

The acquisition of Georgian

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1. The Georgian language.

Georgian belongs to the Kartvelian or South Caucasian language family. It is probably the case that this family is not genetically related to any other, though some scholars hypothesize a common ancestry with the autochthonous languages of the North Caucasus and even with Basque. The Kartvelian languages (Georgian, Zan and Svan) are spoken today in essentially the same territory where they have been in use since the dawn of history: the Soviet republic of Georgia and the northeast corner of Turkey.

Unlike the other Caucasian languages, Georgian has long been a medium for written communication. The earliest attested Georgian inscriptions date from the fifth century, and a sizeable body of religious and secular literature was composed during the medieval period. Throughout their recorded history, Georgians, like other indigenous peoples of the Caucasus, have placed a high premium on verbal skills: improvisation and recitation of poetry, storytelling, giving toasts. Although the modern mass media have reached all but the most inaccessible mountain villages, young Georgians still prefer to spend their evenings in the company of others, engaging in informal conversation or attending dinner banquets where the traditional opportunities to display one's oratorical skills as a toastmaster and poetry reciter are still retained (Holisky, in press).

The literary language is based primarily upon the Georgian dialects spoken in the vicinity of Tbilisi, the principle city of Georgia since the 5th century, and currently the capital of the Georgian SSR. The norms for the contemporary standard language were established in the late 19th century, and to a slight extent revised by a commission of the Linguistics Institute of the Georgian Academy of Sciences, which makes recommendations concerning acceptable usage. The spoken language of educated Tbilisi residents varies to a degree from the standard: some semantically unmotivated morphological differences have undergone levelling, a considerable number of Russian loan words are used, and the syntax of linked-clause constructions is somewhat different. The fifteen or so dialects spoken elsewhere in Georgia diverge in various directions from this standard, and some of them are difficult for Tbilisi speakers to understand. In addition, some Georgians speak Kartvelian languages which are not mutually intelligible with Georgian. The Mingrelian and Laz dialects of the Zan language are spoken along the southeastern coast

of the Black Sea (most Laz speakers are now on the Turkish side of the border), and the small community of Svan speakers inhabits the remote valleys of the southwestern Caucasus. All Mingrelians and Svans acquire Georgian as a second language. All together, about three and a half million people speak Georgian.

The grammatical structure of the Kartvelian languages differs significantly from those of the familiar Indo-European, Semitic and oriental languages. Because of the complexity of Georgian morphology and syntax, and the likelihood that the reader is encountering the Georgian language for the first time, we will go into some detail concerning the structure of the grammar at the outset. The descriptive method used here is largely based on Shanidze's monumental reference grammar (Shanidze, 1953); we have also made use of Tschenkeli (1958), Aronson (1982a), Harris (1985), and Tuite (1988b).

1.1. *The Georgian verb.*

The Kartvelian verb is basically agglutinative in structure, with certain significant exceptions. The ordering of the constituent morphemes is given in Table 1, adapted from Deeters (1930, p. 7) and Aronson (1982a, pp. 462-469). A variety of semantic categories are marked in the Georgian verb: three distinct aspectual oppositions, along with tense, mood, valence, person and number. The major grammatical categories coded in the verb will be discussed in this section.

TABLE 1
The composition of the Georgian verb

slot 1	Preverb (one or more).
slot 2	Person agreement prefix (one, occasionally two).
slot 3	Preradical or "version" vowel.
slot 4	Verb root.
slot 5	Passive/inchoative suffix.
slot 6	Series marker; causative suffix.
slot 7	Imperfect stem suffix.
slot 8	Tense/mood vowel.
slot 9	Person/number agreement suffix (one or two).

Verb morphology I: Conjugation classes. Georgian verbs can be divided into two major classes, and each of these into two subclasses, termed CONJUGATIONS (Aronson, 1982a). The two major formal criteria correlated with class and conjugation membership are [a] case-assignment pattern (to be discussed below) and [b] formation of the future-tense form.

TABLE 2
Georgian verb classes

	CLASS A VERB (<i>can assign ERG</i>)	CLASS P VERB (<i>cannot assign ERG</i>)
future = (preverb +) present: future and present have different stems:	1st conjugation	2nd conjugation
	3rd conjugation	4th conjugation

Most 1st conjugation verbs are transitive. Almost all of the verbs in the other three conjugation classes are intransitive, but they differ in terms of their lexical aspect. 3rd conjugation verbs denote ACTIVITIES (in the sense defined by Vendler and Dowty), that is, events viewed as extending over a period of time without a significant change of state (e.g. 'dance,' 'sing,' 'whistle,' 'act like a fool'). Verbs of the 4th conjugation class are almost all STATIVE. The verbs composing the 2nd conjugation divide into three subgroups, based on how their stems are formed:

- (i) **prefixal**, marked by the preradical vowels *-i-* and *-e-* [slot 3]. Many of these verbs correspond to English passives, and are paired with transitive 1st conjugation verbs.
- (ii) **suffixal**, marked by the suffix *-d-* in slot 5. The verbs of this subgroup describe changes of state. Many are semantically INCHOATIVE, denoting the beginning of an event..
- (iii) **root** 2nd conjugation verbs, which lack a specific stem formant. Many of these verbs denote ACHIEVEMENTS in Vendler's sense. The verbs of directed motion ('come,' 'leave,' 'arrive'), which are semantically agentive, also belong to this group.

As a general rule, verbs which meet the criteria for Vendler and Dowty's

ACCOMPLISHMENT and ACTIVITY classes have Class A stems in Georgian, and verbs belonging to the STATIVE and ACHIEVEMENT semantic groups are Class P (Holisky, 1979, 1981). These aspectual differences were in all probability the original basis for the Class A/P distinction, and the split-intransitive case assignment pattern of the Kartvelian languages. The correlation between aspect and verb class membership is not exact, however; for example, a small set of activity verbs are formally 2nd conjugation (Class P), and a handful of stative verbs belong to Class A. For some examples of these exceptions, see Harris (1981, pp. 268-274).

TABLE 3
Georgian verb types

CLASS A VERBS	CLASS P VERBS
1ST CONJUGATION	2ND CONJUGATION
	(i) prefixal
<i>gamoacxobs</i> 'sb will bake sthg'	<i>gamoicxoba</i> 'sthg will be baked'
<i>gašlis</i> 'sb will spread out sthg'	<i>gaišleba</i> 'sthg will be spread out'
<i>daylis</i> 'sb will tire sb out'	<i>daiyleba</i> 'sb will tire out'
<i>gamoxaršavs</i> 'sb will cook sthg'	<i>gamoixaršeba</i> 'sthg will cook'
	<i>gamoexaršeba</i> 'sthg will be cooked for sb'
<i>daac'erinebs</i> 'sb will make sb write'	<i>etamašeba</i> 'sb plays with sb'
<i>aacaxcaxeb</i> s 'sthg makes sb tremble'	<i>esaubreba</i> 'sb converses with sb'
<i>gaak'oxt'avebs</i> 'sthg (clothing) looks good on sb'	(ii) suffixal
<i>miscems</i> 'sb will give sthg to sb'	<i>gak'etdeba</i> 'sthg will be made'
<i>miiyeb</i> s 'sb will receive sthg/sb'	<i>gac'itldeba</i> 'sthg/sb will turn red'
<i>ganicdi</i> s 'sb will undergo sthg'	<i>šeuq'wardeba</i> 'sb will fall in love with sb'
3RD CONJUGATION	<i>at'irdeba</i> 'sb begins to cry'
<i>myeris</i> 'sb sings'	<i>amyerdeba</i> 'sb begins to sing'
<i>t'iris</i> 'sb cries'	(iii) root
<i>tamašob</i> s 'sb plays'	<i>gatbeba</i> 'sthg/sb will warm up'
<i>maimunob</i> s 'sb monkeys around'	<i>čavardeba</i> 'sthg/sb will fall'
<i>yimis</i> 'sb smiles at sb'	<i>mova</i> 'sb/sthg will come'
<i>saubrob</i> s 'sb converses'	<i>c'ava</i> 'sb/sthg will leave'
<i>duys</i> 'sthg boils'	4TH CONJUGATION
<i>brc'q'invaleb</i> s 'sthg glistens'	<i>uq'wars</i> 'sb loves sb/sthg'
<i>yuis</i> 'sthg [fire] glows red'	<i>axsovs</i> 'sb remembers sthg/sb'
	<i>akws</i> 'sb has sthg'
	<i>unda</i> 'sb wants sthg'
	<i>zis</i> 'sb is sitting'
	<i>q'ria</i> 'things [plural] lie scattered'
	<i>acwia</i> 'sb wears sthg [clothes]'

Verb morphology II: Agreement. The morphemes occurring in slots 2 and 9 of the Georgian verb — and, to a degree, slot 8 — crossreference person and number features of nominal arguments. The two sets of person/number agreement markers are shown in Table 4.

TABLE 4
Georgian person/number agreement affixes

	Set S ("subject")		Set O ("object")	
	slot 2	slot 9	slot 2	slot 9
1sg	v-	- \emptyset /var	1sg m-	
1pl	v-	-t/var-t	1pl gw-	
2sg	\emptyset -	- \emptyset /xar	2sg g-	
2pl	\emptyset -	-t/xar-t	2pl g-	-t
3		-s/a/o	3 \emptyset ,h,s/- \emptyset -	
3pl		-an/en/es/nen	3pl \emptyset ,h,s/- \emptyset -	-t

One or two NPs per clause can control agreement in the Georgian verb. The NPs controlling agreement usually correspond to the subject and direct or indirect object of an English translation equivalent. The correlation between the grammatical role (subject or object) and the type of agreement marker used is not a straightforward one, however. For most transitive verbs, and many intransitives, the subject NP¹ controls Set S agreement, and the (direct or indirect) object² is crossreferenced by a Set O marker. We term these DIRECT CONSTRUCTIONS. Some examples are given below:

¹In this article we use the term SUBJECT to refer to the controlling argument of the verb (usually the agent, experiencer or theme). Attributes of subject include: [a] it is the NP denoting the addressee of an imperative; [b] its reference cannot be obligatorily determined by another NP within the clause (the "nominative-island constraint" of Chomsky (1986, p. 186; cp. Keenan, 1976, p. 313); [c] it is the controller in certain linked-clause constructions (e.g. with verbs meaning "wants," "is able to," etc.). For a further discussion of grammatical relations in Georgian, see Harris (1981) and Tuite (1988b).

²Only one object NP per clause can control agreement. Indirect objects take preference over direct, and 1st/2nd person over 3rd. For more on this see Tuite (1988a).

- (a) *pat'man-∅ me xač'ap'ur-s* $ga_1=m_2=i_3=k't_4=eb_6=s_9$
 P-NOM me cheese.bread-DAT make[1]:3S:1sgO:FUT
 'Patman will make cheese-bread for me.'
- (b) *tkwen čwen* $gw_2=nax_4=e_8=t_9$
 you_{PL} us see[1]:2plS:1plO:AOR
 'You-all saw us.'
- (c) *goča-∅ tavis mama-s* $∅_2=e_3=xmar_4=eb_6=od_7=a_9$
 G.-NOM self's father-DAT help[2]:3S:3O:IMPF
 'Gocha was helping his father.'
- (d) *me p'aat'a-s c'eril-s* $v_2=s_2=c'er_4=∅_9$
 I P.-DAT letter-DAT write[1]:1sgS:3O:PRES
 'I am writing a letter to Paata.'
- (e) *me šen c'eril-s* $g_2=c'er_4=∅_9$
 I you letter-DAT write[1]:1sgS:2sgO:PRES
 'I am writing a letter to you.'

In each of the above sentences, the Set V marker codes the person and number of the subject, and the Set M marker crossreferences the object. Example (e) merits special attention. In all of the Kartvelian languages, the Set S 1st person prefix *v-* is obligatorily deleted when the Set O 2nd person prefix *g-* is present in slot 2 of the verb. The only clue to the person of the subject in such cases is the absence of a Set V 3rd person suffix in slot 9.

A large number of 2nd and 4th conjugation intransitive verbs — in particular, verbs of physical and psychological state — and all Class A verbs in the perfect series (see below) govern INDIRECT CONSTRUCTIONS. In clauses of this sort the Set S marker crossreferences the (real) direct object, and the Set O marker, correspondingly, the (real) subject. Here are some examples:

- (f) *pat'man-s čem-tvis xač'ap'ur-i*
 P.-DAT me-for cheese:bread-NOM
ga₁=∅₂=u₃=k'et₄=eb₆=i₈=a₉
 make[1]:3O:3S:PERF
 'Patman has made cheese-bread for me.' [cp. (a)]
- (g) *tkwen čwen g₂=i₃=nax₄=av₆=var₉=t₉*
 you_{PL} us see[1]:2plO:1plS:PERF
 'You-all have seen us.' [cp. (b)]
- (h) *lia-s tavis mušaoba-∅ mo₁=s₂=c'on₄=s₉*
 L.-DAT self's work-NOM enjoy[4]:3O:3S:PRES
 'Lia enjoys her work.'
- (i) *dzayl-s c'q'al-i s=c'q'ur=i=a*
 dog-DAT water-NOM thirst[4]:3O:3S:PRES
 'The dog is thirsty for water.'
- (j) *p'irveli naxv-it [me] [šen]*
 first sight-INS [I] [you]
še₁=m₂=i₃=q'war₄=d₅=i₈=∅₉
 love:INCH[2]:1sgO:2sgS:AOR
 'I fell in love with you at first sight.'

Indirect constructions occur in some Indo-European languages as well: for example, German *es gefällt mir* 'it pleases me,' *mir schwindelt* 'I am dizzy,' *mich hungert*; 'I am hungry'; Russian *mne stydno* 'I am ashamed,' *mne nuzhno* 'I need (it)'; medieval English *me thinketh*, *me seemeth*. In Georgian, however, indirect constructions are met with far more frequently. The class of indirect verbs (i.e. those which always participate in indirect constructions) is very large, including some of the most commonly-used verbs, especially in the speech of children: *m=i=nd=a* 'I want,' *m=ši=a* 'I'm hungry,' *m=civ=a* 'I'm cold,' *m=t'k'iv=a* 'my [body part] hurts.' The perfect and evidential verb forms, which require the inversion of subject/object marking for transitive verbs, are frequently used in spoken adult Georgian, though children acquire them

somewhat later than other verb forms.

Verb morphology III: Preverbs. The aspectual system of modern Georgian is similar to that of Russian and other Slavic languages in that, for most verbs, the distinction between perfective and imperfective aspect is signalled by the presence or absence of a directional prefix (preverb) in slot 1 (Shanidze, 1953, pp. 269-270):

- vc'er* 'I am writing sthg'
(present, imperfective)
- da=vc'er* 'I will write sthg'
(future, perfective)
- vc'ere* 'I wrote sthg' (but did not finish it)
(imperfective aorist)
- da=vc'ere* 'I wrote sthg' (and finished it)
(perfective aorist)

Note that for the two largest classes of verbs (1st and 2nd conjugations) the distinction between present and future — if there is one — is marked by the presence of a preverb; in many cases, the preverb is not separated from the stem in the present tense, giving identical present and future forms, e.g.

- ay=vc'er* 'I am describing' or 'I will describe' (lit. 'write up')
- gada=vc'er* 'I am copying' or 'I will copy' (lit. 'write over')

The preverbs themselves are derived from directional particles which have become lexically linked to the verbal complex. The choice of preverb is semantically transparent for verbs of motion or transport (e.g. *mo-* 'toward here,' *še-* 'in,' *ča-* 'down'). For the majority of verb stems, the preverb(s) which can be used with them must be learned individually. This does not mean, however, that the system underlying the use of preverbs is totally chaotic. Rather, the semantics of Georgian preverb+verb combinations is similar to that of English verb+particle syntagms ("eat up," "put off," "tire out"). Each particle is semantically anchored by some purely spatial meaning, with a continuous field of increasingly non-spatial metaphoric usages extending outward from this anchoring point (Lindner, 1982). The principles of metaphoric extension are probably universal; one notices, in any event, many

striking correspondences in the semantic fields of Georgian and English particles (e.g. *ga-* ‘out/off’ is used with verbs meaning ‘extinguish,’ ‘turn off,’ ‘disappear’; *gada-* ‘over’ frequently adds the meaning of repetition, ‘doing over’ to a verb, and *da-* ‘down’ is used as an intensifier with many verbs).

Verb morphology IV: Screeves and series. The term SCREEVE, from Georgian *mc’k’rivi*, is a verb form marked for every feature except person and number (Shanidze, 1953). All verb forms within a given screeve will have the same aspect, tense, mood, transitivity, etc., differing only in terms of Set S and Set O person and number affixes. Georgian grammarians recognize ten screeves in the modern literary language. These are grouped into three SERIES, based on case-assignment pattern and stem formation. The screeves of the present series (present, future, conditional, conjunctive and imperfect) are marked by the presence of a SERIES MARKER (also called PRESENT/FUTURE STEM FORMANT) in Slot 6. A half-dozen series markers are used in the modern language, of which two (*-eb-* and *-ob-*) are used in the derivation of new Georgian verbs. For certain types of verbs (e.g. most verbs in the 2nd and 3rd conjugations), the series marker is predictable; for others, it has to be learned separately for each verb.

TABLE 5
Georgian series markers

	Present	Aorist
<i>-i-</i>	<i>gzavn=i=s</i> ‘sb sends sthg’	<i>ga=gzavn=a</i>
<i>-am-</i>	<i>a=sx=am=s</i> ‘sb pours sthg’	<i>da=a=sx=a</i>
<i>-av-</i>	<i>xat’=av=s</i> ‘sb paints sb/sthg’	<i>da=xat’=a</i>
<i>-eb-</i>	<i>a=nt=eb=s</i> ‘sb lights sthg’	<i>a=a=nt=o</i>
<i>-ob-</i>	<i>pikr=ob=s</i> ‘sb thinks’	<i>i=pikr=a</i>
<i>-∅-</i>	<i>c’er=∅=s</i> ‘sb writes sthg’	<i>da=c’er=a</i>

The aorist series screeves (aorist/imperative and optative) lack the series marker. The two perfect series screeves are formed from different stems: the present perfect (or evidential I) is usually based on the present series stem

(with series marker), while the pluperfect (evidential II) is based on the aorist series stem.

The opposition between the present series of screeves and the aorist series is, again, fundamentally aspectual in nature (Schmidt, 1984). The present-series screeves are characterized by DURATIVE aspect, which is opposed to the PUNCTILIAR aspect of the aorist series. That is, the semantic basis for the opposition between present-series and aorist-series stems is one of temporal contour: action viewed as extending over a period of time, versus action viewed as occurring at a circumscribed point in time. Compare, for example, [present-series imperfect] $v=c'er=d=i$ 'I was writing' (over a period of time) and [aorist-series imperfective aorist] $v=c'er=e$ 'I wrote' (at one or more discrete points in time).

To summarize: the Georgian verbal system formally reflects the following three aspectual oppositions:

	MORPHOLOGY	SEMANTICS
<i>Verb class:</i>	1st and 2nd conjugation	Telic (change-of-state)
	3rd and 4th conjugation	Atelic (states and activities)
<i>Preverb:</i>	With preverb	Perfective (completed)
	Without preverb	Imperfective (non-completed)
<i>Verb stem:</i>	Present-series stem	Durative (extended over time)
	Aorist-series stem	Punctiliar (circumscribed in time)

Verb morphology V: Tense and mood. In certain tenses and moods, vowel morphemes occur in slot 8. These morphemes are also sensitive to the person of the NP controlling Set S agreement, in that in certain screeves the tense/mood vowel has distinct 1st/2nd person and 3rd person forms. The Set S 3rd person endings shown in Table 1 are actually portmanteau morphemes, coding tense and mood as well as person and number. As such they are properly conceived as occupying both slots 8 and 9 concurrently. To further complicate matters, different verb-stem types take different tense/mood vowels in some screeves.

Tense/mood markers in the Georgian verb [partial list]

	1st/2nd	3sg	3pl
<i>Present</i>			
Class A verbs:	-∅	-s	-en/an
Class P verbs:	-i	-a	-ian
<i>Imperfect</i>			
	-i	-a	-nen
<i>Conjunctive</i>			
	-e	-es	-nen
<i>Aorist</i>			
Class A verbs:	-e/i	-a/o	-es
Class P verbs	-e/i	-a/o	-nen

Verb morphology VI: Version. The category of VERSION (a translation of the Georgian grammatical term *kceva*) is vaguely similar to the distinction between regular and reflexive verbs in French, Spanish or Russian, though more extensively developed (Shanidze, 1953, pp. 332-367; Vogt, 1971, pp. 119-127). Version is marked by a vowel in slot 3 of the verb. The SUBJECTIVE VERSION marker (-i-) usually indicates that the direct object is possessed by the subject, or that the action described is done for the subject's "benefit" in some sense. The OBJECTIVE VERSION markers (-u-, -e-) indicate that the direct object is possessed by someone other than the subject, or that someone other than the subject is the "beneficiary." The absence of a vowel, or for some verbs the vowel -a-, indicates NEUTRAL VERSION. Some examples of the distinction are given here:

[SUBJECTIVE VERSION]

deda-m da=i-varcxn=a tma-∅
 mother-ERG comb[1]:3S:3O:SUB.V:AOR hair-NOM
 'Mother combed her (own) hair.'

[OBJECTIVE VERSION]

deda-m šwil-s da=∅=u-varcxn=a tma-∅
 mother-ERG child-DAT comb[1]:3S:3O:OBJ.V:AOR hair-NOM
 'Mother combed her child's hair.'

[NEUTRAL VERSION]

gia-∅ sadil-s a=mzadeb=s
 G.-NOM dinner-DAT prepare[1]:3S:3O:PRES
 'Gia is preparing dinner.'

[SUBJECTIVE VERSION]

gia-∅ sadil-s i=mzadeb=s
 G.-NOM dinner-DAT prepare[1]:3S:3O:**SUBJ.V**:PRES
 'Gia is preparing dinner for himself.'

[OBJECTIVE VERSION]

gia-∅ gela-s sadil-s ∅=u=mzadeb=s
 G.-NOM Ge.-DAT dinner-DAT prepare[1]:3S:3O:**OBJ.V**:PRES
 'Gia is preparing dinner for Gela.'

Not all verbs reflect the category of version in such ideal fashion. For many verbs, the version vowel is no longer transparently motivated, and must be learned as part of the lexical information for the verb (Aronson, 1982b). Also, the version markers *-e-*, *-u-* and, to a lesser degree, *-a-* imply the presence of an indirect object. The implicature is sufficiently reliable that it may be the case that Georgian speakers interpret the objective-version vowels as part of the Set O agreement markers, and not as "independent" morphemes. If so, Set O would comprise the following "sub-sets":

TABLE 6
 Subsets of Set O markers [slots 2 and 3] (singular only)

	I (direct obj.)	II	III	IV	V
1sg	m-	m-	mi-	me-	ma-
2sg	g-	g-	gi-	ge-	ga-
3	∅-	∅,h,s-	u-	e-	a-

1.2. *The Georgian noun.*

Compared to the declension systems of the older Indo-European languages,

Georgian nominal morphology is comparatively simple. First of all, there is no category of gender in Georgian grammar, not even for 3rd person pronouns. Kartvelian personal and demonstrative pronouns have only deictic and number content, and do not index the gender of the referent. In the declension of the Georgian noun, six case forms, plus a vocative, are distinguished, and two numbers. The primary functions of the Georgian cases are listed in Table 7.

TABLE 7
The Georgian cases

NOMINATIVE (NOM) [- \emptyset /i]: Subject of transitive verbs in present series screeves, and of 2nd conjugation intransitive verbs in direct constructions; direct object of transitive verbs in aorist series and perfect series screeves; object of intransitive verbs in indirect constructions; also used for expressions of quantity and duration.
ERGATIVE (ERG) [-m/ma]: Subject of transitive verbs and 3rd conjugation intransitives in aorist series screeves.
DATIVE (DAT) [-s]: Indirect object (addressee, recipient, etc.); direct object of transitive verbs in the present series; subject of 1st and 3rd conjugation verbs in the perfect series; subject of indirect verbs; expressions of time, quantity and location. Some postpositions (-ze 'on,' -tan 'with,' -ši 'in') govern the DAT.
GENITIVE (GEN) [-is]: Noun modifiers (possessor, substance, location, material, specification, etc.). It covers most of the range of English <i>of</i> and -'s, as well as denominal adjectives (cp. Georgian <i>vašl-is c'weni</i> 'apple juice'). Most postpositions govern the GEN.
INSTRUMENTAL (INS) [-it]: Instruments, some expressions of time.
ADVERBIAL (ADV) [-ad]: Used to derive adverbs from adjectives, and in the formation of quasi-infinitives.

In the modern language, the plural and case morphemes are distinct

segments, as in Turkish. Some nouns undergo syncope of the vowel in the final syllable of the stem in the oblique cases (GEN, INS, ADV) and in the plural. Certain syllable types are especially prone to syncope, though exceptions are not uncommon (Vogt, 1971). If a noun stem ends in the vowel *a* or *e*, the latter is deleted in certain oblique cases. If it ends in *u* or *o*, the shape of some case endings is modified. The NOM ending is $-\emptyset$ for vowel-final stems, and *-i* for consonant-final stems.

TABLE 8
Declension of Georgian common nouns

STEM:	<i>kal</i> 'woman'	<i>msxal</i> 'pear'	<i>xe</i> 'tree'	<i>bu</i> 'owl'
NOM	<i>kal=i</i>	<i>msxal=i</i>	<i>xe=∅</i>	<i>bu=∅</i>
ERG	<i>kal=ma</i>	<i>msxal=ma</i>	<i>xe=m</i>	<i>bu=m</i>
DAT	<i>kal=s</i>	<i>msxal=s</i>	<i>xe=s</i>	<i>bu=s</i>
GEN	<i>kal=is</i>	<i>msxl=is</i>	<i>x=is</i>	<i>bu=s</i>
INS	<i>kal=it</i>	<i>msxl=it</i>	<i>x=it</i>	<i>bu=ti</i>
ADV	<i>kal=ad</i>	<i>msxl=ad</i>	<i>xe=d</i>	<i>bu=d</i>
VOC	<i>kal=o</i>	<i>msxal=o</i>	<i>xe=o/xe=v</i>	<i>bu=o</i>
NOMpl	<i>kal=eb=i</i>	<i>msxl=eb=i</i>	<i>xe=eb=i</i>	<i>bu=eb=i</i>
ERGpl	<i>kal=eb=ma</i>	<i>msxl=eb=ma</i>	<i>xe=eb=ma</i>	<i>bu=eb=ma</i>
	etc.			

The declension of 1st and 2nd person pronouns is considerably simpler than the above. These pronouns have only two forms: a base form used in NOM, DAT and ERG contexts, and a possessive stem. Also note that the personal interrogative *vin* 'who' has the same form in the NOM and ERG case:

TABLE 9
Declension of personal pronouns

BASE:	<i>me</i> 'I/me'	<i>šen</i> 'you _{sg} '	<i>čwen</i> 'we/us'	<i>tkwen</i> 'you _{pl} '
POSS.:	<i>čem-</i> 'my'	<i>šen-</i> 'your _{sg} '	<i>čwen-</i> 'our'	<i>tkwen-</i> 'your _{pl} '
	NOM/ERG: <i>vin</i> 'who'			
	DAT/GEN: <i>vis</i>			

Adjectival modifiers of nouns show limited agreement for case (but not number) with their heads, but only if they have consonant-final stems. Modifiers with vowel-final stems do not agree. Nouns modified by numerals and other quantifiers remain in the singular.

TABLE 10
Modifier-head agreement within the noun phrase

	'big horse'		'eight boys'
NOM	<i>did=i</i>	<i>cxen=i</i>	<i>rva=Øbič'=i</i>
ERG	<i>did=ma</i>	<i>cxen=ma</i>	<i>rva=Øbič'=ma</i>
DAT	<i>did=Ø</i>	<i>cxen=s</i>	<i>rva=Øbič'=s</i>
GEN	<i>did=i</i>	<i>cxen=is</i>	<i>rva=Øbič'=is</i>
INS	<i>did=i</i>	<i>cxen=it</i>	<i>rva=Øbič'=it</i>
ADV	<i>did=Ø</i>	<i>cxen=ad</i>	<i>rva=Øbič'=ad</i>
VOC	<i>did=o</i>	<i>cxen=o</i>	

1.3. Syntax.

Syntax I: Word order. Within the noun phrase, the order of constituents is quite reliably modifier-precedes-head (ADJ-N, GEN.NP-NOUN), except for relative clauses. They often follow the noun they modify, as in English. Inversion of the usual modifier-head order is for the most part restricted to poetic and archaicizing registers; in such constructions there is full agreement for case between the postposed adjective and its head. The orderings of

clausal constituents is very free. As is the case in many other such languages, word order is used to indicate discourse topicality and focus. Of the twenty-four mathematically possible orderings of the subject, direct object and indirect object of a ditransitive verb, Vogt (1974) found all but two attested in a fifty-page sample of modern Georgian prose. The most frequent ordering is S-IO-DO-V. In the 30,000-sentence corpus analyzed by Apridonidze (1986), 58% of subjects appear in initial position, as do 43% of indirect objects. Nearly half (47%) of direct objects occupied final position in the sentence. Subjects are usually postposed in introductory, scene-changing and presentational sentences (*šemovida erti k'aci* 'enter:3S:AOR one man:NOM' = 'there entered a man'). The NPs bearing the core grammatical relations to the verb (SUBJ, DO, IO) can be deleted, and often are. In a sample of Georgian prose studied by Enukidze (1978), subjects of transitive verbs were deleted 70% of the time, indirect objects about half of the time, while 75% of direct objects were expressed by overt NPs. Since objects as well as subjects can control verb agreement, a deleted NP often (but not always) leaves its mark in the verb morphology.

Syntax II. Case assignment. One of the most bewildering aspects of Georgian grammar, at least for foreigners studying the language, is the phenomenon of CASE SHIFT (Braithwaite, 1973). Class A (i.e. 1st and 3rd conjugation) verbs assign case to their subjects and objects according to a different pattern in each of the three series of screeves. For a Class A verb such as *micema* 'give,' the following case patterns are used:

Present series *gia-∅* *dato-s* *sačukar-s* *mi=s=cem=s*
 G.-NOM D.-DAT gift-DAT give:3S:3O:FUT
 'Gia will give Dato a present.'

Aorist series *gia-m* *dato-s* *sačukar-i* *mi=s=c-a*
 G.-ERG D.-DAT gift-NOM give:3S:3O:AOR
 'Gia gave Dato a present.'

Perfect series *gia-s* *dato-sa-twis* *sačukar-i* *mi=∅=u=c=i-a*
 G.-DAT D.-GEN-for gift-NOM give:3O:3S:PERF
 'Gia has [apparently] given Dato a present.'

TABLE 11
Case assignment and verb agreement in Georgian

	CLASS A			CLASS P			
	SUB	DO	IO	<i>Direct verb</i>		<i>Indirect verb</i>	
	SUB	DO	IO	SUB	IO	SUB	OBJ
PRESENT SERIES							
case:	NOM	DAT	DAT	NOM	DAT	DAT	NOM
agr.:	S	O	O	S	O	O	S
AORIST SERIES							
case:	ERG	NOM	DAT	NOM	DAT	DAT	NOM
agr.:	S	O	O	S	O	O	S
PERFECT SERIES							
case:	DAT	NOM	----	NOM	DAT	DAT	NOM
agr.:	O	S	----	S	O	O	S

The case marking system of Georgian is similar to the ‘split-ergative’ systems of some Indo-Iranian languages. Compare the above to the case-assignment systems occurring in nominative languages such as Latin, or ergative languages such as Basque, where the marking of the major grammatical relations is consistent for all verb forms. In Basque, for example, all transitive subjects are assigned ergative case, and all direct objects and intransitive subjects are assigned the unmarked (nominative/absolutive) case. There is no such simple correlation between surface case and grammatical role in Georgian.

Consider the pattern of case assignment in the aorist series, which has been described as an example of “active” or “split-intransitive” case marking (Harris, 1985). This pattern is certainly not an ergative one, since a large number of intransitive verbs (most of them belonging to the 3rd conjugation) assign ERG case to their subjects in the aorist series (e.g. *k’ac-ma gaiywidza* ‘the man-ERG woke up,’ *borbal-ma it’riala* ‘the wheel-ERG turned’). Nor is the case pattern comparable to that of languages such as Tsova-Tush (Holisky, 1987), where the agentiveness of the argument denoted by the subject NP is the crucial factor determining whether it is assigned nominative or ergative

case. In Georgian, the correlation between agentivity and case marking in the aorist series is not a particularly strong one. While it is certainly true that most Class A verbs are agentive, and most Class P verbs nonagentive, the number of exceptions is not small. Certain semantic subgroups of Class P — among them verbs of directed motion (e.g. *is c'avida* 's/he=NOM left') and comitatives (*is mas etamaša* 's/he=NOM played with him/her=DAT) — are agentive. A smaller number of Class A verbs are semantically nonagentive (e.g. *man iarseba* 's/he=ERG existed'). The semantic criterion with which case assignment in Georgian is most closely correlated is the aspect of the verb, and here as well there are lexical exceptions.

To better appreciate the processing problems presented by such a system, we will compare it to the case marking system of Russian. Here are two noun phrases, standing at the beginning of a sentence:

[RUSSIAN] *Novoe zdanie*

[GEORGIAN] *axali šenoba*

'The new building'

In both examples, the grammatical role of the NP cannot be determined from the information given. The Russian noun *zdanie* is neuter, and, like all neuter nouns in this language, does not have distinct nominative and accusative forms. Since Russian word order is relatively free, it is perfectly possible that *novoe zdanie* is functioning as the direct object of its clause. Among the possible continuations of the sentence are the following:

Novoe zdanie naxoditsja ne daleko ot amerikanskogo posol'stva.

'The new building [subject, nominative] is located not far from the American embassy.'

Novoe zdanie postroila nasha brigada.

'Our brigade erected the new building [direct object, accusative].'

Case desinence "ambiguities" in Russian are of two types: [a] PARADIGM-INTERNAL (e.g. nominative = accusative for neuter, masculine inanimate and some singular feminine nouns; accusative = genitive for masculine animates), and CROSS-PARADIGM (e.g. the ending *-a* signals the GENsg of masculine nouns, the NOMsg of most feminines, and the NOM/ACCpl of neuter nouns). Ambiguities of the second type can be resolved by knowing the gender

classification of each noun. Those of the first type cannot be resolved at such a local level; the determination of the grammatical role of an NP must wait until other sentence constituents — especially the verb — are processed. In practice, the resolution of nominative/accusative ambiguities is assisted by paragraph-level factors: what information is old and what is new, what is in focus, what is receiving special emphasis, and so forth, all of which contribute to word order in languages such as Russian and Georgian (Firbas, 1966).

The Georgian NP *axali šenoba* is in the NOM case. As such it can serve as either subject or direct object of its clause. Unlike the Russian example, this ambiguity is not restricted to some subset of nouns, since it is rooted in the system of case assignment rather than the expression of assigned case in different noun classes. There is, therefore, no local solution to the problem; one must have access to other clausal constituents before a grammatical role can be determined. In particular, the lexical class of the verb (A or P) and its screeve need to be known. Discourse-pragmatic considerations of the sort mentioned above undoubtedly ease the difficulties of anticipating the role of a clause-initial NP somewhat.

2. Sources of data on the acquisition of Georgian.

2.1. Earlier work.

The psychological aspects of language acquisition have been discussed in a number of works by Georgian scholars. The fundamental monographs are: D. Uznadze's *Child psychology* (1947), N. Chrelashvili's *The psychological nature of language acquisition* (1965), and *The development of child language from birth to age three* by A. Avalishvili (1961).³ But these do not suffice to give one a full picture of the acquisition of the Georgian language. The first two books mentioned deal with child language in the context of a general discussion of developmental psychology, and draw upon linguistic data only for the sake of establishing certain regularities in cognitive development. By contrast the third monograph, by Avalishvili, contains a child-language diary, the data of which are carefully analyzed for the purpose of formulating

³All three books were written in Georgian as has been most of the psychological literature produced by Georgian scholars. Most of the works of Uznadze, who formulated the so-called 'psychology of set' which has provided the framework for much of the psychological research done in Georgia, have been translated into Russian, and a smaller number into German and English.

distinct stages of acquisition. All of these works are fairly old and the authors' approaches were informed by the psycholinguistic theories current at the time. While some crosslinguistic comparisons have been attempted by Georgian psychologists, this chapter represents the first attempt to make a sizeable corpus of data available to a wider readership for that purpose. It is, however, only a preliminary work, for the most part summarizing data collected by the above-mentioned authors and others some time ago.

2.2. Diary studies of Georgian children.

Only three researchers have done longitudinal documentation of the speech of Georgian children during the early preschool years: Avalishvili (1961), Kaxadze (1969) and Imedadze (1957, 1960, 1967). Avalishvili recorded the speech of his son Tamaz from the age of eight months to his third birthday. The material is analyzed according to the traditional linguistic categories (phonetics/phonology, morphology, syntax) and some statistical analysis of the development of the lexicon and the morphology is presented.

Kaxadze's book contains partial diaries for several Georgian children: Keto (female, 2;0-5;0), Tina (female, 3;0-5;0), Ila (male, 2;0-5;0) — these three being his own children, and Ana (female, 2;0-5;0), Mariko (female, 2;0-5;0) and the twin boys Paata and Zaza (2;0-5;0). In section 4 of this chapter, the course of acquisition revealed in these diary studies will be presented.

The subject of Imedadze's research is a child (Dali) who simultaneously acquired the Georgian and Russian languages. Although the analysis of data from bilingual children is outside of the scope of this paper, some facts concerning Dali's linguistic development will be presented toward the end of this chapter to provide a contrast to the data from monolingual Georgian children.

3. Overall course of development.

Although the traditional Georgian extended family is a thing of the past, children are still exposed to language input from a variety of sources. Even in contemporary Tbilisi, it is still the norm for young couples to live with the husband's parents, and entrust much of the child's care to the grandmother. Other relatives, friends and neighbors are frequently present in the home, and likewise interact with the child. Georgians dote on children and enjoy speaking to (or at) them. Attendance at kindergarten usually begins at about

age three, and primary schooling starts at six. Instruction in the standard Georgian language, and also in the Russian language, begins at this point.

The first words spoken by Georgian children are not noticeably different in nature than those produced by children acquiring other languages. They include basic kin-terms, names of siblings, animals, toys, etc., and some verbs. Many of these utterances are onomatopoeic or drawn from the Georgian baby-talk lexicon (e.g. *ačua* ‘horsie,’ *pišo* ‘kitty’). Throughout the one-word stage nouns appear in their base form, i.e. their nominative case form in the adult language. The verbs attested at this time fall into two groups: change-of-state verbs (e.g. *ade* ‘get up!’) are used in their imperative form, and stative verbs (e.g. *amna* ‘I don’t want it’) in their present-tense form.

The use of uninflected nominals continues for several months after the onset of multi-word utterances. Word order is used for discourse-related purposes (topicality, thematicity), as in the adult language, and not for indicating grammatical relations. Throughout these early developmental stages, there is no opposition of present-series and aorist-series verb forms: if a verb belongs to the change-of-state aspectual class children at first use it only in the imperative, optative and aorist screeves (all aorist-series forms); if it is a stative or activity verb, it is only used in the present or imperfect (both present-series screeves). Toward the end of the second year or during the first half of the third Georgian children enter an important phase of morphological and syntactic development. For the first time they produce present-series forms of change-of-state verbs. The assignment of case to the subject and object of a Georgian sentence is crucially dependent on the conjugation class of the verb, and the stem type (present-series stem or aorist-series). Concurrently with the appearance of a present- vs. aorist-stem opposition for 1st conjugation (transitive change-of-state) verbs, case markers begin to be used. With the exception of certain semantic groups of intransitive verbs (for which variability of case assignment is observed in the non-standard dialects of adult Georgian as well), the children employ the case markers correctly. Overextension of the ERG case to subjects of present-series verbs, or of the DAT case to the direct objects of aorist-series verbs is never observed. This confirms the hypothesis that there is a certain “naturalness” to the split-ergative systems observed in a number of languages, in which nominative case patterning is used with imperfective-aspect or present-tense

verbs, and ergative patterning with perfective-aspect or past-tense verbs (Antinucci & Miller, 1976; DeLancey, 1981; Slobin, 1985; Schieffelin, 1985).

The basic rules for person marking in the Georgian verb — which agrees with both subject and (direct or indirect) object — are not mastered until about the end of the above transition period (in the third year). Some of the difficulty may be caused by the task of learning that the category of person is not fixed, but rather shifts with each speech turn. In particular, there is a tendency to use 2nd person verb forms with 1st or 3rd person reference. By the end of the third year, only some residual person-marking problems remain: selection of the correct 3rd person marker (for which there is no semantically-transparent system), and underuse of 3pl agreement with plural animate subjects.

In addition to the case-marking system, certain other components of Georgian grammar which seem unusual to speakers of western European languages present little difficulty for children. Almost no errors are observed in the use of the large class of verbs which govern indirect constructions (where the subject is assigned DAT case and controls object agreement). Some indirect verbs are among the very first used by Georgian children. At no point, as far as we can tell, do children attempt to use direct syntax with indirect verbs or vice-versa. They do, however, experience some difficulty in marking 1st or 2nd person objects of indirect verbs (with *take* subject agreement), and in performing the inversion transformation for transitive verbs in the perfect series.

The quasi-lexical category of version (orientation of the action toward or away from the subject) is also acquired with few mistakes. Most errors involve overextension of the semantic principle underlying version to verbs where the version markers are not used systematically. Version vowels are assigned appropriately as well in novel verb forms concocted by Georgian children to fill in gaps in their lexicons.

After the age of 3, those components of the grammar for which Georgian children produce forms that are incorrect from the standpoint of the adult language are, with few exceptions, characterized by variability of usage and analogical leveling in the contemporary Georgian dialects as well (Boeder, 1987; Jorbenadze, 1989). These are usually segments of the morphological system which have lost whatever structural motivation they might have had at

an earlier stage of the language, and which must be learned on a word-by-word basis. Among these sources of difficulty for young Georgian speakers are the stem formants for present-series forms, past-tense forms and person marking of stative verbs, some aspects of the declension of nouns and adjective-noun agreement.

By the end of their third year and beginning of their fourth, Georgian children are putting together various types of constructions formed from two underlying clauses, utilizing sentence conjunctions (especially *da* 'and' and *rom* 'that, when, if') and nominalized verbs.

4. Analysis of data from the diary studies.

4.1. Verb morphology.

4.1.1. *1st and 2nd person marking.* The child studied by Avalishvili, Tamaz, began producing utterances resembling Georgian verbs at about 0;11, e.g.:

Tamaz's father is lying on the couch and pretending to sleep. His mother tells Ta [0;10;29] to go wake him up.

M:⁴ *gaaywidze* *k'ak'o-mama.*
 wake[1]:2sgS:3O:IMP K.father:NOM
 'Wake up Kako-father.'

Ta: [shakes father]
 ade, ade.
 'Get up, get up!'

Mother is preparing breakfast for Ta [0;11;2]

M: *tamaz, papa* *g=i=nd=a?*
 T.:VOC porridge:NOMwant:2sgO:3S:PRES
 'Tamaz, do you want porridge?'

T: *mina.*
 'I want (it).'

⁴The following abbreviations of names will be used in the transcripts of child language: Ta(maz), Ke(to), Ti(na), Il(a), An(a), Ma(riko), Pa(ata), Za(za), Da(li); M(other), F(ather). Principal sources are abbreviated: K(axadze, 1969); A(valishvili, 1961). AG = adult Georgian.

'Tamaz is afraid of the big doggie.'

(lit: 'Tamazi you-are-afraid of the big doggie,' instead of
AG *m=e=šin=i=a* 'I am afraid' or *tamaz=s Ø=e=šinia* 'Tamaz is
afraid.')

It is to be noted that earlier the same day, Tamaz used the same verb with 1st
person agreement in reference to himself: *m=e=sin=i=a*.

Similar phenomena have been noted in the speech of other Georgian
children in the second half of their second year. Chrelashvili (1965, pp. 141-
145) recorded the following examples from the speech of a boy aged 1;9:

1. *mo=g=i=t'an=e*
bring:1sgS:2sgO:IMP/AOR
(lit: 'I brought it to you,' instead of *mo=m=i=t'an=e* 'bring it to me!')

2. *mo=g=c=e*
give:1sgS:2sgO:OPT
(lit: 'I should give it to you,' instead of *mo=m=e=c=i* 'give it to me!')

3. Levan [1;9;15] is sitting atop the headboard of the bed. His older
sister Media reaches for him.
*media, *c'a=vid=e=t!*
M.:VOC go:1plS:OPT
(lit: 'Media, let's go!' Accordingly, Media puts her hands around
Levan's waist, and starts to take him down from the headboard.)
**c'a=vid=e... c'a=val... media, c'a=val...*
go:1sgS:OPT go:1sgS:FUT M.:VOC go:1sgS:FUT
mediaa!... c'a=vid=e=t... c'a=vid=e=s!
M.:VOC go:1plS:OPT go:3sgS:OPT
(lit: 'I should go . . . I will go . . . Media, I will go . . .
Media! . . . We should go . . . He/she/it should go!')

The appropriate verb to express Levan's wishes is the imperative *c'a=d=i* 'go
away,' which had been observed in his usage six weeks earlier. His use of
optative and future forms indicates that he has noticed a connection between

these screeves and the expression of desires and intentions, but has not yet grasped the role of person markers.

At age 1;7, Tamaz began using recognizable verb forms (other than 'I want,' 'I'm hungry') in the indicative mood. Some early examples are *žamea* (AG *mžave=a*) 'it [apple] is sour,' *gat'k'a* (AG *ga=t'q'=d=a*) 'it [flower] broke.' For a few months there is an aspectual distinction however: stative verbs are used in the imperfective present, while change-of-state verbs are in the perfective aorist.

At about age 1;9, indicative-mood verbs become much more frequent. In the speech of Georgian children at this stage — roughly the last quarter of their second year, or beginning of their third — the Set S 1st person prefix *v-* often fails to appear where it would be expected (Choloqashvili-Karchauli, 1960, p. 190; Samxaradze, 1966, p. 138), e.g.:

Ta [1;9;7] *mome mak'ant'eli, *ga=č'l=i egi* (A:145)
 give.me scissors cut:2sgS:3O:FUT this
 'Give me the scissors. I will cut this.'
 (lit: 'you will cut this'; cp AG *mo=v=č'r=i* 'I will cut it')

Ke [2;1;1] *tik'o k'ak'aloni c'ama, *me ala c'ame* (K:71)
 T. persimmon eat:3S:3O:AOR I not eat:2sgS:3O:AOR
 'Tiniko ate a persimmon [but] I didn't eat one.'
 (cp AG *v=č'am=e* 'I ate it')

Pa [2;0] **vel i=p'ov=e* (K:27)
 cannot find:2sgS:3O:AOR
 'I couldn't find it' (lit 'you couldn't find it';
 cp AG *v=i=p'ov=e* 'I found it')

Because the prefix *v-* is the only means of distinguishing 1st from 2nd person in the Set S affix series, all of the above verbs are identical to adult Georgian verbs with 2nd person subjects. One might explain these data on phonological grounds, that is, the failure to produce the first person prefix might be the result of simplification of difficult phoneme sequences. Note however the following instance involving the present tense of the copular

verb. For this verb, the distinction between 1st and 2nd person is indicated by stem suppletion (*var* ‘I am,’ *xar* ‘you are’) rather than addition of a prefix.

Za [2;7] *me k'argi bič'-i xal.* (K:112)
 I good boy-NOM be:2sg:PRES
 ‘I am a good boy.’
 (AG: *me k'argi bič'=i var*)

The use of 3rd person verb forms where 1st person would be appropriate is less common, but is attested, for example, in question-answer sequences:

Aunt: *vin ga=t'ex=a sain-i?* (K:70)
 who:ERG break:3sgS:3O:AOR plate-NOM
 ‘Who broke the plate?’
 Ke [2;0;29] **me ala ga=t'ex=a caini!*
 I not break:3sgS:3O:AOR plate-NOM
 ‘I didn't break the plate!’
 (AG *ga=v-t'ex=e* ‘I broke it’)

Occasionally Set S 2nd person verb forms are used with 3rd person subjects:

Ta [1;9;23] has just observed a neighbor pouring water out of a teapot.
 Ta **sioza da=sx=i cot'a nc'ali, čainik'i nc'ali*
 S pour:2sgS:3O:AOR little water teapot water (A:151)
 ‘Serozha poured a little water [from] the teapot.’
 (AG: *da=a=sx=a* ‘he poured it’)

Because of the small number of children studied in detail thus far, it is still difficult to separate out the factors contributing to or complicating the acquisition of person marking in Georgian. On the one hand, children have to learn to segment the Georgian verb into its component morphemes, including the two sets of person markers. On the other hand, there is the cognitive task of learning to cope with the shifter categories of language. The child must learn that the reference of pronouns and agreement markers shifts with each speaker turn. It is presumably while tackling this problem space that children

appearance of *v-* came after its Set O counterpart *m-* was already being used appropriately:

TABLE 12
Age at which 1st person prefixes are first used correctly

	SET O	SET S
	<i>m-</i>	<i>v-</i>
Tamaz	1;8;26	1;11;14
Keto	2;2;2	2;3;30
Ila	2;3;14	2;10;2

It is unclear why this should be so. One factor may be the phonological resemblance between the prefix *m-* and the 1sg pronoun *me* 'I, me.' Another facilitating factor may be that most Georgian verbs of desire and physical or psychological state, including those which appear the earliest in child language, are indirect, i.e. the Set O affix marks the real subject: *m=i=nd=a* 'I want sthg,' *m=š=i=a* 'I'm hungry,' *m=e=dzin=eb=a* 'I'm sleepy,' etc. These indirect verbs are used in the indicative mood long before direct verbs are.⁵

Once Georgian children have mastered the use of the Set S 1st person prefix *v-* at the beginning of their third year, they no longer commit errors in 1st or 2nd person verb agreement, with the exceptions to be noted in section 4.1.3.

An [2;4] *v=i=t'ir=e* *da* *m=cem=a* (K:106)
cry:1sgS:AOR and hit:3sgS:1sgO:AOR
'I cried and he hit me.'

⁵Another factor of a morphophonemic nature may contribute to the omission of the 1st person SetS (subject) prefix where it is required. In Georgian, and also in the other Kartvelian languages, the Set S 1st person prefix is obligatorily dropped whenever a Set O 2nd person marker (*g-*) is present. The two prefixes may not cooccur. Compare *v=Ø=e=ubn=eb=i* 'I am telling him/her/them' and *g=e=ubn=eb=i* (**v=g=e=ubn=eb=i*) 'I am telling you.' It is therefore not the case that all verbs with a 1st person subject have an overt subject marker present. The Set O 1st person prefixes (*m-*, *gw-*) are never deleted in this fashion.

Ta [1;11;29] *nana, ar da=i=dzin=0, deda-0* (A:168)
 N.:VOC not sleep:2sgS:OPT mother-NOM
čai-s mo=g=i=t'an=s
 tea-DAT bring:3sgS:2sgO:FUT
 'Nana, don't go to sleep, mother will bring you tea.'

4.1.2. *3rd person marking.* As was noted earlier, the Set S 3rd person markers are portmanteau morphemes, containing information about tense, mood and verb class as well as person and number. As one would expect, these suffixes present greater difficulty for the child acquiring Georgian than the 1st and 2nd person markers.

The first 3rd person marker to appear is the suffix *-a* in the present tense forms of indirect verbs: *m=i=nd=a* 'I want **it**,' *m=ši=a* 'I am hungry [**for it**].' In adult Georgian this *-a* codes agreement with the object of the verb. It is unclear whether at this stage children interpret this suffix as a person-agreement marker. The majority of indirect verbs are only used with object NPs denoting inanimates, which always control Set S 3sg agreement.⁶ Since this agreement marker does not change, it is probably acquired as an indicator of tense and not person.

Georgian children appear to acquire the appropriate Set S 3sg suffixes for the present and optative (*-s*) and for the aorist and imperfect (*-a*) of most Class A verbs with few if any deviations from the adult norm. The most frequent occasion of errors in the assignment of 3rd person suffixes involves indirect and stative verbs (Class P 4th conjugation). Although most of these verbs — those with the slot 8 suffix *-i-* — employ the Set S 3sg marker *-a* in the present screeve, the remainder use *-s*. Since there is no longer any semantic basis for the distinction between these two subgroups, the child must learn this information for each 4th conjugation verb separately. Not surprisingly, nonstandard forms frequently occur:⁷

⁶In modern Georgian usage, noun phrases with plural inanimate reference seldom control plural agreement in the verb. See section 4.3.3 below.

⁷Such forms also occur in some Georgian dialects, especially in the northeast mountain provinces (Jorbenadze, 1989, pp. 235, 247).

Ke [3;1;1] *bebia-∅ tinik'o-s *∅=u=q'war=i=a* (K:74)
 gr.mother-NOM T.-DAT love[4]:3O:3S:PRES
 'Tiniko loves grandmother.'
 (AG: *∅=u=q'war=s* 'sb loves sb')

Ke [3;2;20] *ager *q'r=i=av=s šeni pexsacmel-eb-i* (K:75)
 here lie[4]:3S:PRES your shoe-PL-NOM
 'Your shoes are lying over here.'
 (AG: *q'r=i=a* 'sthg lies scattered')

Errors of this type persist at least into the fifth year. The present perfect form of 1st conjugation verbs is formed from a stem similar to that of stative 4th conjugation verbs, and the same types of nonstandard forms are devised by young Georgian speakers. In their use of Set S 3pl suffixes, Georgian children tend to overextend the morpheme *-en*. It almost always is used where adult Georgian would have *-nen* (perhaps for phonological reasons), and on occasion appears in the aorist forms of Class A verbs, instead of *-es*.⁸

Il [3;5;28] *mami, ak dzayl-eb-mam *i=čxub=en* (K:102)
 dad:VOC here dog-PL-ERG fight[3]:3plS:AOR
 'Daddy, the dogs fought here.'
 (AG: *i=čxub=es* 'they fought')

4.1.3. Indirect constructions. Although indirect verbs are among the very first words that Georgian children produce, some of them present special problems. While children readily learn that the subjects of these verbs are marked by Set O agreement markers, they have a harder time marking agreement with the objects of indirect verbs. Indirect verbs with animate — specifically, 1st and 2nd person — object NPs create difficulties for children up to the age of five:

⁸The use of the 3pl subject marker *-en* where *-es* or *-nen* would occur in the standard language is observed in a number of west Georgian dialects (Tuite, 1988b; Jorbenadze, 1989, pp. 468, 529).

An [2;9] (to her parents) *orive-∅* **m=i=q'war=var* (K:107)
 both-NOM love[4]:1sgO:1sgS:PRES
 'I love you both.'
 (lit: 'I love **me** both'; instead of
 AG: *m=i=q'war=xar=t* 'I love you_{PL}')

Ke [4;10;11] *mašin ro* **da=m=q'av=d=i* (K:81)
 then when carry[4]:2sgS:1sgO:IMPF
bax-ši, g=a=xsov=s, deda?
 garden-in remember[4]:2sgO:3S:PRES mother:VOC
 'That time when you were carrying me in the garden,
 do you remember, mother?'
 (lit: 'I was carrying you'; instead of
 AG: *da=g=q'av=d=i* 'carry:2sgO:1sgS:IMPF'
 = 'you were carrying me')

The inversion of person marking that occurs in the perfect series screeves of Class A (1st and 3rd conjugation) verbs is also problematic for young Georgian speakers. The first perfect series screeve to appear is the present perfect, the primary function of which is the expression of negated past actions. The Georgian children in Kaxadze's study did not acquire the present perfect until after age 3; Avalishvili's son Tamaz — who in other respects as well appears to have been a precocious language learner — began using it at age 2;3. In the following exchange, Ila simply echoes the present perfect forms used by his older sister without shifting the person marking, even though at this age he had no problems marking person agreement in the present series and aorist series screeves of 1st conjugation verbs:

Ke (to M) *mag-a-s* *ga=∅=u=t'ex=i=a* *č'ika-∅* (K:99)
 that-DAT break:3O:3S:PERF glass-NOM
 'He broke a glass.'
 Il [2;10;25] *al* *ga=∅=t'ex=i=a*
 not break:3O:3S:PERF
 lit. 'He didn't break it.'

- Ke (to Il): *k'i, ar ga=g=i=t'ex=i=a, ho!*
indeed not break:2sgO:3S:PERF yes
'Yeah, right, you didn't break it!'
- Il: *ala, al ga=g=i=t'ex=i=a, ala!*
no not break:2sgO:3S:PERF no
lit. 'No, you didn't break it, no!'
(AG: *ar ga=m=i=t'ex=i=a* 'I didn't break it')

Once they are able to produce the present perfect correctly, children occasionally use it inappropriately, especially when responding to a negated sentence with an affirmative one:

- M: *xel-i ar še=g=i=mšral=eb=i=a?* (K:86)
hand-NOM not dry:2sgO:3S:PERF
'Didn't you dry off your hands?'
- Ti [4;4;19] *k'i, ?še=m=i=mšral=eb=i=a*
yes dry:1sgO:3S:PERF
'Yes, I have dried them.'
(in AG the aorist would be used: *še=v=i=mšral=e*)

The present perfect is also used to convey the nuance that the speaker has inferred or been informed that an event has taken place, rather than having been a direct witness to it. In this function as well, the present perfect is in semantic opposition to the aorist. The aorist is the unmarked member of the opposition, and can imply that the speaker witnessed the action or event in question (Aronson, 1982a, p. 274). Here is an instance where Tamaz uses the present perfect and aorist to code this contrast: he is describing a picture in a book of a fox running off with a bird. The capture of the bird is not shown, but Tamaz infers that it occurred.

- Ta [2;3;5] *še=xed=e! melia-s da=Ø=u=č'er=i=a* (A:186)
look:2sgS:3O:IMP fox-DATcatch:3O:3S:PERF
čit'unia-Ø, melia-m mo=i=p'ar=a.
bird-NOM fox-ERGsteal:3sgS:3O:AOR
'Look! The fox [apparently] caught a bird; the fox ran off with it.'

4.1.4. *Preverbs*. The imperative verb form, which is among the first to be used by Georgian children, is (for most stems) marked with a preverb. It is probably not the case that the preverb is perceived as a distinct segment at this stage. In the first verbs produced by Ila, for example, the word-initial vowel *a*-corresponded to any of several preverbs containing this vowel: *amat'it'i* [= *ča=m=a=cw=i*] 'dress me,' *atuče* [= *da=xuč'=e*] 'close [your eyes],' *at'ide* [= *c'a=vid=e=t*] 'let's go.' Other children (Tamaz, for example) were more successful in reproducing these initial segments of the verb.

Since it is the case that for many verb roots the preverb(s) that can be used with them is not semantically predictable, children frequently use preverb+verb combinations that do not occur in the lexicon of adult Georgian:

Ti [4;0;3] *šen *da=i=sp'=e!* (K:85)
 you ruin[2]:2sgS:AOR
 'May you be ruined!' (mild curse)
 (AG *mo=i=sp'=e*; *da-* 'down,' *mo-* 'here')

Ke [5;0] *šen *ga=g=i=c'ux=d=a gul-i* (K:83)
 you trouble:3S:2sgO:AOR heart-NOM
 'You were feeling weak.'
 (AG: *še=g=i=c'ux=d=a*; *ga-* 'out,' *še-* 'in')

Where a Georgian verb stem can be used in combination with several preverbs to convey different shades of meaning, children will often employ the preverb-verb combination most familiar to them to cover the semantic range of several adult words (Choloqashvili-Karchauli, 1960, pp. 190-191).

Not infrequently, Georgian children invent new preverb/verb combinations by analogy with existing ones:

Ke [3;2;18] *saban-is da=xureba-∅ ar i=c=i=s,* (K:75)
 blanket-GEN covering-NOM not know:3sgS:3O:PRES
*da *a=xureba-∅ ar i=c=i=s*
 and "uncovering"-NOM not know:3sgS:3O:PRES
 'He doesn't know how to cover himself with a blanket,
 nor how to uncover himself.'

3. Ta [1;10;14] *mašina-∅* **t'rial=ob=s* (A:155)
 machine-NOM turn[3]:3sgS:PRES
 'The machine (car) is turning.'
 (AG: *t'rial=eb=s*)

In each of the above verbs, *-eb-* is used where adult Georgian has a less-common series marker, save the third example. In this instance, Tamaz employs *-ob-* where *-eb-* should be used, presumably because he has observed that most Georgian 3rd conjugation verbs use *-ob-*.

The verb form in the second example (**i=xad=eb=s*) illustrates another source of difficulty for young Georgian speakers. Certain verb roots undergo vowel mutation (ablaut) in the aorist series screeves, e.g.: PRES *v=k'rep=∅* 'I am picking it [flower],' AOR *mo=v=k'ri p=e* 'I picked it'; PRES *v=šl=i* 'I am spreading it out,' AOR *ga=v=šal=e* 'I spread it.out.' In the above-mentioned instance, Keto extracted the root *-xad-* from the aorist form (*ga=i=xad=a* 's/he took it off') and formed a present series stem from this root by the addition of the series marker *-eb-*. Several common Georgian verbs utilize completely different stems in the present series and aorist series. In the following example, Tina fashioned present and future forms of the verb meaning 'do' by adding series markers to the aorist series stem (*-kn-/ken*). The present series forms used in adult Georgian employ etymologically-unrelated roots.

- Ti [4;3;25] *me* **v=kn=av* *ai ase; šen* (K:86)
 I do:1sgS:3O:PRES here so you
 **ken=eb?*
 do:2sgS:3O:FUT
 'I do it this way; will you do it?'
 (AG: *v=šwreb=i* 'I do,' *i=zam* 'you will do';
 cp AOR 1sg *v=ken=i* 'I did it,' 3sg *kn=a*)

Other examples of stem-selection errors:

- Ke [3;9;12] **m=c=em=d=a* (instead of *m=a=dzl=ev=d=a*) (K:78)
 'She was giving it to me.'
 (future/aorist stem used instead of present-series stem in
 formation of imperfect)

Ti [4;3;23] +*g=i=txr=am* (instead of *g=e=ubn=eb=i*) (K:86)

‘I am telling you.’

(aorist-series stem instead of present-series stem in formation of present)

There is a consistency to these errors. In the case of change-of-state verbs (1st and 2nd conjugation verbs), where the present series and aorist series roots differ in ablaut grade, or are etymologically unrelated, children are likely to employ the aorist series root as the base for forming the present series stem (by addition of a series marker).

4.1.6. Imperfect stem formation. Of the five present series screeves, three — the imperfect, conditional and conjunctive — have stems formed by the addition of the suffix *-d-* or *-od-* in slot 7. The former suffix is used with 1st and most 3rd conjugation verbs; *-od-* is used to form the imperfect stems of 2nd conjugation verbs, 3rd conjugation verbs with the series marker *-i-* and some 4th conjugation verbs. Child speech errors involving these suffixes are of two main types: segmentation errors, and formation of imperfect stems for verbs that do not have them in adult Georgian.

One not uncommon segmentation error appears to reflect an interpretation by the child of the slot 7 imperfect stem formant *-d-* and the 3sg Set S suffix *-a* which follows it as a single imperfect screeve morpheme (“*-da*”). In producing his or her own imperfect forms, the child simply adds *-da* to the present-tense form:

Il [2;8;1] *kuta-ši amucia-∅ *mi₁=b₄=i₆=s₉=da₇₊₉* (K:98)

street-in doggy-NOM run[3]:3sgS:PRES+IMPF

‘A doggy was running in the street.’ (AG: *mi₁=rb₄=od₇=a₉*)

Ke [3;7;28] *čaj-∅ *duγ₄=s₉=da₇₊₉ gušin* (K:77)

tea-NOM boil[3]:3sgS:PRES+IMPF yesterday

‘The tea was boiling yesterday’ (AG: *duγ₄=d₇=a₉*)

Another type of segmentation error commonly occurs when Georgian children try to form the past tense of stative verbs. Since there is no meaningful perfective/imperfective opposition for these verbs, they have only one past indicative screeve. Depending on the verb, this screeve will be, formally speaking, either an imperfect or an aorist. There is no semantic

basis for predicting which it will be. For example, the past indicative of $m=i=q'war=s$ 'I love sb/sthg' is $m=i=q'war=d=a$, an imperfect, while the past of $mo=m=c'on=s$ 'I like sb/sthg' is an aorist: $mo=m=e=c'on=a$. The children in our diary studies often devised past-tense forms based on the imperfect stem for stative verbs which employ the aorist, not the imperfect, in adult Georgian:

1. Ke [4;11;20] *dana-∅* *tinik'o-s* $*∅=a(kv)=d=a$, (K:82)
 knife-NOM T.-DAT have[4]:3O:3S:IMPF
xel-ši $*∅=u=k'av=od=a$
 hand-in hold[4]:3O:3S:IMPF
 'Tiniko had a knife, she held it in her hand.'
 (AG: $h=kon=d=a$ 'sb had sthg', $∅=e=k'av=a$ 'sb held sthg')

2. Ti [3;10;2] *ama-s* *saban-i* $*∅=e=xur=i=od=a$ (K:85)
 this-DAT blanket-NOM cover:3O:3S:AOR+IMPF
saban-i $*∅=a=xur=av=d=a$ *ama-s*
 blanket-NOM cover:3O:3S:IMPF this-DAT
 'She was covered by a blanket; a blanket was covering her.'
 (AG: $∅=e=xur=a$ 'sthg covered sb')

In the first example, Keto fashioned past-indicative forms for $∅=a(kv)=s$ 'sb has sthg' and $∅=u=k'av=i=a$ 'sb holds sthg' by inserting imperfect-stem formants in slot 7. The correct Georgian forms involve stem suppletion for the first verb and the use of an aorist form for the second. In the second example, Tina makes two attempts to conjugate the stative $∅=a=xur=av=s$ 'sthg covers sb' in the past indicative. Her first try shows the influence of the correct past-tense form $∅=e=xur=a$, which she evidently processed as a present-tense form $+∅=e=xur=i=a$ (analogous to $∅=e=šin=i=a$ 'sb is afraid of sb/sthg') from which the imperfect was formed by the addition of the slot 7 formant *-od-*. Her second attempt employed an imperfect formed from the actual present screeve.

If one compares these facts with those presented in section 4.1.5, a pattern emerges. In forming the present-series screeves of 1st conjugation verbs, children frequently used stems that are, in the adult language, only used in the aorist series. In the case of stative 4th conjugation verbs, the opposite derivational direction is observed: imperfect stems (formed from the present-

series stem) were employed in the formation of past indicative forms, where the adult language would use aorist stems.

These facts can be compared with data on the emergence of verbal morphology. It was mentioned above that the first recognizable verb forms used by Georgian children are in either the imperative or present screeves. More precisely, almost all of the aspectually TELIC verbs (change-of-state verbs: accomplishments and achievements) were first used in the imperative (formally identical to the aorist with a 2nd person subject), and all of the ATELIC (stative and activity) verbs first appeared in the present indicative. In terms of Georgian verb stem classes, most 1st and 2nd conjugation verbs are telic, and 3rd and 4th conjugation verbs are atelic. Here are the earliest finite verbal forms recorded in the diaries for Tamaz and Ila:

Tamaz (age 0;11 - 1;7)

TELIC VERBS

ade 'get up!'
daġi [= *daġeki*] 'sit down!'
ate [= *aante*] 'turn on [the light]!'
modi 'come here!'
mie 'give it [to me]!'
mome 'give it to me!'
c'adi 'go away!'
gac'ie 'get it away [from me]!'

ATELIC VERBS

mina 'I want it'
ara [= *araa*] 'it isn't [there]'
mšia 'I'm hungry'

Ila (age 2;0 - 2;5)

TELIC VERBS

t'at'ida [= *c'avida*] 'he left'
modi 'come here!'
mieci 'give it [to me]!'
at'ide [= *c'avidet*] 'let's go!'
t'amo [= *vč'amo*] 'let me eat!'
adi [= *adeki*] 'get up!'
dadze [= *daġeki*] 'sit down!'
atuče [= *daxuč'e*] 'close [your eyes]!'
amat'it'i [= *amiq'wane*] 'pick me up!'

ATELIC VERBS

ik'os [= *iq'os*] 'let [me] be!'
na [= *minda*] 'I want it'
eca [= *es aris*] 'this is'
(tovli) modic 'it's snowing'
amidi [= *ar minda*] 'I don't want'
at [= *akws*] 'he has it'
amagak [= *ar makws*] 'I don't have it'

All of the telic verbs are in aorist series forms: mostly the imperative, also some optatives with 1pl subjects (“let’s ...”) and one aorist. All of the stative verbs, with one exception, are in the present tense. The basis for this distribution is aspectual. The aorist-series stem is aspectually PUNCTILIAR, this being the unmarked aspect for change-of-state verbs. The present tense form is aspectually DURATIVE, which is the unmarked aspect for atelic verbs.

In the next phase, these children began to use aorist forms of telic verbs, e.g. *c’ame* [= *vč’ame*] ‘I ate it’ [Ila, 2;6;5]; *gat’k’a* [= *gat’q’da*] ‘it broke’ [Tamaz, 1;7;24]. The first past-tense forms of stative verbs did not appear until several months later. (cp the similar observations reported for the acquisition of Italian by Antinucci and Miller (1976)).

The differences in derivational direction for the formation of (erroneous) verb stems noted above and in section 4.1.5 can be seen to be related to these facts. It is the stem type which is the first to appear in the child’s usage which is initially used in the formation of other stems. When children begin to productively employ the present-series screeves, they interpret them as derived from the aorist series stem with the addition of a series marker (as is indeed the case for most 1st and 2nd conjugation verbs). Conversely, they prefer to use the imperfect stem (derived from the present-series stem) in forming the past indicative of stative verbs.

4.1.7. *Version*. Errors in the use of the version markers (slot 3) do not appear to be very common. Most such deviations from the adult norms involve the use of the wrong version vowel in conjunction with a Set O object marker. In the following sentence, Tina inserts objective-version vowels after the Set O agreement markers for the indirect objects. In fact, most Georgian verbs with indirect objects do use version vowels. The verb in question, however, is one of a small number which subcategorize for indirect objects but do not have version vowels after the indirect object markers.

Ti [3;8;16] *mela-m* * $mo_1=m_2=i_3=p’ar_4=a_9$ *beč’ed-i*, (K:85)
fox-ERG steal:3sgS:1sgO:OBJ.V:AOR ring-NOM
ama-s-ac * $mo_1=\emptyset_2=u_3=p’ar_4=a_9$
this-DAT-also steal:3sgS:3O:OBJ.V:AOR
‘The fox stole my ring; he stole one from her, too.’
(AG: $mo=m_2=p’ar=a$ ‘he stole it from me’, $mo=h_2=p’ar=a$ ‘he stole it from her’)

In her acquisition diary for the child Dali (who was acquiring Russian simultaneously with Georgian), Imedadze recorded the following utterance, in which Dali's uncertainty concerning the presence of a version vowel after the indirect object marker for a particular verb is shown:

Da [2;0;20] *al *še=m₂=dzil₄=i=a, dedik'o, šen*
 not able[4]:1sgO:3S:PRS mommy:VOC you
**g₂=i₃=dzil₄=i=a? dali-s al *še=Ø₂=dzul₄=i=a.*
 able:2sgO:3S:PRS Dali-DAT not able:3O:3S:PRS
 'I can't do it, Mommy, can you? Dali can't do it.'

The correct forms are *še=m₂=i₃=dzl₄=i=a* 'I can do it,' *še=g₂=i₃=dzl₄=i=a* 'you can do it,' *še=Ø₂=u₃=dzl₄=i=a* 's/he can do it' respectively. Dali appears to have misheard the version vowels as part of the stem, leading to the production of the verb roots **-dzil-* and **-dzul-* instead of the correct *-dzl-*. (Since many Georgian roots have different ablaut grades [see section 4.1.5], the postulation of such an alternation of verb forms is not entirely out of line with the adult model). The second verb form in the example cited is a sort of compromise between her earlier hypothesis (no version vowels, syllabic root) and the adult form (version vowels, nonsyllabic root).¹⁰

Less often, Georgian children will derive objective-version forms of verbs that do not have such forms in the adult language, although there is no semantic reason why they should not. In such instances, the young speakers are filling in accidental gaps in the lexicon:

Ti [4;10;1] *hau, čemi p'ur-i c'a=m=i=y=o (K:88)*
 oh my bread-NOM take:3sgS:1sgO:AOR
kata(m)-ma!
 chicken-ERG
 'Oh, the chicken took my bread away from me!'

¹⁰It may not be a coincidence that the preverb (*še-*) is omitted in the second verb form. Dali's representation of this verb might have included a 'melodic' template, comprising information on syllable count, a partial representation of the invariant components of this screeve (i.e. those elements which do not vary according to person and number), etc. The *še-* would then have been dropped in 'compensation' for the version vowel *-i-*, in order to match the syllable count in Dali's melodic representation.

The above verb was intended as the objective-version counterpart to *c'a=i=yeb=s* 'sb takes sthg.' The verb *c'a=Ø=u=yeb=s* 'sb takes sthg away from sb' does not exist in modern Georgian, but in fact this form with this meaning was used in the medieval language.

The overall impression one gets from the diaries is that Georgian children readily obtain a clear grasp of which version vowels can be expected with which classes of verbs. When young speakers concoct verb forms with stems that are not used in the adult language, the version vowel appropriate to that semantic type of verb is used. Some examples:

1. An [2;5] is walking in the wind with her mouth open.

An *p'ir-ši* **m₂=i₃=kar₄=av₆=s₉*. (K:107)

mouth-in wind:3S:1sgO:OBJ.V:PRES

lit: 'It is wind-ing into my mouth.'

(AG: *p'ir-ši kar-i m=i=ber=av=s* 'The wind is blowing into my mouth.')

2. Ti [4;11;26] *es ar še₁=d₄=i₈=s₉ ima-ši;* (K:89)

this-NOM not go.in:3sgS:PRES that-in

*aba, *še₁=a₃=d₄=i_n₆=e₈*

well go.in:CAUS:2sgS:3O:IMP

'This doesn't go into that; well, make it go in!'

3. Ke [4;8;22] *ar *ga₁=m₂=e₃=k'et₄=a₉ es šurnok'-i k'arkat*

not make:PASS:3S:1sgO:AOR thisshoelace-NOM well

'My shoelace was not done right.' (K:80)

(AG: *ga₁=m₂=i₃=k'et₄=d₇=a₉* 'it was done for me')

The verb used by Ana in the first sentence is formed from the nominal root *kar-* 'wind,' which is not used as a verb stem in adult Georgian. As would be expected for a Class A verb with an indirect object, objective version with the vowel *-i/-u-* is employed (Set O subset III in Table 6). In the second example, Tina forms a causative for a verb that has none in the adult language. As is appropriate for derived causatives (see next section) the version vowel *-a-* appears in slot 3. As for example 3, the verb root *-k'et-* does have a passive stem, but it is formed with the suffix *-d-* in adult Georgian. Keto devised a

prefixal 2nd conjugation verb with a 1sg indirect object. As would be required for verbs of this morphological type, the version vowel *-e-* is used (object marking subset IV in Table 6).

4.1.8. *Formation of passives and causatives.* It was noted earlier (see Table 3) that the stems of 2nd conjugation verbs are formed in three distinct ways, of which two (prefixal and suffixal derivations) are used productively to form new verbs in Georgian. Most semantically passive verbs are marked by the slot 3 version vowel *-i-* (or *-e-* if an indirect object is present). 2nd conjugation verbs with the slot 5 suffix *-d-* tend to be inchoatives, sometimes semantically active. The children in Kaxadze's and Avalishvili's studies not infrequently create 2nd conjugation stems in *-i/-e-* for verbs which require the suffix *-d-* in adult Georgian. These errors are most likely for those verbs which are semantically passive. In some instances, it appears that the children have created so-called “verbs of possibility” (Shanidze, 1953, pp. 299-300), which are prefixal 2nd conjugation verbs in Georgian (e.g. AG *i=č'mev=a* ‘it can be eaten, it is edible’).

1. Ke [2;0;29] *savaxit'-i* **ga=i₃=t'ex=a* (K:70)
 comb-NOM break:PASS:3S:AOR
 ‘The comb broke.’
 (AG: *savarcxeli ga=t'q'=d₅=a*)

2. Ke [3;11;27] *nav-i* *ase* **i₃=k'et=eb=a* (K:78)
 boat-NOM so make:PASS:3S:PRES
 ‘The boat is put together like this.’
 (AG: *k'et=d₅=eb=a*)

Children continue to form prefixal passives from some verb stems where the adult language has suffixal passives well into their sixth year.¹¹

Causatives in Georgian are formed in several ways. For most transitive (1st

¹¹One notes that in the Old Georgian language also, prefixal passives were more common than they are now. For many verbs prefixal 2nd conjugation forms that are attested in medieval texts have been completely replaced by suffixal passives in the modern standard language (Imnaishvili, 1968).

conjugation) verbs the corresponding causative stem is formed by addition of the suffix *-i(n)-* and sometimes a second series marker (*-eb-*) in slot 6 after the regular series marker. The version vowel is changed to *-a-*: e.g. $v_2=i_3=g_4=eb_6=\emptyset_9$ 'I understand sthg,' $v_2=a_3=g_4=eb_6=in_6=eb_6=\emptyset_9$ 'I make sb understand sthg, I inform sb.' Most 3rd conjugation verbs form their causatives by changing the version vowel (to *-a-*) and series marker (to *-eb-*), without addition of a causative suffix. Children begin using derived causatives in their third year. Evidence that they have grasped the mechanism of causative formation comes from novel forms such as the following, concocted by Keto for verbs the causatives of which employ distinct roots in adult Georgian:

1. Ke [2;5;1] $+še_1=m_2=a_3=xed_4=eb_6=i_6=e_8$ *čit'-i* (K:73)
 see:CAUS:2sgS:1sgO:IMP bird-NOM
 'Let me see the bird.' [$< še=v=xed=av=\emptyset$ 'I see it']
 (AG: $da=m=a=nax=e$ 'show it to me')

2. Ke [3;2;23] *šen-c* $c'a=xwal$ *da* *men-c* (K:75)
 you-also go:2sgS:FUT and I-also
 $+c'a_1=m_2=a_3=xwal_4=eb_6$
 go:CAUS:2sgS:1sgO:FUT
 'You will go, and you will cause me to go, too.'
 (AG: $c'a=m=i=q'wan$ 'you will bring me')

3. Ke [3;3;17] *tinik'o-m* *burt-i* $*ga_1=a_3=sk'd_4=in_6=a_9$ (K:76)
 T.-ERG ball-NOM burst:CAUS:3S:3O:AOR
 'Tiniko made the ball burst' [$< ga=sk'd=a$ 'it burst_{intr}']
 (AG $ga=xetk=a$'s/he burst_{tr} it')

4. Ke [4;2;29] *gogo,* *ra-m* $*da_1=g_2=a_3=vic'q'_4=d_5=a_9$
 girl:VOC what-ERG forget:CAUS:3S:2sgO:AOR
mag-is *daxat'wa?* (K:79)
 that-GEN painting-NOM
 'Girl, what made you forget how to paint that?'
 [$< da_1=g_2=a_3=vic'q'_4=d_5=a_9$ 'you forgot it']
 (AG: $da=g=a=vic'q'_4=eb_6=in_6=a$ 'it made you forget')

The first and third verbs were formed according to the model for 1st conjugation verbs, and the second as though it were a 3rd conjugation verb (in fact, *c'a=xwal* is a root 2nd conjugation verb). The verb in the fourth example was derived from a suffixal 2nd conjugation verb with indirect syntax (*da=∅=a=vic'q'=d=eb=a* 'sb:DAT will forget sthg:NOM'). Keto evidently interpreted the slot 5 inchoative suffix *-d-* as part of the root. She produced such nonstandard causatives well into her fifth year (Kaxadze, 1969, pp. 32-35).

4.2. Noun declension.

The first recognizable words uttered by Avalishvili's son Tamaz — the only child for whom we have data from this early stage — correspond to nouns in adult Georgian:

[0;8;5]	<i>didda</i> 'mother'	(AG: <i>deda=∅</i>)
[0;8;20]	<i>mama</i> 'father'	(AG: <i>mama=∅</i>)
[0;8;30]	<i>nana</i> 'Nana' <sister's name>	(AG: <i>nana=∅</i>)
[0;9;29]	<i>buti</i> 'ball' <and other round things>	(AG: <i>burt=i</i>)
[0;10;26]	<i>tit'i</i> 'bird' <and other flying things>	(AG: <i>čit'=i</i>)

All of the above resemble Georgian nouns in the nominative case.¹² It is important to recall that for consonant-stem nouns, such as *burt=i* and *čit'=i*, the NOM is not necessarily the simplest form, phonologically speaking. The DAT form (*burt=s*, *čit'=s*) contains the same number of phonemes, and is a syllable shorter. Contributing to the prominence of the NOM as a model for the child's first nouns is its use in predicative constructions (*dzayl-i-a* 'dog-NOM-is' = 'it's a dog'), and as the citation form used in naming things. For the next year or so after the first word appears all of the noun forms produced by the children in the diary studies were in this base form, equivalent to the adult nominative (also noted by Choloqashvili-Karchauli, 1960, p. 185). The first distinct case desinences appear at the end of the second year or beginning of the third. We will discuss them here in the order of their first appearance in

¹²The first three nouns, being in the class of proper names, have identical NOM and VOC case forms. Hence either could serve as the model for the forms produced.

child speech.

NOMINATIVE. Before other case forms appear in Georgian children's speech, there is evidence that they have segmented the *-i* morpheme used to mark the NOM of consonant-stem nouns. This *-i* is occasionally appended to vowel-stem nouns, for which the NOM desinence in adult Georgian is $-\emptyset$:

Ke [2;0;0] +*deda-i* *udi!* (K:69)
 mother-“NOM” want
 ‘I want mother!’ (AG: *deda-∅ m=i=nd=a*)

Il [2;1;20] +*mama-i* *odida* (K:91)
 father-“NOM” came
 ‘Father came.’ (AG: *mama-∅ mo=vid=a*)

It is unclear what meaning or function is attached to this suffix at this stage, since the morphology is otherwise quite undeveloped.

GENITIVE. For the children in the diary studies the first inflected (i.e. non-base-form) nominals tended to be phonologically equivalent to adult GEN or DAT forms. Since in some instances the nominals in question are vowel-stem proper names (which have identical DAT and GEN forms) it cannot be determined which form served as the model.

TABLE 13
 First recorded use of inflected (non-NOM) nouns

Tamaz	1;8;21	DAT/GEN
Ana	2;1	GEN; INSTR
Keto	2;2;2	DAT/GEN
Mariko	2;4;5	GEN
Ila	2;4;17	GEN

Children have relatively little trouble mastering the Georgian GEN. One area of difficulty is the determination of which roots undergo syncope in the GEN, INS and ADV cases in the singular, and all cases in the plural (cp the

own right, and case marked accordingly (Shanidze, 1953, pp. 93-94). This construction is very common in modern Georgian, often being used where an equivalent English sentence would employ gapping. Here is an example from Aronson (1982a, p. 213):

- Q: *c'ign-eb-i* *vi-s* *mšobl-eb-s* *mi=∅=e=c=i?*
 book-PL-NOM who-GEN **parent-PL-DAT** give:2sgS:3O:AOR
 'Whose parents did you give the books to?'
- A: *givi-sa-sa* *da* *mariam-isa-sa-c* *mi=v=∅=e=c=i*
G.-GEN-DAT and M.-GEN-DAT-also give:1sgS:3O:AOR
 'I gave them **to Givi's** and **to Mary's**.' (i.e. Givi's and Mary's parents)

Several examples of double declension in gapping constructions are attested in the diaries, e.g.:

- Fa *vi-si* *šal-it* *mo=xwed=i?* (K:106)
who-GEN **shawl-INS** come:2sgS:AOR
 'Whose shawl were you wearing when you came?'
- An [2;1] *+bebia-s-it.*
grandmother-GEN-INS
 '(Wearing) grandmother's.'

Ana's sentence would be unacceptable in adult Georgian, but only because the second case in a doubly-declined NP must be the NOM, ERG or DAT.

DATIVE. The DAT desinence *-s* makes its first appearance at about the same time as the first use of the GEN. Since the DAT ending does not show the morphophonemic alternations characteristic of the NOM and GEN, nor does it trigger syncope, it is easily mastered. The earliest occurrences of nouns declined in the DAT tend to be correct from the point of view of adult Georgian. In the fourth, and even into the fifth, year children often deviate from the adult model with regard to the stem to which the DAT ending is attached. They appear to interpret the *-i* NOM desinence of consonant-stem nouns as part of the stem, and attach the DAT *-s* to it as follows:¹³

¹³This phenomenon occurs in at least one nonstandard Georgian dialect as well (Jorbenadze, 1989, p. 460).

1. Il [2;11;18] *gogo, nep-s vel Ø=u=q'r=i* (K:99)
 girl:VOC needle-DAT cannot put:2sgS:3O:PRES
 +*dzapi-s?*
 thread-DAT
 ‘Girl, can’t you put the thread in the needle?’
 (AG: NOM *dzap=i*; DAT *dzap=s*)

2. Ta [2;1;24] leafs through a book, asking his mother questions about the characters in the pictures.

Ta *deda, es ra-Ø ar=i=s?* (A:178)
 mother:VOCthis:NOM what-NOM be:3S:PRES
 +*bič'i-s Ø=e=dzin=eb=a? . . .*
 boy-DAT sleep[4]:3O:3S:PRES
ra-s šob-a bič'-i . . .
 what-DAT do:3S:PRES boy-NOM
Ø=e=dzin=eb=a bič'-s?
 sleep:3O:3S:PRES boy-DAT
 ‘Mother, what is this? The boy is sleeping? . . .
 What is the boy doing? Is the boy sleeping?’
 (AG: NOM *bič'=i*; DAT *bič'=s*)

At the same time, children occasionally misdecline the word *čaj* ‘tea,’ one of a tiny class of common nouns for which the final *-i* is in fact part of the stem (NOM *čaj=Ø*; DAT *čaj=s*). The following example indicates that Tina misinterprets the *-i* as a NOM ending, hence giving *ča-* as the stem to which she adds the DAT desinence:¹⁴

Ti [4;9;29] *aba, ase tu da=lev +ča-s,*
 well so if drink:2sgS:3O:FUT tea-DAT
c'q'al-isa-vit! (K:88)
 water-GEN-like
 ‘Well, so this is how you drink tea, like water!’

¹⁴Adult Georgians have been observed to modify the stems of foreign borrowings ending in /i/ in similar fashion. For example, the loan word *visk'i* ‘whiskey’ is declined as a consonant-stem noun in the speech of some Georgians, as evidenced by its DAT form *visk'=s* (see also Jorbenadze, 1989, p. 523).

Adjectives modifying a head noun assigned DAT case appear in their base form in standard Georgian (see Table 10). Personal possessives show fuller agreement. Children do not master these rules until quite late; until then they often leave modifiers in the form used with NOM-case heads (Choloqashvili-Karchauli, 1960, p. 192):

Il [4;11;26] +*čem-i* *babu-s* *at'am-eb-i-c* (K:105)
 my-NOM grandfather-DAT peach-PL-NOM-also
 ∅=*a=kw=s* *sopel-ši*
 have[4]:3O:3S:PRES village-in
 'My grandfather also has peaches in his village.'
 (AG: *čem=s babua=s*)

On the other hand, Ila correctly declined modifiers which were separated from their heads by an intervening verb. Whenever an NP is thus broken up for stylistic purposes, full modifier-head agreement for case must occur in Georgian:

Il [4;1;1] *million-s* *v=i=q'id=i* *vaš-s* (K:103)
 million-DAT buy:1sgS:3O:FUT apple-DAT
 'I will buy a million apples.'

ERGATIVE. This case makes its first appearance simultaneously with or shortly after the DAT.¹⁵ The ERG has two variants: *-m* after vowel-final stems, and *-ma* after consonant stems. The former is the first to appear (Choloqashvili-Karchauli, 1960, p. 188), probably because most of the nouns in a Georgian child's lexicon denoting animate beings — which are more likely to have agency ascribed to them than inanimates — are vowel stems: proper names, kinship terms, diminutives, etc. For a while afterwards, only this ending is used. Nouns which would be consonant stems in adult Georgian are declined as vowel stems, often through incorporation of the NOM *-i* desinence into the stem, as in (1) below. Other deviations from the adult

¹⁵This is what the data contained in the diaries indicates. Maia Machavariani (personal communication) relates that she has noted the use of ERG-case forms of the words for 'mother' and 'father' as early as the late one-word stage (ages 1;7-1;9). In her view, the child is reflecting the frequent perception of his or her parents as initiators of actions.

model are also attested. Consider the following sentences produced by Keto (age 2;9;20) on the same day:

1. +*dzayli-m* *mo=a=t'q'u=a* *cicunia-∅* (K:74)
 dog-ERG deceive:3S:3O:AOR kitty-NOM
 ‘The dog fooled the kitty.’ (AG: NOM *dzayl=i*; ERG *dzayl=ma*)

2. +*kal-ma=m* *da* +*k'ac-ma=m* *da* +*bavš-ma=m* *c'a=vid=nen*
 woman-ERG and man-ERG and child-ERG leave[2]:3plS:AOR
 ‘The woman and the man and the child left.’
 (AG: *kal=ma*; *k'ac=ma*; *bavšw=ma*)

In example (2), the stem appears to have been doubly marked with the ERG desinence. This may reflect an attempt to cope with the dissonance between the adult input (ERG in *-ma* for all three nouns) and Keto’s initial hypothesis that the ERG desinence for all nouns is *-m*. Keto and Tina produced forms such as *kal=mam* and *dzay(l)=mam* up to at least age five.

As with the DAT, modifiers of ERG-case nouns are not consistently inflected to agree with their heads until relatively late. Keto was still wrestling with this problem at age 5;0:

- +*čem-i* *xel-mam* *da=i=dzax=a*, *am-am*, *če(m)-ma* *xel-mam*
 my-NOM hand-ERG call:3S:AOR this-ERG my-ERG hand-ERG (K:83)
 ‘My hand made a noise; here, this one, my hand.’ (AG: *čem=ma* *xel=ma*)

VOCATIVE. Proper names and kinship terms (when used with reference to one’s own kin) have the bare stem as their vocative form. The first appearance of the VOC desinence *-o* is usually with adjectives modifying a kinship term. Tamaz used the phrase *čem-o deda* ‘my-VOC mother:VOC’ as early as age 1;8;9, just as he was beginning to use inflected nominals. By age three, children are correctly inflecting common nouns in the VOC, e.g.:

- II [3;0;15] *ga=a=čel=e*, *k'ac-o*, *ga=a=čel=e!* (K:101)
 stop:2sgS:3O:IMP man-VOC stop
 ‘Stop, man, stop!’

Later, around age four and a half, Kaxadze's daughters Keto and Tina overextended the VOC in *-o* to kinship terms which they had earlier used (correctly) in the bare-stem form. In the following sentence, Tina follows the bare-stem VOC with a form ending in a labial glide, apparently an attempt to add a VOC desinence:

Ti [4;2;1] *dedi, dedi-w, abano-i-dan* (K:86)
 mom:VOCmom-“VOC” bath-GEN-from
mo=d=i!
 come:2sgS:IMP
 ‘Mommy, mommy, come out of the bathtub!’

INSTRUMENTAL. This case is not used as often as the ones discussed above. Its morphophonemic characteristics are essentially identical to those of the GEN case (it triggers syncope in the appropriate stems, appears in an alternate form [*ti*] when added to *o*-stem and *u*-stem nouns and vowel-stem proper names), and therefore the same types of erroneous forms are created (e.g. **vedro-it* instead of *vedro-ti* ‘pail-INS’) (Kaxadze, 1969, p. 19).

ADVERBIAL. According to Kaxadze (1969, pp. 19-20), the children he studied did not use this case productively (see also Choloqashvili-Karchauli, 1960, p.186).

PLURAL FORMATION. The modern Georgian plural is far more regular than that of the older Indo-European languages, and is acquired fairly early (the first use of the plural suffix *-eb-* recorded for Tamaz was at age 1;9;7). The stem to which the plural ending is added often has the NOM desinence *-i* incorporated into it, as was the case with many of the oblique-case forms discussed above:

Ke [3;2;18] *+bevr-eb-i +k'aci-eb-i da +kali-eb-i-a* (K:75)
 many-PL-NOM man-PL-NOM andwoman-PL-NOM-is
 ‘There are many men and women.’
 (AG: *bevr=i k'ac=eb=i da kal=eb=i*)

The plural suffix triggers deletion of the final vowel in nouns with syncompating stems. As with the use of the GEN here as well children

frequently fail to apply the syncope rule where it would occur in adult Georgian:

Ti [4;0;17] +*mge**l-eb-i* *xo* *ar* *mo=vl=en?* (K:86)
 wolf-PL-NOM INT not come:3plS:FUT
 ‘The wolves aren’t coming, are they?’
 (AG: NOMsg *mge**l=i*; NOMpl *mgl=eb=i*)

Children overextend the range of uses of the plural marker in several directions. Frequently they decline modifiers for plural number, although they only agree for case in modern Georgian. Further, with some quantifiers — numerals, for example — the head remains in the singular number in adult Georgian. Children very often inflect the head, and modifier as well, for plurality (Choloqashvili-Karchauli, 1960, p. 188-189):

Ke [3;4;5] +*p’at’ar-eb-i* *bavšw-eb-i* *tovl-ši* *gora=ob=d=en* (K:76)
 little-PL-NOM child-PL-NOM snow-in roll:3plS:IMPF
 ‘Little children were rolling around in the snow.’
 (AG: *p’at’ara=∅* *bavšw=eb=i*)

Ta [2;6;15] *e,* *ramden=i* +*čit’-eb-i-a;* *ramden=i,* (A:192)
 eh how.many bird-PL-NOM-is how.many
 +*or-eb-i* +*čit’-eb-i-a.*
 two-PL-NOM bird-PL-NOM
 ‘Eh, how many birds are there; how many, there are two birds.’
 (AG: *ramden=i* *čit’=i*; *or=i* *čit’=i*)

Overextension of the use of the plural in the lexical domain is also observed, though it does not appear to be an extremely frequent phenomenon. Some Georgian children in the diary studies have pluralized mass nouns which do not take the plural number in adult Georgian. At age 1;11;11 Tamaz used +*tovl-eb-i* ‘snow-PL-NOM’ in reference to snowballs (the correct adult usage would be *toqli* ‘snow’ or else *gund=eb=i* ‘snowballs’), +*c’q’l-eb-i* ‘water-PL-NOM’ instead of *c’q’al=i* ‘water’ to denote a quantity of water spilled by his mother (Avalishvili, 1961, pp. 164-165). Similar overextensions of the plural

have been noted by Choloqashvili-Karchauli (1960, p. 188) and Kaxadze (1969, p. 101).

4.3. Syntax.

4.3.1. *Word order.* As was mentioned earlier, Georgian allows all possible orderings of clause constituents. Since grammatical information is conveyed by case and agreement, word order is used to indicate new information, focus, emphasis, etc. The pragmatic use of word order begins at about the same time as the onset of case marking, i.e. both major syntactic modules seem to develop in tandem. Table 14 summarizes the relative orderings of subject, direct or indirect object and verb observed in those sentences in the diaries of three Georgian children where all three are present as surface-level constituents.¹⁶

TABLE 14
Word order in full sentences

Child	Age	Subject-object			Object-subject		
		SOV	SVO	VSO	OVS	OSV	VOS
<u>Tamaz</u>	1;9 - 2;0	15	9	1	3	3	1
	2;0 - 2;3	10	8	3	5	0	0
	2;3 - 2;6	7	3	1	1	1	0
	2;6 - 2;9	23	8	2	5	2	0
<u>Keto</u>	2;0 - 2;5	5	3	0	2	2	0
<u>Ila</u>	2;2 - 3;0	3	5	1	2	1	0

While SOV and SVO orders are the most common — as they are in adult Georgian — the other possible orders are all attested. Many of the examples of OVS order involve interrogative pronouns, which must precede the verb directly, e.g. *ra-s šob=i=an k'uk'l-eb-i?* ‘what-DAT do:3plS:3O:PRS doll-PL-NOM’ = ‘what are the dolls doing?’ (Tamaz, age 2;2;0 — A:181).

It is worthy of note that the first instances of object-subject word order for all

¹⁶We should again point out that ellipsis of noun phrases is extremely common in Georgian, especially in the spoken language. For this reason, sentences where both subject and object are expressed by overt NPs represent a minority of the sentences produced by children.

Stage II. The first clausal grammatical relation to be case marked is the indirect object (which is assigned DAT case). Here are the first recorded instances of case assignment for two Georgian children:

1. Ke [2;2;2] *babu-s šub-ze a=t'k'op'=e.* (K:72)
 gr.father-DAT forehead-on kiss
 'I kissed grandfather on the forehead.'
 (AG: *babua=s šubl=ze v=a=k'oc=e*)

2. An [2;2] *tamara-s ar ga=v=∅=u=gzavn=eb +čir-i.* (K:106)
 T.-DAT not send:1sgS:3O:FUT dried.fruit-∅
 'I will not send dried fruit to Tamara.'
 (AG: *tamara=s ar ga=v=∅=u=gzavn=i čir=s*)

For some children, the beginning of case assignment clearly preceded the mastering of person-marking morphology in the verb (compare Table 12, and Keto's utterance above, where the 1st person Set S prefix does not appear in the verb). Sentence (2) demonstrates that the DAT case is not assigned to all arguments that require it at this stage. In particular, the direct object of a verb in the present series, which is assigned DAT case in adult Georgian, remains in the unmarked form. The earlier acquisition of DAT marking for indirect objects is probably a reflection of the greater consistency of case assignment for indirect objects compared to direct objects (Table 11). The assignment of DAT case to the subjects of indirect verbs also begins somewhat later. At age 1;8;26, Tamaz was marking indirect objects appropriately (ex. 2 below), but not the subjects of indirect verbs such as *dzinavs* 'sb sleeps':

1. Ta [1;8;26] *∅=dzin=am=s +tamazi-∅* (A:143)
 sleep[4]:3O:3S T.-∅
 'Tamaz is sleeping.'
 (AG: *∅=dzin=av=s tamaz=s*)

2. Ta [1;8;26] *mi=∅=e=c=i tamazi-s p'amador-i* (A:142)
 give:2sgS:3O:IMP T.-DAT tomato-∅
 'Give Tamaz a tomato!'

Stage III. Shortly after the DAT makes its first appearance, it is applied to the direct objects of present series verbs, but not to the direct objects of aorist series verbs, just as in adult Georgian. This is the first indication that Georgian children are acquiring the principle of case shift for Class A (1st and 3rd conjugation) verbs.

In the utterance including his first use of the DAT to mark the direct object of a present series verb Ila provides a contrasting example using the same verb in an aorist series screeve:

Ila [2;6;27] *mama, buti-∅ m=i=k'id=e* .[pause] (K:96)
 father:VOC ball-**NOM** buy:2sgS:1sgO:IMP
me m=i=k'id=ep buti-s?
 me buy:2sgS:1sgO:FUT ball-**DAT**
 ‘Father, buy me a ball <imperative, aorist series> . . .
 will you buy me a ball? <future, present series>’
 (AG: IMP *burt=i m=i=q'id=e*; FUT *burt=s m=i=q'id=i*)

At this point Ila was not yet marking NPs in the ERG case. The first instance recorded in his diary is at age 2;8;1:

II [2;8;1] *im buc'i-m, didibuc'i-m ga=lax=a* (K:98)
 that boy-**ERG** big boy-**ERG** beat:3S:3O:AOR
mole buc'i-∅.
 second boy-**NOM**
 ‘That boy, that big boy beat up another boy.’
 (AG: *im did=ma bič'=ma ga=lax=a meore bič'=i*)

From this point onward Ila correctly marked the subjects of all aorist series Class A verbs with the ERG case, including the subjects of intransitive 3rd conjugation verbs:

II [2;10;2] *am bavš-am ga=lax=a da* (K:98)
 this child-**ERG** beat[1]:3S:3O:AOR and
am-am i=t'il=a
 this-**ERG** cry[3]:3S:AOR
 ‘This child beat [him] up, and this one cried.’

Ila's older sister Keto produced her first ERG, as well as her first present series direct object marked in the DAT case, while "reading" a letter out loud to herself. Much of her monologue consists of nonsense words, but two recognizable sentences are imbedded within:

Ke [2;4;5] *doki-∅* *m=i=k'id=a* *deda-m.* (K:72)
pitcher-**NOM** buy:3S:1sgO:AOR mother-**ERG**
. . . . *me* *v=i=q'id=ep* *doki-s!*
I buy:1sgS:3O:FUT pitcher-**DAT**
'Mother bought me a pitcher I will buy a pitcher.'
(AG: AOR *dok=i m=i=q'id=a deda=m*; FUT *v=i=q'id=i dok=s*)

The most detailed record we have of this stage of grammatical development is in Avalishvili's diary of his son Tamaz's utterances. Tamaz used the ERG case appropriately as early as the end of his second year:

Ta [1;10;18] *didi* *teviz-i* *mo=m=i=t'an=a* (A:156)
big fish-**NOM** bring:3S:1sgO:AOR
babua-m *tamazi-s.*
grandfather-**ERG** T.-**DAT**
'Grandfather brought me, Tamaz, a big fish.'

Three days later he is recorded using the DAT to mark the direct object of a present series verb, as well as the subject of an indirect verb:

Ta [1;10;21] (describing a picture in a book)
bič'i-s *kudi-∅* *∅=a=xur=i=a,* (A:157)
boy-**DAT** hat-**NOM** cover[4]:3O:3S:PRES
ačua-∅ *č'am=s* *k'wavił-s.*
horse-**NOM** eat:3S:3O:PRES flower-**DAT**
'The boy is wearing a hat, the horse is eating flowers.'

During this period of transition (lasting about two months) to a system where case marking is used consistently to mark grammatical relations,

Tamaz from time to time “backslides.”¹⁷ The same date he produced the above sentence, he produced another in which the subject of a 1st conjugation aorist series verb was not marked in the ERG case:

Ta [1;10;21] (describing a picture)

čočx-*i* da=∅=a=t'k'=a +k'ač-*i* (A:158)
 broom-∅ hit:3S:3O:AOR man-∅
 ‘The man hit it [a cat] with a broom.’
 (AG: *cocx=i da=∅=a=rt'q'=a k'ac=ma*)

Two days later Tamaz follows the adult case-assignment rules in these two sentences, and apparently never falters thereafter:

1. Ta [1;10;23] *didibat'-i* *balak-s* č'am=s (A:158)
 big goose-**NOM** grass-**DAT** eat:3S:3O:PRES
 ‘The big goose is eating grass.’ <present series>
2. Ta [1;10;23] *talik'o-m* *k'ak'al-i* *mo=m=i=t'an=a* (A:159)
 T.-**ERG** nut-**NOM** bring:3S:1sgO:AOR
 ‘Taliko brought me nuts.’ <aorist series>

He also demonstrates the ability to use case appropriately in one-word responses to questions:

Fa: *vin* *g=cem=a?* (A:162)
 who:ERG hit:3S:2sgO:AOR
 ‘Who hit you?’

Ta [1;11;2] *nana-m*
 N.-**ERG**
 ‘Nana [hit me].’

¹⁷Two weeks earlier, Tamaz showed a similar inconsistency in assigning the appropriate case (DAT) to the subject of an indirect verb:

1. Ta [1;10;4] *babua-s* ∅=dzin=am=s (A:152)
 grandfather-**DAT** sleep[4]:3O:3S:PRES
 ‘Grandfather is sleeping.’
2. Ta [1;10;12] **tamazi-∅* ∅=dzin=am=s (A:152)
 T.-' sleep:3O:3S:PRES
 ‘Tamaz is sleeping.’ (AG: *tamaz=s ∅=dzin=av=s*)

2. Ti [3;8;12] *čemi +saxl-ma ase ge=i=ndzr=a* (K:84)
 my house-**ERG** thus shake[2]:3S:AOR
 ‘My house shook like this.’
 (AG: *čem=i saxl=i ase ga=i=ndzr=a*)

Other children — Tamaz, for example — always marked the subjects of Class P verbs, including those that are semantically agentive, in the NOM case:

- Ta [2;6;27] *dzayl-i mo=vid=a da mo=∅=e=per=a*. (A:197)
 dog-**NOM** come[2]:3S:AOR andcaress[2]:3S:3O:AOR
 ‘The dog came and caressed her.’

Intransitive as well as transitive Class A verbs were correctly assigning ERG case in the aorist series:

- Ta [2;0;7] *nana-m ge=i=ywidz=a*. (A:170)
 N.-**ERG** wake[1]:3S:AOR
 ‘Nana woke up.’

The one category of verbs that gave Tamaz trouble at this stage is the group denoting INTERACTIVE ACTIVITIES. Many such verbs (e.g. the verbs meaning “converse,” “argue,” “visit,” “quarrel,” “play,” “have a snowball fight”) have paired 2nd conjugation (Class P) and 3rd conjugation (Class A) forms which are identical in meaning, except that the 2nd conjugation forms take an indirect object (denoting the person(s) the subject engages in the activity with) while the 3rd conjugation forms are monovalent. Because of their different verb-class membership, however, the two members of the pair have different case-marking properties. It was only when using verbs from this semantic group that Tamaz made case-assignment errors after age 1;11:¹⁸

¹⁸From the point of view of aspect, these verbs belong in the 3rd conjugation. Formally, they are 2nd conjugation. Because the formal class distinction does not correspond to a semantic distinction of either agentivity or aspect, many adult Georgians, including speakers of the Tbilisi dialect, treat 2nd conjugation interactive activity verbs as though they were 3rd conjugation (Class A) verbs, and assign ERG case to the subject in the aorist series. Such speakers would say, e.g. *masc'avlebel-ma diana-s ∅=e=saur=a kartulad* ‘the teacher-**ERG** conversed with Dee Ann-DAT in Georgian’ even though this violates the rules of the normative grammar (which requires a NOM subject). See Harris (1981, pp. 268-274).

1. Ta [1;11;14] +*tamas=a* *tamazi-m bavs-s* (A:166)
 play[2?3?]:3S:3O:AOR T.-**ERG** child-**DAT**
 ‘Tamaz played with a child.’
 (AG: Ø=*e=tamaš=a tamaz-i bavšw-s*
 ‘Tamaz-NOM played [2nd conjugation] <with a>
 child-DAT’ OR:
i=tamaš=a tamaz-ma bavšw-tan
 ‘Tamaz-ERG played [3rd conjugation] child-with)
2. Ta [2;1;2] *da mere i=čxub=a* +*dzayl=eb-i.* (A:176)
 andthen fight[3?]:3S:AOR dog-PL-**NOM**
 ‘And then the dogs fought.’
 (AG: Ø=*e=čxub=nen dzayl=eb-i ertmanet-s*
 ‘The dogs-NOM fought [2nd conjugation]
 each other-DAT’ OR:
i=čxub=es dzayl=eb-ma
 ‘The dogs-ERG fought [3rd conjugation].’

If our interpretation of the diary data is correct, then it is the case that Georgian children formulate one or another semantic hypothesis to account for the complex pattern of case assignment in the aorist series. One hypothesis links the case pattern to the aspect of the verb, and the other links it to agentivity. These two case-marking principles are given in Table 15, which is adapted from Van Valin (1987, 1988):

TABLE 15
 Split intransitive systems

TRANSITIVE SUBJECT INTRANSITIVE SUBJECT [DIRECT OBJECT]

Group A Group B

A

A

B

B

1. *Split by agentivity.* Marker A assigned to NPs denoting arguments which are agents and/or controllers of the action described; marker B assigned to non-agentive subjects and (in some systems) to direct objects.

Examples: Case marking in Tsova-Tush , agreement in Acehnese, impersonal passivization in Dutch .

2. *Split by inherent lexical aspect.* Marker A assigned by verbs belonging to certain aspectual groups; marker B assigned by verbs belonging to the remaining groups.

Examples: Auxiliary selection in compound tenses in Italian and Dutch.

Under both hypotheses, the pattern of case marking in the aorist series is perceived as split-intransitive. Because the number of intransitive verbs which take ERG subjects in the aorist series is so large — and many of them are likely to be in frequent use in the child’s environment — *Georgian children do not, as far as we can tell, ever make the assumption that the pattern is strictly ergative-absolutive, i.e. that only subjects of transitive verbs are assigned ERG case.* The two case-marking principles in Table 15 give a fairly close approximation to the adult model.¹⁹ If it is true that most of the split-intransitive systems attested in the world’s languages boil down to one or the other of these types, then it may be quite natural for just these hypotheses to be the ones children try out.

Stage V. The perfect series verb forms are acquired fairly late. When they first appear in the child’s speech, the DAT case is correctly assigned to the subject of Class A verbs:

1. Ta [2;3;22] *es me ar da=m=i=c'er=i=a;* (A:188)
 this-NOM I not write:1sgO:3S:PERF
es k'oba-s da=∅=u=c'er=i=a.
 this-NOM K.-DAT write:3O:3S:PERF
 ‘I didn’t write this, Koba wrote this.’

¹⁹Although such usage is unacceptable to speakers of Tbilisi Georgian, case assignment of the first type (split by agentivity) is attested in many contemporary Georgian dialects, outside of the conservative mountain provinces and the area surrounding Tbilisi. In these dialects, the ERG is employed much the same way Keto and Ila used it in their early years. ERG case is assigned to the subjects of agentive Class P verbs in the aorist series, as in the following example (from Boeder, 1979, pp. 443-4, 467):

xp'o-m ge=∅=e=k'id=a ĵar-s (Imeretian dialect)
 calf-ERG pursue[2]:3S:3O:AOR army-DAT
 ‘The calf pursued the army.’
 (Standard Gg: *xbo=∅ ga=∅=e=k'id=a ĵar=s*)

2. Ke [3;4;2] *tinik'o-s p'ap'iros-i da=∅=u=q'ar=i=a st'ol-ze.* (K:76)
 T.-DAT cigarette-NOM spill:3O:3S:PERF table-on
 'Tiniko has spilled cigarettes on the table.'

Well before their fourth birthday, then, Georgian children control the case-marking procedures employed in all three verb series (present, aorist, perfect) with both major classes of verbs. Their case marking “errors” are confined to a small group of intransitive verbs: 2nd conjugation verbs which, in terms of either agentivity or aspect, are mistakenly classified with 3rd conjugation verbs.

4.3.3. Number agreement. The principles governing agreement for number between the verb and its subject and object NPs are complex, and show a high great variability from one Georgian dialect to another, and even among educated speakers of the Tbilisi dialect (Tuite, 1988b). The principal rules for the standard language are as follows:

- A.** Number agreement is obligatory with 1st and 2nd person subjects and objects [with some minor exceptions].
- B.** Among 3rd person NPs, those which denote animate beings and which are functioning as subjects control number agreement. Number agreement with 3rd plural direct object and indirect objects, and with inanimate subjects seldom occurs in written or spoken Georgian.
- C.** A 3rd person NP can control plural agreement only if it is formally plural.

An NP is formally plural only if the head noun is a pronoun, or a noun marked for plurality by the suffix *-eb-*. This means that most quantified NPs are formally singular, because a Georgian noun cannot be marked with *-eb-* if it is modified by a numeral or other quantifier (this was mentioned above in the section “plural formation” in 4.2.) Here are some examples from recent Georgian literature of semantically plural subject NPs which control non-plural verb agreement:

Nonagreement for number with inanimate subject

c'wim-is cwar-eb-i s=cem=d=a panjŕ-eb-is
 rain-GEN drop-**PL**-NOM hit:**3S**:**3O**:IMPF window-**PL**-GEN
šuš-eb-s. (Vazha-Pshavela)
 glass-**PL**-DAT
 'Raindrops were beating against the window panes.'
 (cp. *bič'=eb=i s=cem=d=nen* 'the boys beat (**3plS**) it/them')

Singular agreement with (formally singular) quantified NP

ormoc-amde kartveli miliciel-i mo=s=dev=d=a
 forty-until Georgianmilitia-NOM pursue:**3S**:**3O**:IMPF
 'Up to forty Georgian militiamen were pursuing him.' (M. Javaxishvili)
 (cp. *kartveli miliciel=eb=i mo=s=dev=d=nen* 'the Georgian
 militiamen (**plural**) were pursuing (**3plS**) him.')

Georgian children seem to grasp the relation between animacy and number agreement from the beginning. No examples of 3pl agreement with inanimate subjects occur in any of the diaries.

Ta [2;3;20] *mdziv-eb-i da=∅=u=cwiv=d=a* (A:187)
 bead-**PL**-NOM fall:**3S**:**3O**:AOR
 'The beads fell down.'

When the subject is animate, number agreement usually occurs:

Pa [3;1] *kal-eb-s ∅=u=k'et=i=a=t sakule-eb-i* (K:113)
 woman-**PL**-DAT wear:**3plO**:**3S**:PRES earring-**PL**-NOM
 'The women are wearing (**3plO**) earrings.'

However, some of the children use 3pl agreement markers more sparingly than adults do, frequently omitting them even when the subject is animate and plural. The failure of number agreement to occur is especially common when the subject NP follows the verb:

1. Ta [2;3;22] *ra-s +šob=a es bič'-eb-i?* (A:188)
 what-DAT do:**3S**:PRES thisboy-**PL**-NOM

čxub=ob=en.

fight:**3pIS**:PRES

‘What is these boys doing (**3S**)? [They’re] fighting (**3pIS**).’

(AG: *ra=s šwreb=i=an es bič’=eb=i*)

2. Ti [4;11;29] (“reading” a book out loud)

t’q’e-ši +i=q’=o mgel-eb-i, (K:90)

forest-in be:**3S**:AOR wolf-PL-NOM

+gamo=vid=a mgel-eb-i.

come.out:**3S**:AOR wolf-PL-NOM

‘There was (**3S**) wolves in the forest; out came (**3S**) the wolves.’

Since the postposing of the subject after the verb is one means of conveying new information, the failure of number agreement to occur in constructions such as the above may reflect a hypothesis on the part of the young Georgian speaker that the ability to control number agreement is linked with the degree of presupposedness of the referent of the subject NP.²⁰

4.3.4. *Two-clause constructions.* Compound constructions, formed by either simple juxtaposition of two or more finite verbs and their arguments, or with the use of the conjunctive *da* ‘and,’ appear early. One child, Ana, used *da* to link clauses in inverse temporal or causal order, e.g.

An [2;4] *v=i=t’ir=e da m=cem=a.* (K:106)

cry:**1sgS**:AOR and hit:**3sgS**:**1sgO**:AOR

‘I cried and he hit me.’ (= ‘he hit me and I cried’)

Shortly after this some young speakers begin to use the conjunctive clitic *-c* ‘also’ to link sentences. In adult Georgian this particle can only be attached to nominals, adverbials and postpositions. In the following example, however, Keto attaches it to two verbs:²¹

²⁰In many dialects, especially those of western Georgia, plural animate subjects often fail to control number agreement when they are first introduced into the discourse (usually in post-verbal position). NPs that convey presupposed information are more likely to control number agreement than those which represent new information (Tuite 1987, 1988b).

²¹In adult Georgian, the *-c* would be attached to the negative adverbial *ar* in such a construction (*ar=c....ar=c...* ‘neither...nor...’).

Fa: *ketino mo=d=i ak!* (K:75)

K.:VOC come:2sgS:IMP here

‘Ketino, come here!’

Ke [2;7;5]: *modi ar m=i=nd=a.*

‘come’ not want[4]:1sgO:3S:PRS

‘I don’t want “come”.’

Fa: *aba, c’a=d=i!*

well leave:2sgS:IMP

‘In that case, go!’

Ke: *modi ar *m=i=nd=a-c da*

‘come’ not want[4]:1sgO:3S:PRS-also and

*c’adi ar *minda-c!*

‘go’ not want[4]:1sgO:3S:PRS-also

‘I don’t want “come” and I don’t want “go” either!’

About this time Georgian children begin to link verbs of saying and commands or quoted speech, e.g.:

Ke [2;5;23]: *me (v)=∅=u=txrav sandrik’o-s, mo=d=i-o.* (K:74)

I tell:1sgS:3O:FUT S.-DAT come:2sgS:IMP-QUOT

‘I will tell Sandro: come.’

Georgian has three quoted-speech particles: *-o* ‘you/he/she/they said,’ *-metki* ‘I said,’ *-tko* ‘I want you to tell him/her/them.’ The particles are tacked on to the last word of a quoted sentence, and sometimes to one or more words within the quote. As in the above sentence, the first particle to appear, *-o*, is sometimes attached to the speaker’s own words, where adults would have *-metki*.

Somewhat later, in the latter half of the third year, children begin to use the sentence conjunction *ro(m)* ‘that, if, when.’ This is one of the most common sentence connectors used in spoken Georgian. It is employed in a variety of complex constructions, e.g. sentential modifiers of nouns, manner and reason clauses, temporal clauses. In most cases it occupies the second position in the clause, and children from the beginning place it appropriately, e.g.:

Ta [2;2;4]: *babua-m rom k’ok’t’el-i mo=m=i=t’an=a*

grandfather-ERG that soda.pop-NOM bring:3S:1sgO:AOR

Ke [4;1;2]: *erti sak'at'ao ro m=kondeb=od=a,* (K:79)
 onesled:NOM if have[4]:1sgO:3S:PLUPERFECT
ga=v=a=k'at'eb=d=i tol-ši
 slide:1sgS:COND snow-in
 'If I had had a sled, I would have gone sliding in the snow.'
 (AG: *mkonoda* 'if I had had')

By the time Georgian children are five years of age, they have a variety of clause-linking means at their disposal. In addition to linkages between clauses with finite verbs, they also make use of nominalized verbs, which are very common in the adult language. Several types of participles (past and future passive, agentive, negative) are in use, as well as a gerund-like verbal noun. The children in our diaries began to employ nominalizations at around age 3, though they often form them incorrectly. Here are some examples (derivational morphemes are shown in boldface):

Ti [3;11;12]: *ga=tal=**a** Ø=u=nd=**a** am pankari-s.* (K:85)
 peeling:NOM want:3O:3S:PRS this pencil-DAT
 'This pencil needs to be sharpened.' [verbal noun]
 (lit: 'This pencil wants sharpening.')
 (AG: *ga=tl=**a***; Tino mistakenly used the aorist stem *-tal-*)

Ta [2;9;6]: *deda, piso imas č'am-s,* (A:214)
 mother:VOCKitty:NOMthat:DAT eat:3S:3O:PRS
*čamo=k'ideb=**ul**-i ro ari=s.*
 hung.down-NOM that be:3S:PRS
 'Mother, kitty is eating that [dried fruit] which is hanging down.' [past passive participle]

Ma [3;0]: ***u**=da=c'er=**il**=**o** kayald-i m=i=nd=**a**.* (K:110)
 not.written paper-NOM want:1sgO:3S:PRS
 'I want paper that hasn't been written on.' [negative participle]
 (AG: *da=**u**=c'er=**el**=**i***; Mariko added the circumfix *u-* *-o* to

the past passive participle *da=c'er=il=i*)²²

5. Experimental study of some aspects of the acquisition of Georgian case marking.

To supplement the diary data, we conducted two experiments on the production and comprehension of case markers by Georgian children.

In the first experiment, preschool pupils ranging in age from 3;0 to 3;8 were shown pictures of children in three different scenes: getting dressed, washing their faces, standing alongside Mother by the remnants of a broken flower-vase. After examining a picture, a child was asked a question containing a verb in either the present or aorist form, e.g.:

PRESENT TENSE

vin i=cw=am=s?

‘Who:NOM is getting dressed?’

AORIST TENSE

vin ča=i=cw=a?

‘Who:ERG got dressed?’

The questions are designed so that the subject will respond with an answer in either the nominative or ergative case, depending on the tense of the verb in the question (note that the interrogative pronoun *vin* does not have distinct NOM and ERG forms). 25 children of 27 (93%) gave the answer to each question in the correct case, i.e. NOM case for a question in the present tense, and ERG case for a question in the aorist. Two children (ages 3;2 and 3;4) used the NOM instead of the ERG in answering aorist-tense questions; they did so for all three questions. However, since the responses given by these children, like those of nearly everyone else, consisted of a single word, we cannot conclude that they would fail to use the ERG case in a sentence where the verb is present.

The second experiment assessed the strategies used by Georgian children in comprehending sentences. Some experiments had noted a temporary decline in performance in older age groups compared to younger in certain

²²In forming the negative participle Georgian children often employ the circumfix *u- -o* ‘without, -less,’ which is properly only applied to nominals (e.g. *u=mtwar=o* ‘moonless,’ *u=žen=o* ‘without you’), in place of the formally similar but more complex negative participial circumfix *u- -el/∅*. Note that the prefixal element of the latter is inserted between the preverb and the verb stem, and not at the beginning of the word, as is the case with *u- -o*.

comprehension tasks. Recently Pleh, Jarovinsky and Balajan (1987) studied the comprehension of sentences with various orders of the subject, object and verb by Russian and Hungarian children, ages 4 to 6. For one of the groups tested, monolingual Russian children, the average scores were 99% correct for SO (subject before object) and 76% for OS (object preceding subject) order, but while the youngest group scored 81% on OS sentences, the average correct for the oldest group was about 70%.

Similar results were reported in a paper by Axutina, Velichkovski and Kempe (in press). The experimenters compared German and Russian children in a comprehension task using direct and reversed word orders for active and passive sentences. The subjects ranged in age from 3 to 5. The scores for erroneous interpretation for the various age groups are as follows:

language	German			Russian		
	3	4	5	3	4	5
age (years)						
direct order (SO)	30%	15%	15%	23%	13%	2%
reversed order (OS)	43%	56%	33%	27%	37%	27%

In these data we do not observe the expected monotonic improvement of performance with age. Both German and Russian children make a greater number of comprehension errors at age 4 than age 3 for sentences with OS order. In the authors' interpretation, the 3 year olds are more closely attending to case markers, while the 4 y.o. children are experimenting with a word-order based strategy, developed on the basis of their experience with language.

We were interested in finding out if the same effect would be observed with Georgian-speaking children. In view of the phenomenon of case shift in Georgian, case pattern as well as word order are varied in the stimulus sentences. Four types of sentences were included in the comprehension task: nominative-pattern and ergative-pattern sentences in direct and reversed order ($S_{NOM}VO_{DAT}$; $O_{DAT}VS_{NOM}$; $S_{ERG}VO_{NOM/DAT}$; $O_{NOM/DAT}VS_{ERG}$). A total of 16 sentences were used — the following four sentences (each reversible in terms of animacy) in each of the four sentence patterns:

1. *bič'=ma gada=a=rčin=a gogo*. 'The boy:ERG saved the girl:NOM'
2. *bič'=ma ga=c'uc'=a gogo*. 'The boy:ERG sprayed water on the girl:NOM'

3. *deda=m a=k'oc=a bavšv=s*. 'The mother:ERG kissed the child:DAT'
4. *dzayl=ma u=k'bin=a k'at'a=s*. 'The dog:ERG bit the cat:DAT'

In the reversed order the participants are the same, but their case marking in switched (e.g. *bič'=i gadaarčina gogo=m* 'boy:NOM saved girl:ERG' = 'The girl saved the boy').

Our subjects were sixty Georgian kindergarten children, in two age groups: 30 children aged 3 to 4, and 30 aged 4 to 5. For each sentence the subject was asked to select the one from a pair of pictures which illustrates the situation described in the sentence (e.g. for sentence 2 above there would be one picture of a boy getting a girl wet, and a second showing a girl doing the same to a boy). The percentage of erroneous interpretations for each sentence type are shown in the chart below:

	S _{NOM} V _O D _{DAT}	O _{DAT} V _S N _{NOM}	S _{ERG} V _O N _{NOM/DA}	O _{NOM/DAT} V _S ERG
3-4 y.o.	41%	42%	40%	50%
4-5 y.o.	13%	36%	11%	32%

The data can be analyzed as follows:

- (1) There was no significant effect of case pattern (NOM-DAT or ERG-NOM/DAT) on comprehension performance ($p > 0.05$).
- (2) For the three-year-old group, there was no significant effect of word order on comprehension ($p > 0.05$).
- (3) For the four-year-old group, there was a significant effect of word order on comprehension: performance on SVO sentences was better for both types of case pattern ($p < 0.01$).

The first result indicates that by age three, children comprehend both case patterns with equal ease. Their overall scores lag somewhat behind those of German and Russian 3 year olds, while those for the age 4 group are roughly the same.

Result (2) indicates that if the children are following any strategy at all (their performance is not much better than chance!) it is one based on case endings.

The lack of significant improvement in comprehending OS sentences observed for 4 year olds (result (3)) indicates a shift in comprehension

strategy away from a dependence on case marking toward a greater reliance on word order. This appears to be the same phenomenon as that noted by Akhutina et al. By this age children are forming hypotheses concerning expected word order in different contexts, with SO order being the unmarked option.

We also noted that for sentences with the ERG-DAT case pattern (e.g. #3 and 4 above) there was an especially wide difference in comprehension performance for direct and reversed order. The presence of two marked cases (ERG and DAT) without a NP in the unmarked case (NOM) may be a source of difficulty here, but as of yet we cannot say.

6. Comparison of acquisition data from monolingual children with data from a bilingual child.

The data presented in the previous sections was produced by children who were exposed almost exclusively to Georgian in their early years. A corpus of data has also been collected from a child (Dali) who was exposed to both Georgian (spoken by her parents and grandfather) and Russian (the language of her grandmother and her nurse) from the very beginning. The diaries themselves are unpublished, but some articles have been written on the basis of this material (Imedadze 1957, 1960, 1967). Comparison of the data from this child with that of the monolingual Georgian children may yield some insight into the significance of the latter.

Person marking. In an early stage of Dali's language acquisition, as in that of the other children, 2nd person verb forms (in terms of the adult language) are used with 1st or 3rd person reference. This is attested in her Russian as well as Georgian utterances, e.g.

RUSSIAN

Da [1;5;20]: *Dali nuka *khoch-ish.*

D.:∅ nougat:∅ want:PRS-2sg

'Dali wants nougat.' (lit. 'Dali you:want nougat.')

(cp adult Russian: *Dali nug-u khoch-et*

D:NOM nougat-ACC want:PRS-3sg)

GEORGIAN

Da [1;6;10]: *pi-so* *p'uli* **g=i=nd=a*.
 kitty:Ø bread:Ø want[4]:2sgO:3S:PRS
 'Kitty wants bread.' (lit. 'Kitty you:want:it bread.')

(cp AG: *pi-so-s* *p'ur-i* Ø=*u=nd=a*
 kitty-DAT bread-NOM want[4]:3O:3S:PRS)

Case assignment. The development of case-marking syntax observed in Dali's speech differs in significant ways from that of the monolingual children.

Stage I. In Dali's earliest multi-word utterances all nouns are in the base form (i.e. the same as the adult nominative), e.g. [Russian] *Dali rechka kupaca* 'Dali:Ø river:Ø bathe' = 'Dali went bathing in the river.' Note also the two sentences given above.

Stage II. At the age of 1;8 Dali began to use nominal forms corresponding to the Russian accusative and the Georgian dative. This is within the expected age range for the first appearance of these cases in monolingual Russian and Georgian children (on the acquisition of the Russian accusative see Gvozdev, 1961, pp. 379-380). During this stage in her development Dali employed the Georgian DAT in ways that are anomalous from the perspective of the adult language, and, more significantly, which are not attested in the speech of monolingual Georgian children. One verb type that presented considerable difficulty for Dali during this period (discussed in Imedadze, 1960) was that comprising verbs of psychological and physical state, which govern indirect constructions, i.e. the (real) subject is assigned DAT case and Set O ("object") agreement, and the (real) object is marked with NOM case and Set S ("subject") agreement. The equivalents of most of these verbs in Russian are standard transitives, with NOM subjects and ACC objects. Compare the following two sentences produced by Dali, both of which are grammatically correct from the standpoint of the adult languages:

RUSSIAN

Da [1;8;22]: *Kaljask-u* *xoch-ish*.
 carriage-ACC want:PRS-2sg
 '(You-NOM) want the carriage-ACC.'

GEORGIAN

Da [1;8;10]: *pankal-i* \emptyset =*u=nd=a* *dali-s*.
 pencil-NOM want[4]:3O:3S:PRS D.-DAT
 ‘Dali-DAT wants the pencil-NOM.’

At about the same time, anomalous case patterns involving the same verb are observed in Dali’s Georgian speech:

Da [1;9;24]: **dali- \emptyset* \emptyset =*u=nd=a* *k’aba-s*.
 D.-NOM want[4]:3O:3S:PRS dress-DAT
 ‘Dali-NOM wants a dress-DAT.’

Da [1;9;10]: **giuška-s* \emptyset =*u=nd=a-s* *sap’oni-s*.
 G.-DAT want[4]:3O:3S:PRS-‘DAT’? soap-DAT
 ‘Giushka-DAT wants-‘DAT’ the soap-DAT.’

In the first of these, Dali appears to have superimposed the case pattern appropriate to Russian on the Georgian sentence (if one interprets the Georgian DAT — which is assigned to direct objects of transitive verbs in the present tense — as being in this context the equivalent of the Russian ACC). Sentences of this type were produced fairly frequently in the second half of Dali’s second year. The second sentence may well represent an attempt to appease both sets of norms by marking both subject and object (as well as the verb!) with the DAT.

The phenomenon of case shift, which was acquired essentially without error by the monolingual children, also presented difficulty for Dali. In the following sentence, the direct object of a transitive verb in the aorist series is marked with DAT case, instead of the expected NOM — a type of error never attested in the available data on monolingual Georgian children:

Da [1;8;28]: *mo=m=e=c=i* **p’uli-s*.
 give[1]:2sgS:1sgO:IMP bread-DAT
 ‘Give me some bread.’
 (AG: *mo=m=e=c=i p’ul-i* ‘give:me bread-NOM’)

Stage III. Dali did not use the Georgian ERG until age 2;8, one year after the first appearance of the DAT. Until this point, subjects of transitive verbs in the aorist series were left in the unmarked (NOM) case, e.g. **bič'i da=i=č'ir=a p'ep'ela* 'boy:Ø caught:3S:3O:AOR butterfly:Ø' = 'the boy caught the butterfly' (instead of *bič'=ma* 'boy:ERG'). While the age of first use of the ERG is within the range observed for monolinguals (e.g. Kaxadze's son Ila) the delay relative to the onset of case marking is considerable. Here as well, Russian grammar may have exerted an influence: since there is no marked case in Russian corresponding to the Georgian ERG, its onset may have been delayed until the grammatical systems of the two languages were more clearly separated in Dali's mind.

The quite different developmental path followed by Dali in her acquisition of Georgian indicates that, although the syntactic system of Georgian is psychologically natural enough that it is readily acquired by children, it nonetheless is perceived as being more complex than the nominative-accusative syntax of Russian. The simultaneous acquisition of Russian had a more disruptive effect on Dali's Georgian than vice-versa. At no time, as far as can be told, did Dali try to impose a Georgian-like pattern (split ergativity, indirect constructions) on the Russian case system.

7. Conclusions.

The systems of case marking and verb agreement and the extensive use of indirect as well as direct constructions have remained basically unchanged since the earliest Georgian texts of the 5th century, and probably for a long time before that (the distantly related Svan language has a syntactic system virtually identical to that of Georgian). It is precisely these stable features of Georgian grammar that children acquire the most readily. Conversely, it is in the acquisition of those segments of the grammar for which there is considerable variation and levelling in the Georgian dialects that children experience the greatest difficulty in reproducing the adult model. These observations support those made by other scholars concerning the naturalness of certain non-nominative syntactic patterns. In particular:

[1] The split-intransitive case marking pattern associated with aorist-series verbs was picked up from the beginning. Once children begin to use it, the Georgian ERG case is employed to mark the subjects of a particular subclass

of intransitive verbs. Their errors in assigning this case reflect different initial hypotheses concerning the type of split-intransitive case system in use (aspect-based or agentivity-based); there is no evidence that they ever actively try out a transitivity-based pattern (nominative-accusative or ergative-absolutive) in assigning case to the subjects of aorist-series verbs.

[2] The notion that ASPECT (telic vs. atelic, punctiliar vs. durative) can play a crucial role in determining the pattern of case marking — which has been observed in a number of languages (Dixon, 1979; DeLancey, 1981) — has been shown to be a concept readily assimilated by young language learners. Georgian children begin to use case markers at the same time as they begin to tackle the formal differences between present-series and aorist-series verb forms. Overextensions of the ERG or DAT case across series boundaries have not been attested, an indication that the presence of two distinct case marking patterns used with different sets of verb forms does not present an especially difficult problem.

Comparison of these data from monolingual Georgian children with evidence from a child simultaneously learning Georgian and Russian indicates that the consistent nominative-accusative argument-marking pattern characteristic of English, Russian, Hungarian and many other languages is indeed a more “accessible” scheme (Bowerman, 1985, 1306) than the split-intransitive pattern of Georgian. Dali’s acquisition of the latter was significantly impeded by her simultaneous acquisition of Russian. However, it appears very much to be the case that the hypothesis that a language might have a split-intransitive pattern (with or without the further complication of a concurrently used nominative-accusative pattern with durative-aspect verb forms) is sufficiently accessible to children that they apply the pattern from the beginning of their use of case markers.

The work that has been done to date on the acquisition of Georgian, to say nothing of any other Caucasian language, is by no means adequate for conducting the detailed studies of specific aspects of acquisition that has been undertaken for many European languages and Japanese. It has also been impossible given the available data to clearly establish cases of U-shaped learning curves for Georgian children. In addition to simply collecting and transcribing more data, a number of more focused projects ought to be undertaken. Here are a couple of suggestions for future research:

(a) *Use of deictic terms and zero anaphors.* Georgian has three series of deictic terms, indicating, roughly, proximity to the speaker, proximity to the listener, and distance from both of them. In addition to their purely spatial meanings, the three series are used with reference to the speech context: this which I have just mentioned, that which you just mentioned, that mentioned earlier. The third series is also used in CATAPHORIC constructions, where the information determining reference follows the deictic term (“I only accept advice from *those*_j people whom_j I respect”). Along with pronouns, a number of adverbials and sentence connectives are marked for deixis. Corresponding to English “because,” for example, are three Georgian conjunctions: *amit’om* ‘for this reason,’ *magit’om* ‘for that reason that you gave (or that is somehow connected with you),’ *imit’om* ‘for the following reason.’ Since Georgian has no category of gender for indicating reference, these deictic terms play a crucial role in making it clear who is doing what to whom in Georgian discourse. In addition to learning what contexts each of the series of deictics is used in, children must learn when they can omit a pronoun entirely (i.e. the use of “zero anaphora”), or, conversely, when they must use a more fully-specified noun phrase.

The use of deictic terms and zero anaphors gives Georgian discourse its distinctive character. It appears from the diaries that children begin to use deictic pronouns, adverbials and conjunctions to weave clauses together during their third year, but the material so far collected is insufficient for studying this question in depth.

(b) *The acquisition of Svan.* Although it diverged from the other Kartvelian languages some 3000 years ago, the Svan language retains essentially the same morphological and syntactic structure as Georgian. One major difference between them is the presence in Svan of complex morphophonemic rules which mediate between the morphological “deep structure” and the surface forms a child actually hears. For example, the Svan verb *äšwix* is a transformation of the deep structure $*xw_2=a_3=šix_4$ ‘I burned it’: the 1st person subject marker (*xw*) is incorporated into the root, and the version vowel undergoes umlaut under the influence of the root vowel *i*. Comparison of acquisition data for Svan-speaking and Georgian-speaking children should give some indication of the extent to which morphophonemic rules impede the acquisition of otherwise identical morphosyntactic systems.

(c) *Split case systems*. The data presented in this chapter suggest that split case-marking systems, however complicated they may appear to linguists and language students, may not be such insurmountable obstacles for children. We need to expand our corpus of acquisition studies to include some more languages with split systems. Many native Australian languages, for example, have shifts in case pattern according to the type of noun phrase (personal pronouns manifest a nominative-accusative pattern, while full noun phrases follow an ergative-absolutive pattern) (Silverstein, 1976). A number of languages (Tsova-Tush, Tibetan, many native American languages) have active-stative or other types of split-intransitive marking systems. Comparison of data from monolingual and bilingual children (where the second language has a more straightforwardly nominative or ergative alignment) should prove to be enlightening, as it was in the case of Georgian.

KEY TO GLOSSES

In glossing verbs, the person markers are indicated in the order: (real) subject > (real) object. In a direct construction, therefore, the Set S (“subject”) marker is glossed first, while in the case of an indirect construction the Set O (“object”) marker is indicated first. Where it considered relevant, the conjugation class of the verb (see Table 3) is indicated by a number in square brackets. For example, the gloss *da=gv=a=vic'q'=eb=in=a* ‘forget:CAUS:[1]:3S:1plO:AOR’ contains the information that the verb stem belongs to the 1st conjugation, is in the aorist screeve (tense/aspect/mood form), has a 3rd person subject marker (-a) and 1st person plural object (-gv-) marker, and means (roughly) ‘(he/she/it) caused (us) to forget.’ The gloss *da=gv=a=vic'q'=d=eb=a* ‘forget[2]:1plO:3S:FUT’ indicates a 2nd conjugation verb stem, future screeve, with a 1st plural Set O marker (-gv-) crossreferencing the real subject and a Set S 3rd person marker (-a) for the real object, and the meaning ‘(we) will forget (him/her/it/them).’ The abbreviations used in the glosses are those given in the list on pages x and xi of the first volume of this series, with the addition of SUBJ.V “subjective version” and OBJ.V “objective version.”

SYSTEM OF PHONOLOGICAL TRANSCRIPTION

The transcripts of child language used in this study were written in the

Georgian script. The transliteration of Georgian characters used here is essentially the same as that used in H. Aronson's (1982a) Georgian textbook:

VOWELS: *a, e, i, o, u*

VOICED OBSTRUENTS: *b, d, g, dz [dz], j* [English 'j']

VOICELESS ASPIRATED OBSTRUENTS: *p, t, k, c* [ts], *č* [English 'ch']

VOICELESS GLOTTALIZED OBSTRUENTS: *p', t', k', c', č', q'* [postvelar affricate /q'x/]

FRICATIVES: *s, z, š* [English 'sh'], *ž* ['measure'], *ɣ* [like Parisian 'r' /R/], *x* [like German 'Bach']. Both *ɣ* and *x* are postvelar.

SONANTS: *m, n, l, r, v, w*

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