing in the oblique form without the presence of a postposition, as can be seen in (24) from the child language data below.

- (22) *ek parii -ne ek -pare -ko kiss kiyaa* (CT-TB:4;9)
 one fairy.f -ERG one -fairy.OBL.M. -ACC kiss do.PERF.M.SG
 ‘a female fairy kissed a male fairy’

- (23) *cook raaje -ko cammac* (CT-RM:4;7)
 cook.M.SG king.OBL.SG -DAT spoon.M.SG
de rahaa hE
 give PROG.M.SG AUX.PRS.3P
 ‘the cook is giving the spoon to the king’

- (24) *laRke ro rahaa hE* (AT-NS:3;3)
 boys cry PROG.M.SG AUX.PRS.3P
 ‘the boy is crying’

3.2 The distribution of *-ko* and *-se* marked objects in transitive/ditransitive predicates

The *-ko* postposition appears on arguments with *Theme/Patient*, and *Recipient* argument roles in transitive and ditransitive predicates, respectively, each of which is exemplified below.

- (25) *jaadugar parii -ko gale lagaa rahaa hE*
 magician fairy -ACC neck put PROG.F.SG AUX.PRS.3P
 ‘The magician is hugging the fairy’

- (26) *joker shikaarii -ko kitaab bhej rahaa hE*

joker hunter -DAT book.F.SG send prog.M.SG AUX.PRS.3P
 ‘The joker is sending the book to the hunter’

The *-se* postposition, on the other hand, is used in a variety of semantic contexts, such as *ablative*, *comitative*, *abilitative*, and *source* arguments of transitive predicates. This data cited in this chapter primarily concerns itself with the *comitative* or *sociative* use of this postposition, as exemplified in the following sentence.

(27) *raajaa laRkii -se haath milaa rahaa hE*
 king girl -COMM hand.M meet.PERF PROG.M.SG AUX.PRS.3P
 ‘The king is shaking hands with the girl’

3.2.1 Methodology for child language data

The child language data was collected by employing a picture-based elicited production experiment⁸, called ‘Case-Task’ (Ruigendijk 2015)⁹. The study comprised pictures of transitive and ditransitive predicates, with easily recognizable human characters in events/actions to be described in complete sentences using full definite noun phrases. While the target set of transitive predicates consisted of both theme/patient arguments of transitive predicates, and recipient arguments of ditransitive predicates, the discussion here is limited to the former of these.

The data was collected in the Delhi region for 21 participating children in the age range of 41 to 71 months¹⁰. The methodological conditions such as participant selection, venues for data collection, ethical considerations, and parental consent were the same as those described in the previous section.

3.2.2 The appearance of *-ko* and *-se* marked objects in Hindi child language data

A very high rate of accuracy was seen in the use of *-ko* marking in the child language data. As can be seen in Table 3, there is a 92.68% accuracy in the accusative use of *-ko* on objects of transitive

⁸A subset of the Case-Task titled ‘Possessives Task’ is not included here, which targeted the use of possessive structures in the child language.

⁹Refer to Pareek, Kidwai & Eisenbeiss (2016) and Pareek (2018) for a description of the task and methodology used.

¹⁰This research was funded by JNU/Essex Development Fund grant to study ‘The Acquisition of Hindi Case Marking’ in 2013.

predicates, and 93.81% accuracy in the dative use of *-ko* on indirect objects of ditransitive predicates. In contrast, 64.61% is the rate of accuracy in the use of *-se* on transitive objects.

Nominal in the clause	Target form	Total instances of overt argument	Correct form used		Form omitted	Incorrect form used
Object of V _t	<i>-ko</i>	560	519	92.7%	0.7%	6.6%
Object of V _t	<i>-se</i>	65	42	64.6%	3.1%	32.3%
Indirect object of V _{dt}	<i>-ko</i>	404	379	93.8%	0	6.2%

Table 3. Summary of *-ko* and *-se* Case marking postpositions in the Case Task

Children as old as 71 months are observed to alternatively assign a *sociative* case marker for the object, instead of the more acceptable *accusative -ko*, as can be seen in the utterances below.

(28) *joker -ne us -se bye kiya thaa* (CT-CP:3;5)

joker -ERG that.OBL -se bye do.PERF AUX.PST.3P

‘The joker did ‘bye’ with her’

(Target: The joker waved to the fairy/The joker did goodbye to the fairy)

(29) *jaadugar -ne parii -se gale lagaayaa* (CT-HSS:5;3)

magician -ERG fairy -se neck put.PERF

‘The magician hugged with the fairy’

(Target: The magician hugged the fairy)

(30) *jaadugar -ne is parii -se gale milaayaa* (CT-AKS:5;11)

magician -ERG this fairy -se neck meet.PERF

‘The magician hugged with the fairy’

(Target: The magician hugged the fairy)

Alternatively, children are also seen to assign the *theme/patient* role in place of the *sociative* argument, as seen in the utterances below.

(31) *raajaa handshake kar rahaa hE ek laRkii-ko* (CT-ST2:3;7)

king handshake do PROG.M.SG AUX.PRS.3P one girl -ko

‘The king is shaking hands to a girl’

(Target: The king is shaking hands with the girl)

(32) *ek king queen -ko haath milaa rahaa hE* (CT-IS:5;6)

one king queen -ko hand meet PROG.M.SG AUX.PRS.3P

‘The king is shaking hands to a queen’

(Target: The king is shaking hands with the queen)

(33) *laRkii raajaa -ko haath milaa rahii hE* (CT-AG2:6;8)

girl king -ko hand meet PROG.F.SG AUX.PRS.3P

‘The girl is shaking hands to the king’

(Target: The girl is shaking hands with the king)

(34) *parii -ne joker -ko hello kiya* (CT-SM:6;9)

fairy -ERG joker -ko hello do.PERF

‘The fairy did hello to the joker’

(Target: The fairy shook hands with the joker)

Use of the correct case marker is affected by created individual lexical entries for the predicates, and given that children know both the sociative and polyfunctional *-ko*, a pedagogical approach that variegate the input of predicate types will enable the child to arrive at the correct generalizations.

4. Expressing social relationships via pronouns in Bangla

Many languages express the social relationship between the speaker and the addressee (you) or referent (him/her) using politeness markers, honorifics, or pronouns. Bangla, from the Eastern Indo-Aryan language family branch, does this via its second and third person pronouns. In the second person, there are three pronouns, which we christen Level 1 (L1), Level 2 (L2), and Level 3 (L3) pronouns (see examples (38) – (39)), where L1 refers to the least polite pronoun while L3 the politest. In the third person, there are two pronouns, L2 and L3 (see examples (35) - (39)).

(35) *ami toke daklam*

1P.SG 2P.SG.L1 called.1P

‘I called you.’ (addressee is the speaker’s friend/sibling)

- (36) *ami tomake daklam*
 1P.SG 2P.SG.L2 called.1P
 ‘I called you.’ (addressee is the speaker’s friend/sibling/parent)
- (37) *ami apnake daklam*
 1P.SG 2P.SG.L2 called.1P
 ‘I called you.’ (addressee is the speaker’s acquaintance/boss, or is a stranger)
- (38) *ami oke daklam*
 1P.SG 3P.SG.L2 called.1P
 ‘I called you.’ (addressee is the speaker’s friend/sibling)
- (39) *ami onake daklam*
 1P.SG 3P.SG.L3 called.1P
 ‘I called you.’ (addressee is the speaker’s acquaintance/boss, or is a stranger)

The Bangla verb is found to co-vary¹¹ for person, and politeness with the subject, as evident from examples (40) – (45).

- (40) *ami baRi phir-l-am*
 1P.SG home return-PST-1P
 ‘I returned home.’
- (41) *tui baRi phir-l-i*
 2P.SG home return-PST-2P.L1
 ‘You returned home.’
- (42) *tumi baRi phir-l-e*
 2P.SG home return-PST-2P.L2
 ‘You returned home.’
- (43) *apni baRi phir-l-en*
 2P.SG home return-PST-2P.L3
 ‘You returned home.’
- (44) *o baRi phir-l-o*
 3P.SG home return-PST-2P.L2
 ‘She/he returned home.’

¹¹ Covariation here refers to the situation where the form of the verb depends on the subject of the clause, manifesting the person and formality values of the subject.

- (45) *uni* *baRi* *phir-l-en*
 3P.SG home return-PST-2P.L3
 ‘She/he returned home.’

Examples (35)-(39) show that there is more than one way to address a friend or a sibling. Similarly, if one has known one’s boss for years, and shares a slightly informal relationship with them, the L2 pronoun may be used instead of the L3 one. Further, one may refer to one’s in-laws using either the L2 pronoun or the L3. What is clear from these limited illustrations is that the use of pronouns is subject to intense variation. It is impossible to formalise this use beyond using a morphological criterion to say that there are three levels of pronouns, as has been done here.

4.1 Methodology for child language data

Three structured elicitation tasks were conducted with nineteen children aged between 2;5 and 6;11, to study children’s production of formal and non-formal pronouns. The tasks were also conducted with ten adult controls. Participants were required to describe the action depicted in a picture such that they would produce the target pronoun/reflexive, based on information gathered from introductory pictures shown and described to them.

4.2 The acquisition of formal pronouns

The intriguing aspect of the politeness factor of Bangla pronouns is that it is found to be extremely sparse in Bangla-speaking children’s repertoire of the language, appearing only around age six.

	Target response rate	Target response rate	Target response rate
Response rate	0.0%	25.7%	15.5%

Table 4. Rate of target responses when the target was a formal pronoun

T1 T2 T3

	Target response rate	Target response rate	Target response rate
Response rate	40.0%	70.3%	82.2%

Table 5. Rate of target responses when the target was a non-formal pronoun

The results from the tasks conducted with children contrast starkly with those of the adult controls, where there were only 5 (n=380) cases of informal pronouns produced in place of formal ones. What was found was that children's rate of production of formal pronouns is significantly lower than that of non-formal pronouns, as evident from an initial comparison between the cumulative rates of target production in Tables 4 and 5. In fact, in one task (T1), no child produced the target formal pronoun. There were however three children who together produced 5 non-target formal (possessive) pronouns. Only two, by bch16 (6;11) and bch19 (6;10) resulted in correct utterances, illustrated by example (46). The others, of the type in example (47), resulted in infelicitous responses¹².

- (46) *onari meye ori ma-ke* (bch16: 6;11)
 3P.SG.L3.GEN daughter 3P.SG.L2.GEN mother-ACC
furfuri ditʃiʰe
 tickle giving.3P
 'Her_i (formal) daughter is tickling her_i (non-formal) mother.'
- (47) *#ori ...onari meye* (bch15: 6;5)
 3P.SG.L2.GEN ...3P.SG.L3.GEN daughter
okei tʃumu ditʃiʰe
 3P.SG.L3.ACC kiss giving.3P
 'His_i (formal) daughter is giving him_i (non-formal) a kiss.'

In T2 and T3, the targets were reflexive or formal/non-formal pronouns, which means that the rate of production of formal pronouns in tasks 2 and 3 is lower than 25.7% and 15.5% respectively. Most target responses that were produced were the reflexive rather than the pronoun.

¹² T1 was the only task where the possessive formal pronoun was pre-empted by the researcher asking the question *onar x ki kortʃiʰe?* ('what is his/her x doing?')

In T2, of the 19 target responses (25.7%) only 1 was the formal pronoun, produced by one child(bch09) aged 5;9, as given in example (48). However, this child also produced informal pronouns in place of formal ones, like those in (49).

- (48) *o ... onar-i* (bch09: 5;9)
o ... 3P.SG.L3.GEN-i
 ‘his (formal)’

- (49) *#o dadu_i-Ta or_i pa wash korchhe* (bch09: 5;9)
o grandpa-CLF 3P.SG.L2.GEN foot wash doing.3P
 ‘The grandpa_i is washing his_i foot.’

In T3, out of the 16 (15.5%) target responses met, 6 had the target formal pronoun in them (see examples (50) and (51)). Five of these were produced by bch19 (6;10) and one by bch09 (5;9). Therefore, three children, all nearly six years of age or older were the only ones whose pronoun repertoire displayed potential use of formal pronouns.

- (50) *eTa onar bag Tebil-e rakh(a)* (bch19: 6;10)
this 3P.SG.L3.GEN bag table-LOC kept
 ‘this is her bag kept on the table.’

- (51) *hæ ...oTa onar-i belun* (bch09: 5;9)
yes ...that 3P.SG.L3.GEN-i balloon
 ‘yes ... that is his balloon.’

The most common error type in children’s production of formal pronouns was using the non-formal one in place of the formal one. There were 102 instances of these across the three tasks.

- (52) *#dida_i-r bæg-e or_i* (bch22: 4;0)
dida-GEN bag-LOC 3P.SG.L2.GEN
fon khũjchhe
phone searching.3P
 ‘(Grandma) is searching for her_i phone in Grandma_i’s bag’

- (53) *#dida_i eTa nije or_i meye-ke* (bch03: 5;10)
grandma this take.NF 3P.SG.L2.GEN daughter-ACC
marbe mone hɔj
hit.FUT thought be
 ‘looks like Grandma_i will beat her_i daughter with this.’

- (54) *#ekhane ei kiṇi-Ta boshe ori* (bch03: 5;10)
 here this king-CLF sit.NF 3P.SG.L2.GEN
juto porchhe
 shoes wearing.3P
 ‘here this king_i is sitting and wearing his_i shoes.’
- (55) *#dɔkTor_i ori matha-y hat diye* (bch09: 5;9)
 doctor 3P.SG.L2.GEN head-LOC hand give.NF
chinta korchhe
 worry doing.3P
 ‘Placing his_i hand on his_i head the doctor_i is worrying’
- (56) *#ekhane ei ankəli-Ta ori hat-Ta* (bch15: 6;5)
 here this uncle-CLF 3P.SG.L2.GEN hand-CLF
chumu dichhe
 kiss giving.3P
 ‘here this uncle_i is giving a kiss to his_i hand’

5. Conclusions and Implications

The Hindi and Bangla studies present contrasting results in terms of accurate application of their respective grammars. While Hindi children use postpositions accurately as early as 23 months, Bangla children only begin to produce formal pronouns at age 5+, and that too very sparingly. We attribute this contrast to a composite acqullearning process that depends on UG and the input. While the grammar of postpositions is determined by UG, the appropriate use of pronouns is not. Further, we predict that the use of Hindi postpositions is abundantly available in the child’s input/environment and their use is critical to disambiguate sentence structure in both the child’s comprehension and production. In contrast, Bangla formal pronouns are used in a limited social context, exposure to which does not begin in a full-fledged manner until the child enters a formal setting, such as school. Essentially the child’s world until school-going age is only occupied by people (parents, grandparents, caregivers, friends) who need only be referred to in the non-formal.

We, therefore, suggest that the elementary classroom not treat postpositions and formal pronouns with the same teaching rigour.

Anecdotal evidence suggests that caregivers provide explicit correction for children's inappropriate use of pronouns, as they do for other featural errors that children produce. However, this seems to have little impact on children's grammar. Children are unperturbed by explicit correction (as also illustrated in Section 2), rather trudge along the probable 5-years-milestone as far as formal pronoun production is concerned¹³. Since the data from our study ends at age 6;11, we cannot confirm when the acquisition process culminates. Anecdotal evidence from the children in our pronoun study also shows that children who produce formal pronouns are also ones who have begun to have exposure to them in school. In private schools in Kolkata city, which the children in our pronoun study attended, Bangla is not introduced in the classroom before Grade 1 (ages 5+ or 6+). An elementary classroom may, therefore, introduce Bangla formal pronouns functionally, in order to speed up acquisition. However, owing to an acquisition milestone, doing so before the child is of age five may not yield any significant results. Whether this holds true may only be determined after studying its implementation in elementary classrooms.

An observation of an elementary school teacher in Kolkata teaching English to 5-year-olds at an ISCE-affiliated school, using Elementary English Grammar and Composition (Class 1 & 2) by N.K Aggarwala¹⁴, has revealed that currently pronouns (both English and Bangla) are taught in elementary classrooms by first introducing the child to a definition of a pronoun (a word used to replace a thing/place/person). While we suggest introducing formal pronouns into the elementary classroom, we are not in support of teaching the grammatical jargon describing them. This means that there is little need to have children be aware of the terminology associated with pronouns, that say, Bangla *apnader* is formal, while *tomaderis* non-formal. It is enough for the child to have to refer to the teacher in the formal, or to have formal pronouns appear in stories with human characters. We must remember, as argued by Kidwai (2008, 2013), that the contents of the story lesson will piggyback on the child's innate knowledge of the language, and there is therefore no need to explicitly teach linguistic properties or definitions. This would extend to evaluation exercises as well. The exercise instruction need not be to, say, "fill in the blanks with a formal

¹³5+ seems to be the age when formal pronouns begin to appear.

¹⁴ Goyal Brothers Prakashan

pronoun”, but should rather just be “fill in the blank with the appropriate word”, thus relieving the child of rote-memorization and instead focusing on communicative competence.

We have demonstrated that children are not empiricist learners. The poverty of the stimulus argument points to a ‘gap’ between the rich stock of knowledge about language that competent speakers possess and the meagre supply of linguistic information that their experience during acquilearning provides. This gap is so wide that no child endowed with only an empiricist-style, general-purpose learning mechanism could hope to bridge it. We have shown that this conception yields a normal course of acquisition that has grammatical ‘errors’ built into it, which corrects over the path, which may stretch into the period of early childhood education. We have also demonstrated that there exist rules/conventions in language that either do not follow from the innate endowment, or do not fall into place until much later. We suggest that for children to arrive at these rules, a strengthened input would be beneficial, and is something that early childhood education should provide, but in a way that is consistent with the understanding that the child’s innate endowment is fully equipped to make grammatical sense of the input.

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