In the text I only include data for the omission of SA and T. Further analyses have been performed investigating the occurrence of subjunctive/indicative alternations, reported in Deen & Hyams, 2002. These data are presented here. Please refer to Deen & Hyams (2002) for a fuller discussion.

Table 4D.1 Total indicative, subjunctive and negative (final vowel) utterances by stage

Stage	Indicative	Subjunctive	Negative	Total
1	210	9	19	238
2	295	7	11	313
3	460	50	76	586
4	377	37	22	436

In table 4D.1 we see that indicative clauses are the most frequent clause types at all stages. This is also true of adult speech, and so this is unsurprising. However, the proportion of subjunctives increases by stage, as the figure and table below show:

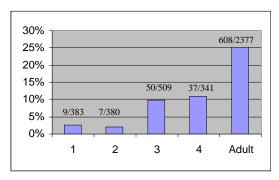


Figure 4D.1. Subjunctives as a proportion of non-imperative verbs

Table 4D.2 Subjunctives by stage

	Stage 1	Stage 2	Stage 3	Stage 4
Types	8	5	26	20
Tokens	9	7	50	37
Token/type ratio	0.88	0.71	0.52	0.54
Irrealis meanings	Desire Request Suggestion	Desire Request	Desire Possibility Request Permission Suggestion	Desire Possibility Request Permission Suggestion

Moving on to the interpretation of clauses, we find that a total of 23 out of 1436 indicative verbs are used incorrectly (indicated in bold in the table), i.e., 23 indicative verbs are used in a context that is most compatible with a subjunctive final vowel (predominantly a context in which the child is expressing his/her desire). This represents an error rate of 1.6%, which I consider to be negligible.

Table 4D.3 Interpretation of children's indicative verbs

	MEANING		
	Present, on-going	737	
	Present result	160	
Adult	Past	266	
Indicative	Future	89	
	Intentional	161	
	Desire	17	
Adult	Possibility	0	
subjunctive	Necessity	0	
	Request	0	
	Suggestion	6	
	Total	1436	

The numbers in table 4D.3 above include all clause types, i.e., full clauses, [-SA] clauses, [-T] clauses and bare stems. It is possible that the presence of the tense marker in most of these indicative clauses forces an

indicative interpretation, and hence the low error rate that we see in table 4D.3 is a result of temporal marking. In order to control for that, I investigated the interpretation of bare stems, which are lacking tense marking. The results are presented below:

Table 4D.4 Interpretation of bare indicative stems

	MEANING		
	Present, on-going	92	
	Present result	18	
Adult	Past	25	
Indicative	Future	6	
	Intentional	18	
	Desire	3	
	Possibility	0	
Adult	Necessity	0	
Subjunctive	Request	1	
	Suggestion	1	
	Total	164	

Here we see an error rate of 5/164 (the errors are indicated in bold), which is 3%. I still consider this a negligible rate of error, and so I conclude that children have knowledge of when the indicative final vowel is to be used. However, when we investigate the interpretation of subjunctive clauses, we find a different story. In table 4D.5, we see that 0f the 105 subjunctive clauses that occur in the entire corpus, a total of 18 are used in indicative contexts (errors are in bold). This is an error rate of 17%, something that can not be chalked up to speech error.

Table 4D.5 Interpretation of subjunctive verbs

	MEANING	
	Present, on-going	2
Adult	Present result	3
Indicative	Past	3
	Future	1*
	Intentional	9*
	Desire	18
Adult	Possibility	2
Subjunctive	Necessity	0
	Request	46
	Suggestion	21
	Total	105

Much cross-linguistic work has been done investigating the semantic contexts of subjunctive forms. Subjunctive is the morphology that is often associated with irrealis mood (Bybee, Perkins, and Pagliuca 1994; Chafe 1995; Givón 1994). Givón, for example, shows that irrealis morphology generally occurs with suggestions, the expression of desires, making of requests etc. Realis or temporal forms, on the other hand, occur in past and present contexts. Chafe (1995)describes these different semantic contexts as occurring in a "gradient" of markedness, as in figure 6, with the unmarked realis contexts and irrealis contexts on opposing ends of a continuum. In the unmarked case, imperatives pattern as realis forms and have indicative morphology, while future and intentionals pattern like irrealis forms and have subjunctive morphology. However, the morphology of these three categories – imperatives, futures and intentionals – is subject to cross-linguistic variation.

(1) The unmarked 'gradient' of markedness.



Swahili adheres to the unmarked realis-irrealis distinction with the exception of future and intentionals, which have indicative morphology and hence represent a marked option. Therefore, the Swahili system is a marked mood system in that it departs from the prototypical realis/irrealis mapping. The Swahili mood system is summarized in table 4D.6:

Table 4D.6: Summary of Swahili mood marking

Indicative/realis	Subjunctive/irrealis
Past	Desire
Present	Suggestion
Imperative	Necessity
Future	Request
Intentional	Permission
<u> </u>	Possibility

According to Chafe and Givón, adult Swahili future/intentional contexts are indicative and are hence marked (indicated by the dotted box above). The Swahili children, however, use the indicative-subjunctive morphology according to the unmarked mapping, extending subjunctive morphology to future and intentional contexts. The Swahili children have not acquired the marked characteristic of Swahili according to which future and intentionals have indicative morphology. If we put aside these 10 cases (marked in table 4D.5 by the asterisks) as representing a principled departure from the adult grammar, the number of subjunctive errors drops to 8 – that is, only 7.6%. The corrected form-meaning contingencies are presented in table 4D.7.

Table 4D.7 Form-meaning contingencies

	Indicative Marking	Subjunctive marking
Target Irrealis	5 (3.1%)	87 (83%)
Target Realis	159 (96.9%)	8 (7.6%)
	164	95

Our conclusion therefore is that Swahili children have not acquired the marked characteristic of the Swahili mood system, but show knowledge of mood distinctions at very early ages.