

AN INFANT SPEAKS

Bob Stuckey 1980 and 2013 and 2023

INTRODUCTION

I kept a little notebook of our first child Don's learning to speak from 7 to 32 months. I always meant to type it up and didn't get round to it until some 22 years later when Don and his cousin Cara (mentioned in the notebook) have children of their own also following the same fascinating path, as billions have done before them. I hope it might be interesting reading for them and for all parents and students of language.

My wife, Liz, and I had recently returned from Amsterdam. There I had been studying for a music degree which included study of the Indian instrument, the sitar, and an introduction to phonetics. This helped me to observe Don's speech development. Of course there are much more thorough academic studies of the acquisition of speech. I have added a reproduction of the table compiled by Lenneberg in his classic *the Biology of Language*. I was not sufficiently practiced to write down the phonetic alphabet and I hope my attempts to recreate pronunciation will be enough to suggest the gradual refinement taking place.

Linguists make a distinction between *passive* words - those understood, and *active* words - those spoken and used. This distinction is important in the early stages however when it is dropped the reader can assume that only active is meant. In my original notes I just had two categories for each new entry - vocabulary or syntax. In the present write-up I thought it would be useful to the part of speech of the vocabulary, and noting if the syntax is mixed, that is involving something outside the spoken word - a person or object in the scenario or a facial or bodily gesture.

I have divided the record into months to ease comparison with Lenneberg's table. The reflections that I made twenty-two years later I have put in italics preceded with the word *Afterthought* to set them off from the original observations. The headings are also a later attempt to highlight developmental landmarks.

Footnote added in 2023

You may not have the appetite to plough through every detail. There are three moments that I find particularly striking. The first, on 19 June 1978 is when Don holds and returns to a single note- an aspect of an instinct becoming subject to experiment and finely tuned. The second moment, on 19 September 1978, is when Don repeats an initial response to gain voluntary control. On 31 October 1978 he applies this principle to the voice : the crying response changes midstream into play and experiment- so instinctual expression is being subject to voluntary control.

Bob Stuckey

Playing with sound

Already eight months and a bit late to start a record but I would like to see how Don's grammatical faculties grow so as to compare with Chomsky's ideas. Don's order of making sounds was I recall *a, ba, ge, ga bf, fb, bv, vb*. As he began to make repeated motion with his arms (6 months) so with his jaw, a sort of *yayaya* or *mamama*.

He alternates in short exchanges with us *dha - bha dha bha*. He sings with the sitar in a low croaky voice (I was playing sitar at the time) a sustained slow melodic line, not in tune. He makes a sucking-in croaking sound especially when excited and pleased. I repeat the sounds that he makes so that he sees the relationship between what he's doing and what we're doing. He may know the meaning of his name which is usually said in the intonation Don ^{Khe} pra. He enjoys all games that involve a short repeated phrase e.g. *ba ba BAA!* pause *ba ba BAA!* so that he can memorise and anticipate. I talk to him in speech and nonsense syllables. He enjoys listening to nonsense tales told in the style of an old bard with much expression and gesture.

Might be an idea to note other areas of development for comparison. Certain forms of expression seem to be innate. He frowned very soon after birth. Later (though not necessarily in this order) wide opening of eyes and mouth at interesting thing or object with a pushin forward of the lips and rapid breathing; kick with excitement or displeasure; crying of which tension in the lips is an early movement; closing the eyes when hearing a sharp or loud sound.

Hypothesis: that children can manipulate pattern in successions of sounds on a quite abstract way: that the manipulation of succession is the essence of grammar: that certain manipulation procedures only become associated with imaginative operation through hearing them used that way by elders. To try this hypothesis I will therefore be on the alert for patterns. The most elementary of these are linked to basic physiology and the basic repetition of a set of muscles as in the aforementioned *yayaya*, also heard as *ayayay*, likewise *babab* and *ababab* (will **voiced plosives** precede **unvoiced** plosives?)

7 months

19 June 1978

The first instance of what could really be called singing. Don sang a steady note, took a breath, and returned to the same note, over and over. I joined in at some points.

I've noticed two syllable words for some months now which I will just note down as I hear them

hebu

babwab

abv

He used a lot of *g* in the beginning but now he is focussing on the lips and teeth.

Since he started using *bs* he has been very fond of making trumpeting noises and the *bv* sound is associated with this.

v

8 months

7 July

He enjoys seeing people make raspberries, clicks and all kinds of mouth noises, and tries to make the same, succeeding with "tut tut" sound (front of the tongue sucked back against the palette by the back of the tongue).

16 July

Has started to make rounded mouth words *aw, how, oo*

9 months

16 August

tego for "door"

20 Aug

Has been clapping hands and making similar mirrored arm movements for over a month. Some French girls staying with us pointed out that French babies go *arar* (with guttural r's) at Don's age. This shows already the effect of parents selective encouragement from the wide variety of sounds that a baby makes.

26 Aug

due better written *duway*

Shaking head from side to side

10 months

11 September

ch, j A mass of syllables, permutations of the accumulated elements. He enjoys exchanging nonsense syllables with us. Vocalisation accompanies excited perception of any object or pattern as it is being felt with the hand and follows interesting sound.

Throwing was at first a matter of holding something, moving it back and forward and then at a certain moment letting go so that Don would not know in which direction it went. Now it has been streamlined to one movement with roughly predictable direction.

14 September

l

17 September

Forcing air through half closed **velum**

19 Sept 1978

ara

Don does an innate movement and then repeats it bringing it under his conscious control, including arm and leg flapping (an innate expression of excitement), coughing, eye closing (a reaction to taste), vocalisation (innate expression of distress, interest etc.)

11 months

11 Oct 1978

Don recognises the significance of *Byebye* and waves his hand charlston style in imitation of our wave. He recognises *No!* when being told not to do something.

General development -scooting round in his babywalker. Enjoys standing supporting himself on a low table, shuffling on the floor with a movement more resembling breast stroke than a coordinated crawl. He beats his leg on his high chair in imitation of the dog wagging tail smacking the ground.

Lots of repeated syllables *bababa yayaya* etc, with a period of about a quarter of a second.

n in *nanana*

We say *dada* he says *dada* back
(Thinks:I know how to make that sound)

17 Oct

Social response- a lifting up and hiding behind the shoulder in response to peoples gaze.

I sang three notes; Don in imitation made three sounds - counting without numbers.

20 Oct

The **plosives** *t* and *k* formed in a *nuta* and *huka*

21 Oct

A rolling of the tongue making a sort of *lyalyalya* - a **retroflex** sound.

31 Oct

In Don's behaviour one can see how short term memory of movements made is used to repeat happy accidents caused by random movements and extending innate pattern. As an example Don cried in protestation at something we did but then proceeded to

repeat his cry and then to make patterns and play with the sounds, see 19 Sept 1978.

5 Nov 1978

A repeated vocal pattern : *aaaaaaA!* the last *A* loud and high combined with beating both palms against the body. The long low *a* leads up to a sudden explosion. The adults present took this pattern up and amplified it.

12 months

14 Nov 1978

Passive vocab: *No, weewee, ahah* (shitting), *come on* , *bye bye* (prompts hand wave).

Private word: *dooway* (general purpose attention drawer)

Private word: *guzwa* for "no"

We seem to notice that two syllable utterance have become less frequent.

General progress. Standing up. Manouvering himself in standing position round furniture. Crawling in various modes including the classic opposed hand and feet.

Lifting the shoulder seems to be a general expression of social fear and is used when we tick him off or say no. The baby walker is no longer in use as he fell over a couple of times.

Can weeweee into potty when requested and sometimes likewise do ah-ahs (a word taught to me by my aunt who brought us up that we assume to be derived from the sound of straining)

Beginnings of a Vocabulary

20 November

Imitates me when I tell dogs to get out - a stern "Go!" with pointed finger. Imitates look.

Plays/experiments with high/low voice patterns.

23 November

An r with flapped tip of the tongue.

24 November

Don enjoys many synchronising games, jumping up and down while being bounced, peeping either side of an obstruction, hitting a book in time with you, bowing in time with you.

28 November

Repeated intonation patterns e.g. *high-low, in-breath* then again.

New **active** vocabulary with occasional appearance

cow

dat for "that"

hello

bye bye

29 November

Don was protesting against having his nappy changed crying and wining. During one of the wines he ended with a controlled up and down oscillation. This illustrates two points 1) the controlled activity as an extension of the innate and 2) his interest in intonation patterning long before he has any need for it. If he was in a **tonal** culture he would of course be using it syllabically very soon, but in **intonational** tongues we need a modicum of grammar first.

4 Dec

Don may pick up certain consonant-vowel combinations from a sentence eg. " you cant go there" "Go"

Active vocab: *Hot* pronounced with a scottish *ch* as in *loch*

13 months

6 Dec

Passive vocabulary: "Put it back" (lids etc.)

He may also pick out bits of intonation from an utterance eg cle-^{ver} aa-

8 December

When Don is taken into a shop where distinctively persussive music is playing he will start to beat.

oo expression of surprise and interest with open eyes.

11 Dec

The private verbalisation on discovering interesting things has given way to an

oo^{oo} with rounded mouth and open eyes which is an invitation for others to share in the discovery.

14 months

8 Jan 1979

Uses of vocal sounds to draw attention to self, to own needs, to an object in the environment.

Laughter is used as a) a pure expression b) to get the adult to do something again e.g. a lifting game c) in imitation of adults laughter not understanding the cause.

Don has developed a "word" for music a clicking of the tongue. This is in imitation of my tongue clicks when I dance with him on my shoulder but he uses it for other music besides dance music, the necessary ingredients being pitches. Any pitches may start him "singing" though not yet in tune, with obvious intention to stabilise the pitches.

He has a "word" for eating making yum yum movements with his mouth.

These "words" are part of a new ability, that of pretending. He may pretend that something is hot by touching and quickly drawing away and making a hissing sound.

Pretense is the ability to take part of a reality but not all of it. Is not pretence the basis of language? With onomatopoeic words such as *swish* or physical words like *yummy* one is clearly taking a part of the reality and using it to represent the whole. But also the arbitrary relationship between most words and what they mean is built up in a similar way. For instance if an adult is with a child and they come across a goat the adult may point saying "goat". For the child the animal and the sound are part of a total reality. He can then later use the sound to evoke/suggest/recreate the rest of that reality i.e. he is pretending to be with the goat again (all this after much repetition).

10 Jan

Don and Cara, his younger cousin, were fighting over who would play with the cassette machine. He took hold of her hand and bit it. He has not acted in the same way to adults though he has bitten in experiment and noticed it hurts people. Is biting and innate form of human aggression? Is aggression against weaker people innate?

Has learned to kiss hello and goodbye.

Did coy shoulder lifting expression to his own image in the mirror.

Passive vocab: "Clever boy" whereupon may nod head in imitation of adults approval. Also shakes head on hearing "no".

12 Jan

Passive vocab "juga juga" meaning "the object rattles:try it" where upon Don will shake it.

Clare, his aunt, with the help of wooden models, is developing the routine:

What does the cow say? *moo*

What does the dog say ? *wow wow*

Don imitates the dog's singing with the viola (taking a part of reality: imitating/pretending/symbolising)

14 Jan

Concentrating is accompanied by regular breathing.

4 February

Passive vocab : "Picked up"

Lots of vocalisations now

Has assimilated adult approval and will nod head when he knows he has done something deserving of it.

Active vocab: Scottish *ch* for dirty or messy, as in "Loch". Part of our "Yuck" + repulsed expression. *Note Darwin on expression what page?*

15 months

1 March

Active vocab: *door, dad, dog, oh dear* in imitation of Cara. *Wee wee* (ocasionally)

Passive: kiss, nose (can point to it) as part of sentence

Where's your nose?

Active: a breathed Scottish *ch* expressing interest in an object.

Don picks up on the pattern of this poem-game where the child sits on a adults knees so that they face each other and hold hands. At the end of the poem the child is allowed to fall backwards and is then hoisted back up again ready for a repeat of the poem.

The baby goes tee hee hee

The gentleman goes trip trip

The farmer goes gallupa gallupa gallupa

The old man goes hobble hobble hobble down the ditch
and up again.

3 March

Passive adverbs with matching intonation: u^p do^{wn} whereupon moves whole or part of body

Active: *door*

His reward for speech is largely our "clever boy" though it can sometimes bring him direct rewards i.e. "door" may cause a door to be opened.

16 months

9 March

Active adverb: *u* for "up"

Active name: *Liz*

12 March

Passive syntax: where're your eyes? whereupon blinks eyes. Note key word at end of sentence.

Passive syntax: Daddy's nose whereupon points to same.

15 March

Don has learned Ring a Ring o Roses and enjoys including everybody (not the words of course. Note: this is a children action song where several people dance round in a ring and at the end fall to the ground.

25 March

Active adverb: *out* pointing to the door in imitation of our command to the dogs.

Active verb: *look*

Active adverb: *back* as part of "put it back".

Pointed to ears and said *door* : concept of an entrance ?

Passive noun: *bikshi* for "biscuit"

1 April

Active vocab: *hat*

Active vocab: *baa baa* (sheep)

I think "hat" has been active for some time but I neglected to record it.

3 April

Passive names "Granny, Kieron"

Passive syntax "Where's Granny?" whereupon looks towards Granny.

4 April

Passive vocab "ball"

Active vocab: *milk*

Active vocab: *biscuit*

17 months

16 April

Active vocab: *broom broom* for vacuum cleaner.

22 April

Passive syntax "Give it to ..."

2 May

Active vocab: *apba* for "apple" which begun as *up* already in vocabulary.

18 months

9 May

Don has developed his own word *ba* which means "food" and "drink" or "pass me that food or drink". It might be a generalisation from apple (*apba* in his pronunciation).

He expresses pleasure when an utterance brings him the result he wanted and displeasure when not.

Lots of grabbing at the moment.

15 May

Shaking head for no as refusal of food.

Active vocab: *car*, *ball*.

22 May 1979

Don can now identify and apple in drawings saying as he points *apba*. A drawing is also pretending i.e. part of a reality is standing for the whole.

19 months

7 June

When you say "What time is it?" he brings you alarm clock or watch.

Spontaneously points to things he knows the words for, saying it.

While we converse he spontaneously picks out known words and repeats them.

Active vocab: *more* which started as *bo*

Active vocab: *Hello* (which disappeared from use for a while). He says this when the phone rings.

Any spherical shape he calls *ball*.

A wider repertoire of animal noises;

What does the cow say? *moo*

What does the dog say? *wow*

What does the cat say? *oow*

What does the sheep say? *aa-aa*

Passive: gets toe and tummy mixed up.

Passive syntax: "funny man" which has limited meaning for Don viz - the skeleton hanging on a thread in my art room which we go and blow making it turn around and dance. When Don walked into the music room I said "Who's this funny man?" whereupon he started to blow as if blowing the skeleton.

Active adjective: *dirty*

Active exclamation: *oh dear!*

Afterthought: *Is this the first active two word combination?*

16 June

Its getting hard to keep up with his vocab growth.

Active noun: *tractor*

Imitates whole phrases *All over the place* general intonation with a few correct **phonemes**.

20 June

Active noun: *tea*

Two Concept Syntax

Afterthought: *these are the first instances where both concepts are represented as words. There have already been many examples where one of the concepts has been implied in the senario or in a bodily gesture or facial expression.*

23 June

Don's first piece of active syntax: after I left the room he said to Liz *daddy...go*. He has used *go* before in the imperative telling the dogs to leave the room.

26 June

Active name: *Dudy* for "Judy"

Active noun *back* for "bike"

Active name *Car* for "Cara"

What does the cockerel say? *cockedoodeldoo* (much garbled).

New vocabulary is made from mishearing/adapting known words.
up becomes *oup* for "out" and *upba* for "apple"

Active vocab: *tractor* pronounce *llaxa* beginning with a welsh *ll* that is the Scottish *ch* followed by *l*.

27 June

Don invents gestures e.g. hunching his shoulders to say he wants to put his coat on or putting his finger in his mouth to say he wants food.

19 months

15 July

Active noun: *cheese*

Invention of gestures: tapping bare foot on the ground to indicate he would like shoes on.

16 July

Active noun: *lorry*

Active name: *Gug* for "George"

Invented symbols: goes *a^{aaaa}a* when he wants a nursery rhyme to be sung. Jogs in time to Humpty Dumpty .

17 July

Active verb/noun: *sleep*

Active noun: *grass*

24 July

Active noun: *dok* for "sock", *bebe* for "baby" which also serves for "paper" and "peekaboo". Teddy bears and furry toys are also called *bebe*.

Collecting the tools of grammar

28 July

Active adjective: *other* used to refer to the other hand. If we give him a mug he will say *other* until we give him the Tower of London mug.

Phonetically Don associates *other* with *ah-ah*. This is his first class-of-objects word.

Invented symbols: Don makes a kissing noise when he wants you to be nearby and paying attention to what he's doing.

Active noun: *do* for "shoe"

30 July

On hearing rhythmic music on TV Don began to flex his spine almost in time.

Active name: (song/dance title) *wee wee* or *wing wing* or somewhere between for Ring and ring a roses when he wants to play it.

3 August

Don uses *door* for many inside/outside concepts as when he wanted us to open a clock so that he could see what made it tick.

21 months

7 August

Active noun: *boo* for "spoon"

The plural

12 August

Active noun and plural suffix: *birds*

Active proper noun: *Kiki* for Kieron

Active noun: *nana* for banana also used as proper noun for Nadine and Daniel

Active noun: *lorry*

Active noun: *uway* for "rain" pointing to wet head.

Passive syntax: "What does the lion say?"

Active animal noise: *aaah!* (also for kangaroo)

Active adverb: *ot* for "off "

13 August

Active noun: *towel*

Active proper noun: *Bo* for "Bob"

Active proper noun: *Do* for "Don"

16 August

Active syntax: *aga* for "all gone". Note, *all* is not yet in use as a separate piece of vocabulary.

Active adverb: As I showed a dead moth to Don he said *away* meaning "throw the moth away". So although he is not using very much spoken syntax he is obviously using *conceptual syntax* and has been doing for a good while, words like up, away, gone, more, off are only just the spoken parts of conceptual syntax configurations. In this case "away" was conceptual syntax only partly spoken.

All verbs, even when spoken in isolation are part of conceptual syntax configurations. "Gone" may be part of "Doggie has gone".

Some of the conceptual syntax may be expressed in gesture, some in speech e.g. pointing to an object and saying "ball" would be fully converted to speech as "That's a ball"

A noun is an act of categorisation. It is simpler than verbs and prepositions in that these latter are categorisations of the kinds of movements and spatial events that occur to nouns. Thus we can contrast:

1) categorisation of objects

2) categorization of movements and space/time configurations relating to objects.

Perhaps our language syntax is designed for the purpose of describing objects of *fixed shape* and their space/time configurations. Some nouns like *swarm*, *wirlpool*, *herd*, *jet* (of water), *crowd*, already contain space/time configurations but these are in the minority.

Don will often produce a stream of unrecognisable syllables presumably in an attempt to express some concept. These syllables are marked by their regular rhythm.

Though Don can say *Cara* he prefers *Caca*. His list of repeated syllable words is

long *Kaka*, *Xixi* (Kieron), *Xexe* (Clare), *Thethe* (Judy), note a good *th* sound, *Fafa* (Fanny), *Meme*, *Dada*, *ah-ah*, *Wing-wing* (Ring a ring a roses). *Afterthought: these are all proper nouns.*

27 August

Noun: *door* for "sword"

Preposition with confusion/flexibility: :says *out* when he wants his shoes *off*.

Afterthought: another language might use the same preposition. Don will eventually adopt the conventions of English.

21 months

8 September

For some time Don has been calling out to certain people with two steadily held pitches eg *Kaka*, *Xixi* (Kieron), *Dada*. This morning I heard him singing a series of steady notes to the syllable *da*. The notes did not seem to be harmonically related. Liz has repeated that he has been singing the word *dada* at different places in his range experimenting with the sound.

Other words are also spoken in this way such as *apba* (apple) and *cha cha* (tractor) with Scottish *ch*.

9 September

Don uses *out* to remark when a tune on the cassette player has finished suggesting innate unity of space/time conception.

10 September

aga for "all gone" usually said on two very steady notes up to a musical fifth apart.

11 September

Liz reports that Don was singing today to the sound of the spin drier (a hum with clear harmonics).

Proper noun: *Amy* a little friend

Syntax: verb + adverb: *go away*

13 September

Noun: *dik* for "stick"

Proper noun: *Koko* for "Connel" (dog's name)

Proper noun: *Bimbe* for "Trimble" (dog's name)

Adaptation of one word to become another:

car to *kaka* to *koko*

bo (more) to *bimbe*

no to *nana*

out like *oh dear*

29 September

Adjective: *wat* for "wet" used for rain and nappies

Noun/verb: *dudu* for "whistle"

Nouns: *bucket, potty, pocket, butter, biscuit* have come into use about the same time

Verb: *open*

Out is being used for lights being turned on or off

Refinement of proper noun: *Dudu* for Daniel has been changed to *Dang*.

1 October

Nouns: *water, man*

3 October

Propernoun: *Gen* for Granny

Propernoun: *Sessa* for Sarah. *Afterthought: another example of repeated consonants in peoples names.*

Syntax: adverb+adverb: *up-down* before driving over a bridge or up a hill or slope.

Syntax: noun+adjective: *car wet*

Don uses *out* for switching on or off the TV or tape recorder.

Exclamation: *ow* to express pain

Syntax: proper noun+past participle *Xixi gone* (Kieron)

The Negative

Syntax: verb+negative: *don't* used as a command. *Afterthought is this the first use of a negative? Is this also the first use of the word "do"?*

Affirmative: *way* a word of Don's own invention which he seems to use for "yes".

Noun: *gung* for gun. Compare *Dang* for Dan.

4 October

Noun: *boon* for "moon". Don has had this for about a month. It is now a fully fledged "moon".

5 October

Perhaps *way* is Don's attempt to say "yes". Both words begin with a **formant** glide. The word *ah-ah I* which we used for shitting Don generalised for both shitting and pissing. He now uses it only for pissing and uses an onomatopoeic raspberry for shitting.

He uses a raspberry-like sound in an attempt to pronounce the word Mathew - only the "-thew" part. Though I have heard him use a th, he chooses to make a raspberry followed by -iuw.

He seems to be tuning into **diphthongs**. His "out" is much better these days.

23 months

7 October

Syntax: negative+noun: *no door* meaning the package will not pass under the door.

Noun/verb: *work* used in imitation of me going out of the door to work. Does he understand what work means and is imagining the complete action or just going out of the door?

Don and Cara take turns to hide behind a pillar; everyone says "Where's Don? Has he gone away?" When Cara hid behind the cupboard Don joined in the pretence saying *Away. All gone* though she was in fact quite visible.

Collecting pronouns

Pronoun: *mine* (about five days old)

Noun: *bin* (for rubbish)

Mixed syntax:noun+gesture: *way* (pointing) in response to "Which way shall we go?"

Afterthought: quite an abstract noun and interesting mixture of gesture and word.

Noun: *wawa* for "piano"

8 October

Liz reckons Don has been able to whisper for about a month.

Today he was making unvoiced Welsh ll changing the formant from high to low at a slow and regular tempo — __ — __ — __ *Afterthought: he is systematically learning control of speech sounds in a playful way without any intention to communicate an idea.*

10 October

Pronoun: *I* when claiming food on a plate

Noun: *kite*

Syntax: associated nouns: *Cara mum* meaning Cara's mum *Afterthought: this is the first instance of the possessive relationship between two nouns.*

12 October

Syntax: noun+noun: associated nouns: *key door* omitting "for the".

Proper noun: *Tin* for Tintin.

Mixed syntax:verb + subject implied: *move* used as a command.

17 October

Syntax: proper noun +implied verb+noun: *Koko....dik* meaning "Connel (the dog) hit me with a stick" ; said while hitting himself on the head. Gesture mixed with word.

Since this happened two days ago Don tells everyone he meets, often over and over.

Whilst relating something very important Don opens his eyes wide and tilts his head. Innate or cultural?

18 October

Noun: *cart* for "carrot"

20 October

Syntax: associated nouns: *car wawa* meaning the car is beside the piano.

21 October

Noun: *money*

Noun: *buna* for "gun". From banger?

Noun: *tick tock* said while I was putting on Don's sock (*dock*).

22 October

Noun: *dayner* for "danger"

Multiple concept syntax

24 October

Syntax: *Koko ... Bimble...fight* for Connel and Trimble are fighting.

Verb: *fight*. The first time a new word has made its first appearance within a piece of syntax.

27 October

Noun: *knee*

Verb: *catch* always with clutching hand movement. At present only used in the car for chasing other cars.

Noun: *bag*

Noun: *man*

Noun: *tree*

Noun: *tch tch* for "train"

Noun: *muk* for milk

Noun: *werwer* for lorry

Noun: *bubble*

Proper noun: *Dina* for Tintin. *Afterthought: rendered as "Tin" on 12 October.*

28 October

Adjective: *bib* Don's word for "too big". Being comparative this is perhaps active syntax.

Adverb: *roun* for "round" used to describe pictures of trains with the coaches trailing on a curved track. Space/time concept.

Verb as passed participle: *duck* for stuck, usually referring to self. *Afterthought: a verb needn't be learned infinitive first, unlike the classroom procedure.*

Syntax: adverb + adverb: *up-down* meaning (also) upside down. *Afterthought: space/time concept. Compare the different meaning given to this combination on 3 September*

Noun: *mok* for moth.

Syntax: *door...no...work*. Don couldn't open the door on a toy car.

30 October

Exclamation: *oops*

2 November

Syntax: verb + negative *kang* for can't.

Proper noun: *Fanny* as well as *Fafa*.

Syntax: *ou'a way* for out of the way, ' being a **glottal stop**. A week old.

Syntax: *gone...ball...gone* (word order unconventionalised)

Syntax: *mulk...Don* meaning milk for Don (request).

4 Nov

Noun: *house*

Syntax: *potty...gone*

Syntax: *can't* (with t)

Noun: *muk* for nut

Noun: *potata* and *potatata* for hippopotamus (first 3 and 4 syllable words perhaps trying to get the syllables number up to 5 as in the original).

Syntax: *dirty boy* (good liaison, no break between words).

5 November

Syntax: *milk...out* for the milk comes out of the cows udder. The interval between the beginning of each word is about a second.

Noun: *ponu* for "pony"

Noun: *tin*

Syntax: *bikshi...tin* for biscuit tin.

24 months

7 November

Adjective: *duk* for dark

Nouns: *un* for orange and engine.

8 Nov

Noun: *neck* predated *nut* which started off like it.

Syntax: *Dada...ah-ah* for Daddy is doing ah-ah.

Mixed syntax: *Can't...(rasberry)* for "I can't shit" when first sitting on the potty followed by *Can't ..ah-ah*

Syntax: he likes to relate associated ideas like *Dada...work...car...bag*

Proper noun: *Paula* predated-

Proper noun: *Polly*

Noun: *wood*

Noun: *floor*

Syntax: *Don ...takta* for Don's tractor (genative)

Verb: *fine* for "find"

Syntax: *bike...fine* for "Let's go and find the bike"

Noun: *fire...work* for firework. *Afterthought: or is this syntax, putting together two nouns to fuse into a specific meaning? Or separating parts of a composite word. Don already had "work" as separate item in his vocabulary.*

10 November

Syntax: while playing a game of hiding my feet under the bed clothes *toe...gone, toe...more* i.e. bring your toe out again.

Syntax: *gik...fire, gik...fire* for "the sticks are on the fire".

11 November

Noun: *hand*

Syntax: *ou'awawa* meaning "get away from the lorry"

12 November

Noun: *bird*

Pronunciation note: *downg, dong* for down, Don. *Afterthought: he has yet to chose whether to make the semi-vowel with the front or the back of the tongue.*

Noun: *shane* for train where *sh* is made by blowing air through closed teeth.

Mixed syntax: *Dada...all gone, Mama...all gone* for "Daddy's soup is all gone", "Mummy's soup is all gone". *Afterthought:some elements in the syntax are implied.*

Syntax: *dik fire* for the sticks are on the fire (see 10 November for variation)

Syntax: *shoe...out* for the man's shoe has come off (see 22 August 1979)

Verb: *wait*

Syntax: *wait..Bob*

Noun: *upkot* for apricot

Mixed syntax: *bed* while shaking head i.e. "I don't want to go to bed".

14 November

Noun: *camel*

Noun: *polo* (a brand of mint sweet)

Noun: *clock*

15 November

Verb: *hope* for "help" used in the imperative.

16 November

Syntax: *find...Kiki*

Syntax: *no...key* for can't find the key.

18 November

Mixed syntax: *want* with shaking head meaning "I don't want x".

Noun: *fwog* for frog

Mixed syntax: *water...eyes* for the leopard has water coming from his eyes or in his eyes.

19 November

Exclamation: *Oh God* expression of annoyance.

Preposition: *on* describing a torch, i.e. switched on

Noun: *tight* for typewriter

23 November

Improved pronunciation: *Cara* (instead of *Caca*)

Adjective: *naughty* (addressed to the dogs)

Noun: *toast*

Is quite interested in rhymes at the moment *money...honey...Fanny*

Noun: *amog* for ambulance

24 November

Don responds to the questions - What is that? - Who is that?- Where is....? -What did you do today? He does not yet respond to the question Why?

Noun: *bean*

Verb/noun: *dang* for dance (the double consonant *ns* has not yet been mastered).

Don confuses moon with baloon probably thinking that the former is one of the latter.

Verb: *sit*

Noun: *fang* for "van" (see semi vowel 12 November)

30 November

Noun: *cupba* for cupboard

Noun: *doctor*

Noun: *red* for bread

Verb as past participle: *bookoo* for broken *Afterthought: this is an instance of making a past participle of a verb by changing the vowel and adding the suffix "-en"* .

Don now uses *want* in the positive.

Noun: *meat*

Verb: *kanu* for carry.

Syntax: *coat...out* for take you coat off

2 December

Noun: *date* (the dried fruit)

3 December

Syntax: *Don want milk*

Noun: *head*

Adjective: *bad*

5 December 1979

Noun: *head*

Don was looking for one of his tractors. Liz offered him his blue one: he said "no" pointing to a green and meaning his green one. *Afterthought: perhaps Don had the concept green but not the word so had to pick out another green object instead.*

Adjective: *bad*

25 months

6 December

Noun/verb *cunnel* for cuddle

Noun: *mattey* for nappy

Noun: *top*

Noun: *fwane* for plane

Adjective/adverb: *ok*

7 December

Syntax: *horse... catch... dog* for the horse is chasing the dog.

8 December

Verb: *hand* now used as a verb meaning "hand me such and such" or "put it in my hand".

Verb: *see*

Verb: *djaw* for "draw" (images on paper)

Starting to count

9 December

Verb: *wite* for "write"

Syntax: *Don...in* for "I would like to come in"

Syntax: *woung woung* for "round and round".

Numeral: *one*

Numeral: *two*

We say nursery rhymes leaving a word for Don to say , for example:

Hickory-dickory*dock*

Them mouse ran up the*clock*

The clock struck.....*one*

The mouse fell.....*down*

Hickory-dickory.....*dock*

Syntax: *broken* (pronunciation refined from 10 november)

Brand name: *bin* for "Ribina", a soft drink.

Brand name: *polo* the mint with the hole.

Verb/noun: *seep* for "sleep".

Comparative adjective: *Doctor...better* for "The doctor will try to make the man better"

Noun: *fwan* for "swan"

Adjective: *sore* meaning "it hurts".

Syntax: *more...wed* for "more bread"

Syntax: *train...go...round*

Noun: *matsy* for "marmalade".

Verb as past participle: *weshed* for "dressed" *Afterthought: an example of making the past participle by adding the suffix "-ed"*.

11 December

Noun: *taa* for "towel".

Adjective: *nice*

Noun: *pen* with the p pronounced rather like a wh.

Mixed syntax: *um* while shaking the head meaning "I don't want to eat it".

Adjective: *ready*

Syntax: *moff* for "come off"

Syntax: *fwon* for "another one of those"

12 December 1979

Syntax: *Sit...dang* for "sit down".

Syntax: *more...catch* for "chase me again".

About a month ago Don demonstrated his enjoyment of the ambiguity of language by crawling backwards in the bath as we washed his back. He laughed an repeated *back...back*.

Verb/noun: *fwatch* for "watch".

Plural suffix

13 December

Syntax: *one bike, two bikes* . First appearance of plural suffix.

Adjective: *pretty*

Draw: *draw*

14 December

Noun: *night*

Syntax: As Liz drove passed the school where I work don said "*Don...Daddy...see*" presumably for "Don might see Daddy". Note concept order is still unconventionalised.

15 December

Proper noun: *Maffew* for "Mathew"

Syntax: *Dark...no* for "It's not dark"

Syntax: *funny man*

Syntax: *book...sore* meaning a page was torn. Note identity of objects and people.

Adverb: *upstairs* used for going uphill in the car. *Afterthought: a space/timeconcept though with uncoventional generality.*

Verb: *puss* for "push"

Adjective: *big*

Syntax: *big tractor.*

Verb: *play*

Inflection of a verb in the third person singular

17 December

Syntax: *Talks...man* for "the man talks"

Noun: *lady*

18 December

Noun: *noise*

Adjective: *ready* (of food)

Syntax: When asked "who do you love?" Don replied "*Nana...not*" *Afterthought: food relations were resotred on 20 December,*

Syntax: *boys*

Noun: *seesaw* for "sausage" probably borrowed from the nursery rhyme "Seesaw Margery Daw, She shall have a new master".

20 December

Verb: *fit* as in shoe

Verb/noun: *hanoo* for "handle". Compare *cunoo* or *cunel* for "cuddle".

Syntax: *Mummy...come..sit down...watch.*

Syntax: *Letter...up* for "Stick the letter up".

Noun: *temi* for "television"

Syntax: *Temi...watch.*

Syntax: *Nana...lorry...bought . Afterthought: past tense through vowel change (strong verb),*

Syntax: *shop*

22 December

Noun: *coffee*

23 December

Adverb: *now*

Adjective: *right* . Both words said before beginning a task.

Syntax: *Daddy...see...baby.*

Noun: *party*

Noun: *parcel*

Syntax: *Daddy...see* (as an imperative or suggestion) *Afterthought: it is unconventional to use "see" in the imperative. "Look" , implying a deliberate act, is preferred.*

Noun: *miwer* for "mirror"

Noun/verb: *sheep* for "sleep"

Noun/verb: *shide* and *shige* for "slide"

Adjective: *heavy*

24 December

Verb/noun: *cough* . This word I taught Don formally by comparing it with *coffee* as he was commenting on my cough with mixed-mode syntax saying "*Daddy*" then doing a fake cough.

Conjunction: *and*

26 December

Verb: *make*

Syntax: *eyes closed* . *Afterthought: syntactically complicated with plural and passed tense suffixes*

27 December

Syntax: *Don...drink...gone* for "Don's drink isn't there".

Odd thought: though conceptual syntax can involve networks verbal syntax can only consist of strings. For example "you can catch a green bus or a red bus" stands for the network

a red bus

you can catch <

a green bus

Noun: *sorwy* for "story"

Noun/verb: *tayse* for "taste" *Afterthought: the double consonant in these last two examples requires deft manipulation of the tip of the tongue where the following ks involvs the back then the front of the tongue.*

Name: *Hicks* the name of our neighbour

Noun/verb: *hope* for "help" . The consonant juxtaposition *lp* is yet to come.

Noun: *piece*

Noun; *bit* of jig-saw

Syntax: *All back* . This is the first time *all* is articulated separately from *all gone* yet said in the same high-low intonation.

28 December

Noun: *lady*

Syntax: *bit..dark* for "quite dark" . It is amazing for *bit* to be used comparatively so soon after its first usage for a jigsaw piece.

Noun: *zeba* for zebra. *Afterthought: one consonant will have to do for the time being.*

Noun: *mikshy* for "music" , an obvious adaptation of *bikshy* for "biscuit" .

29 December

Noun: *shadow*

Pronunciation: *cunoo* has now improved to *cudoo* for "cuddle".

Syntax: *Wheel come off.*

Syntax: *Lie down!* to dog.

Syntax: *Apba...and...muk* for "apple and milk" also

Muk...and....apba

Noun: *kitchen*

31 December

Syntax: *like Daddy* on seeing a man play flute on TV

Noun: *seweoo* for "cerial"

Noun/verb: *post*

Verb: *peez* for please

Syntax: *ar' foom* for "art room" with **glottal stop** represented by apostrophy

1 January 1980

Noun: *button*

Noun: *bum*

Adjective: *carefull* *Afterthought:the first usage of the suffix -full*

Verb: *ass* for "ask".

Adverb: *some*

Verb: *buy* . *Afterthought: past paticiple already in use.*

2 January

Verb: *long* for belong

Mixed syntax: *long...mattey* for "That belongs to the nappy"

3 January

Noun: *ma'moo* for marmalade

Proper noun: *Peter*

Adjective: *white*

Noun: *bucket*

Noun: *cama* for camera

26 months

6 January

Verb: *might*

Syntax: *might fall* Afterthought: *this is the first expression of probability*

Noun: *size*

7 January

Noun: *mess*

Syntax: *sit down on knee*

Verb: *read*

8 January

Syntax: *peanuts...butter*

Noun: *purse*

Noun: *meter* (electric)

10 January

Noun: *penis*

Syntax: *Tea out'away* for "Mover your tea out of the way".

Syntax: *upside down* Afterthought: *this is a refinement of an earlier usage up-down of date xxx*

12 January

Syntax: *Man hiding.*

Syntax: *Don crying.*

Noun: *wump* for "jump"

Noun: *wumper* for "jumper"

13 January

Noun: *bottom*

Noun: *kaker* for "craker"

Noun: *muzji* for "muesli"

Noun: *tenoo* for "telephone"

Syntax: *Train is?* for "where is the train?"

Verb: *is*

14 January

Noun: *hexun* for "hexagon" , learned because is the name of a local community building.

Noun: *boiler*

Syntax: *sat?* for "What's that?"

16 January

Syntax: *Money...is...gone*

17 January

Pronoun: *someone*

Noun: *saw*

Noun: *donkey*

Syntax: *fankoo* for "thank you"

Verb/noun: *fwing* for "swing"

Noun: *llide* (Welsh *ll*) for "slide" the playground apparatus

Adjective: *long*

Syntax: *long time*

18 January

Verb: *got*

Verb: *does*

22 January

Verb: *have*

Syntax: *Have it* sometimes meaning "I want it".

Note: it is remarkable that parts of the verb to be, to have and to get, and some pronouns, arrive at a similar time.

Noun: *noise* for "nails"

Syntax: *Cut...noise* for "Cut...nails."

Verb: *long* for "belong". didnt we have this earlier? Editors comment. didnt we have this already

Name : *Dawee* for "David"

23 January

Syntax: *little one table* for "the little table"

Syntax: *Let go.*

Noun: *scissors*

Proper noun: *Soopy* for "Snoopy"

25 January

Noun: *heater*

Verb: *whistle*

Adjective: *happy*

Noun: *party*

Syntax: *happy party* for "birthday party"

Noun: *shoulder* for "soldier"

Pronoun: *my* formerly missaid as mine e.g. *mine bag*

Noun: *cake*

Verb: *pass*

26 January

Adjective: *coss* for cross

Adverb: *too*

Syntax: *Mummy...coss...too.*

27 January

Syntax: *Nice and warm*

Syntax: *Where's my pen?*

Pronunciation: *solder* for "soldier"

Syntax: *Little one bucket* for "the little bucket" as opposed to the big one.

Noun: *benchy* for "bench"

30 January

Verb: *give*

3 February

Syntax: *Get one bikshi* for "Get a biscuit"

Adverb: *way* for "very"

Noun: *kata* for "kettle"

Syntax: *Kata way hot* for "The kettle is very hot".

4 February

Noun: *lloor* (Welsh *ll*) for "floor" *Afterthought; making a fricative with the back of the tongue rather than with the lips and teeth.*

Adverb: *soon*

Syntax: *Mikshi coming soon* for "the music is coming soon".

Noun: *sun*

Verb: *hurt*

Noun: *keem* for "cream"

26 months

6 February

Conjunction: *with*

Syntax: *Now play with solder* (soldier)

Adjective: *dangeous* for "dangerous". *Afterthought: "danger" was used on xxx. Don is now learning the suffix -ous to turn an noun into an adjective.*

8 February

Syntax: *milk float*

9 February

Noun: *toilet*

11 February

More frequent use of articles.

Syntax: *round 'a corner* for "round the corner"

Pronoun: *me*. *Afterthought: Don is gradually filling in the table of pronouns.*

Syntax: *Cara push me*

12 February

Adjective: *peshious* for "precious"

16 February

Adverb: *fwoo* for "through"

Demonstrative pronoun: *dere* for "there"

Syntax: *fwoo dere*

Adjective: *hungwy* for "hungry"

18 February

Noun: *drawing*

The basis of language seems to be there. There is now taking place:

- 1) the conventionalisation of word order
- 2) the addition of **articles** (the, a, some)
- 3) filling out of the missing pronoun forms , I, you, yours, they et.c.
- 4) fuller manipulation of tenses
- 5) addition of prepositions and conjunctions to better articulate already expressed concept strings
- 6) perfecting pronunciation

Henceforth I will ignore pronunciation and vocabulary and concentrate on grammar.

Don un a water for Don (went) under the water. Does *a* belong to under or the?

19 February

I'll do it (has been saying Don do it for some time)

What? (asking for a shout to be repeated)

Don't fall down the stairs.

This one?

20 February

Doesn't work.

22 February

Sore baby ears (that will give the baby sore ears).

Mind your finger.

23 February

Lots a mess (lots of mess)

24 February

Let Don do it.

25 February

Don catch him.

1 March

Where's my boots?

Don is using *where's* for both singular and plural probably not realising the contraction of *where* and *is* or not being aware of the word *are*. He is aware of the word *is*. It was used at first in place of *where* e.g. *Bikbhi is?* for "where is the biscuit?"

Watch tenu not for "I'm not going to watch TV"

2 March

Iow get it for "I'll get it".

Mussa touch Weesibik for "You mustn't touch the Weetabix (breakfast cereal brand)".

This one.

Get later for "I will get it later"

Nex one for next one.

3 March

Don one o dose for "Don wants one of those"

Nover one for "another one".

Where^{are} you? in sing-song voice.

One bit go n ere for "One bit goes in there"

Who's dat? (that)

What are dose? (those)

5 March

Too much.

Don outside with Cara. Note: with

27 months

7 March

Don't throw it away.

Where's our car? Note: our

Where's your car?

8 March

Liz asked "Did you make that?" Don replied,

No. Mummy dood that. Afterthought: this is a classic example of a child applying a newly aquired rule of grammer (to make a past tense add -ed to the infinitive) on a verb where another convention applies, that is vowel change, in this case to "did".

With us Note: us

13 March

Bring my Wessibik down there.

Not fit in.

Look out de window.

18 March

Don doesn't like it, chocolate. Note: a word order used in French

His penis Note: his

I'm making a fire.

20 March

You'll fall out.

23 March

Car won't start. Note: won't

24 March

Don often says the positive when he means the negative. For example;

Don like chocolate for "Don does't like chocolate".

27 March

Don't quirs me for "Don't squirt me".

This all wet.

28 March

Yes, Daddy in the bath to express the idea of urging me to get in the bath.

30 March

Where's my new soldier what Clare bought it. Note: relative clause.

31 March

Could Don go outside?

Who's outside?

For you.

1 April

I done it the wee.

I can't open a door. Afterthought: probalby meaning "the door" or something in between "the" and "a".

4 April

Don made it.

What happened, Mitri (short for Dmitri, his younger brother)

5 April

In contradiction:

Yes, the toys on the table.

Don't draw in my book.

29 Months

10 April

I wanna come out.

11 April

Shall we play na cars? Note: subject-verb inversion to create a question.

16 April

Regarding emotional development: when we scold him he tries to preserve his self esteem by saying "*You naughty*" and smacking us.

If Cara, don's contemporary wants something then he wants it and vica versa.

17 April

Better go outside.

20 April

My been talking. Note: *My* mixed up with *I've*.

There is now a break in the record as Don has been away for over a month on holiday.

30 months

23 May

Mitri very naughtyly yesterday.

27 May

Will you put the top on? Note: *will you* like *shall we* is a nice prefix to the command *put the top on!*

30 April

It's flown away.

Note: gradual accumulation of past participles including the recent *fed*.

I'm gonna put the engine along here so the cars can come along here. Note: so linking a subordinate clause.

Gonna is much used e.g.

Gonna fix my engine.

2 June

Don uses *my* for *I'm* and *I*, *this* for *him*, *his* for *hers*. Like foreigners learning a new language it takes a while to pick up tables such as:

I me my mine

you you yours yours and so forth.

Anybody

Hava for "have to"

Oh, God!

4 June

It's gone for "She's gone"

Not just a little wee, a big wee.

Stop eating!

5 June

I saw the church. Note: past tense.

Eat your that ! (when the name of food is not known) *Afterthought: the convention is to say "Eat your whatever (that is)!"*

31 months

9 June

Don has learned *just* and found it can be used anywhere.

I just gonna do a poo,

11 June

Yes toys on the table is a logical contradiction of

No toys on the table.

You might hurt yourself. Note: use of probability and reflexive pronoun.

15 June

I at home.

16 June

I didn't.

19 June

Don't talk cos I'm making a bridge. Note: causality

Not that part, not those parts (in quick succession using *that* in singular and plural).

20 June

My turn next.

25 June

Should I?

Should I cut the finger?

Don has started to lay stress on a single word in a sentence:

You're NOT to take my gun away.

27 June

Last time.

2 July

I could drive it like that.

Emotional development: Don is proud of the fact that he has taken pictures with the Polaroid Camera. He rams it home by saying;

YOU didn't take the picture.

Here the language record ends.

Commentary as afterthought.

The grammar of the imagination is far more complex than that of language. Concepts are linked as a gigantic multidimensional network. Language has to convert part of that network into a single sequence of words. The order in which the concepts are strung out is determined by the conventions of the child's mother tongue. Language is only one of the many ways that a child uses to express his thoughts and to find out yours. First language usage is always a mixed syntax of objects, movements, facial and bodily gestures. It is a long time before a child can develop sufficient language skills to express him/herself keeping perfectly still and with no facial or bodily gestures. Telephone speech has to be carefully composed to make up for the absence of these props and written speech more so.

In making the conversion from the network to the single string it takes some time for the child to get the measure of the generality or specificity implied by a particular word in a language. For example on 3 August 1979 Don applied *door* to any boundary between the inside and outside of things. He had still to learn that its conventional meaning is more limited. However, we need still to be ready to apply a more general meaning in poetic expressions such as "the door to the heart".

Don took some time to master double consonants, and to distinguish between the various fricatives, semi vowels and diphthongs. These features are not essential to create sufficient variety of sounds for a language. For instance double consonants are absent from Japanese and fricatives are absent from many aboriginal languages in Australia and New Zealand. On the other hand Don did not have to master the tonal distinctions of many oriental and African languages or an elaborate system of gender and inflections as in German or Latin or the clicks of the Bantu.

Lenneberg's table of developmental milestones in motor and language development from *Biological Foundations of Language* 1967 J. Wiley & Sons Inc.

TABLE 4.1. *Developmental Milestones in Motor and Language Development*

At the completion of:	Motor Development	Vocalization and Language
12 weeks	Supports head when in prone position; weight is on elbows; hands mostly open; no grasp reflex	Markedly less crying than at 8 weeks; when talked to and nodded at, smiles, followed by squealing-gurgling sounds usually called <i>cooing</i> , which is vowel-like in character and pitch-modulated; sustains cooing for 15-20 seconds
16 weeks	Plays with a rattle placed in his hands (by shaking it and staring at it), head self-supported; tonic neck reflex subsiding.	Responds to human sounds more definitely; turns head; eyes seem to search for speaker; occasionally some chuckling sounds
20 weeks	Sits with props	The vowel-like cooing sounds begin to be interspersed with more consonantal-sounds; labial fricatives, spirants and nasals are common; acoustically, all vocalizations are very different from the sounds of the mature language of the environment
6 months	Sitting: bends forward and uses hands for support; can bear weight when put into standing position, but cannot yet stand with holding on; reaching: unilateral; grasp: no thumb apposition yet; releases cube when given another	Cooing changing into babbling resembling one-syllable utterances; neither vowels nor consonants have very fixed recurrences; most common utterances sound somewhat like ma, mu, da, or di

TABLE 4.1 (Continued)

8 months	Stands holding on; grasps with thumb apposition; picks up pellet with thumb and finger tips	Reduplication (or more continuous repetitions) becomes frequent; intonation patterns become distinct; utterances can signal emphasis and emotions
10 months	Creeps efficiently; takes side-steps, holding on; pulls to standing position	Vocalizations are mixed with sound-play such as gurgling or bubble-blowing; appears to wish to imitate sounds, but the imitations are never quite successful; beginning to differentiate between words heard by making differential adjustment
12 months	Walks when held by one hand; walks on feet and hands—knees in air; mouthing of objects almost stopped; seats self on floor	Identical sound sequences are replicated with higher relative frequency of occurrence and words (mamma or dadda) are emerging; definite signs of understanding some words and simple commands (show me your eyes)
18 months	Grasp, prehension and release fully developed; gait stiff, propulsive and precipitated; sits on child's chair with only fair aim; creeps downstairs backward; has difficulty building tower of 3 cubes	Has a definite repertoire of words—more than three, but less than fifty; still much babbling but now of several syllables with intricate intonation pattern; no attempt at communicating information and no frustration for not being understood; words may include items such as thank you or come here, but there is little ability to join any of the lexical items into spontaneous two-item phrases; understanding is progressing rapidly

TABLE 4.1 (Continued)

At the completion of:	Motor Development	Vocalization and Language
24 months	Runs, but falls in sudden turns; can quickly alternate between sitting and stance; walks stairs up or down, one foot forward only	Vocabulary of more than 50 items (some children seem to be able to name everything in environment); begins spontaneously to join vocabulary items into two-word phrases; all phrases appear to be own creations; definite increase in communicative behavior and interest in language
30 months	Jumps up into air with both feet; stands on one foot for about two seconds; takes few steps on tip-toe; jumps from chair; good hand and finger coordination; can move digits independently; manipulation of objects much improved; builds tower of six cubes	Fastest increase in vocabulary with many new additions every day; no babbling at all; utterances have communicative intent; frustrated if not understood by adults; utterances consist of at least two words, many have three or even five words; sentences and phrases have characteristic child grammar, that is, they are rarely verbatim repetitions of an adult utterance; intelligibility is not very good yet, though there is great variation among children; seems to understand everything that is said to him
3 years	Tiptoes three yards; runs smoothly with acceleration and deceleration; negotiates sharp and fast curves without difficulty; walks stairs by alternating feet; jumps 12 inches; can operate tricycle	Vocabulary of some 1000 words; about 80% of utterances are intelligible even to strangers; grammatical complexity of utterances is roughly that of colloquial adult language, although mistakes still occur
4 years	Jumps over rope; hops on right foot; catches ball in arms; walks line	Language is well-established; deviations from the adult norm tend to be more in style than in grammar