

# Control and Argument Structure: Explaining Control into Subject in Indonesian\*

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## Abstract

The a(rgument)-structure based analysis within the Lexical-Functional Grammar framework provides natural explanation for different syntactic realizations of complex arguments in Indonesian. It especially accounts for control-into-subject constructions, predicted as impossible in earlier accounts in the theory of control. Discussions mainly deal with a-str and linking to account for voice alternations and possible control-into-subject constructions, not only in Indonesian, but also in other languages.

## 1 Introduction

This paper deals with control constructions illustrated in Indonesian by (1). Control can be defined as a relation of referential dependence between an unexpressed argument in an embedded clause (controlled argument) and an expressed or unexpressed argument (the controller) in a matrix clause (Bresnan 1982:317).

- (1) Mereka<sub>i</sub> sudah men-coba [ \_\_<sub>i</sub> berunding dengan pembrontak]<sub>SOA</sub> (SOA=non-SUBJ)  
3PL already AV-try negotiate with rebel  
'They have tried [ \_\_ to negotiate with the rebels]'

The meaning of a clause containing an Active Voice (henceforth, AV) verb *mencoba*, like its English counterpart 'try', requires a trier (an entity), and some action that they try ('negotiate' in (1), a State of Affairs, or SOA for short). In both Indonesian and English, the controlled clause is expressed overtly as an embedded clause (put within brackets). The subject of the embedded clause is not overtly expressed, however. It is understood be coreferent with (i.e. controlled by) the trier (*mereka*), the Subject of the higher clause. The controlled Subject position in the embedded clause is indicated by a dash. The referential dependence between the two arguments is indicated by the index *i*.

Existing theories of control would have no trouble representing the Indonesian example in (1). However, Indonesian (and other Indonesian languages such as Balinese Arka (1998), Arka and Simpson (1998)) has an alternative construction of (1), illustrated by (2a), which English lacks (i.e. the badness of (ii)):

- (2) a. [ \_\_<sub>i</sub> berunding dengan pembrontak]<sub>SOA</sub> sudah mereka<sub>i</sub> coba (SOA=SUBJ)  
negotiate with rebel already 3PL OV.try  
(i) 'To negotiate with the rebels was what they tried'  
(ii) \* 'To negotiate with the rebels was tried by them'

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\* The main idea of this paper is based on Arka (1998) and Arka and Simpson (1998, in progress) which discuss the Balinese data. I thank the S2 students of the Linguistics program at Udayana University for their willingness to provide judgements, Ketut Artawa for his suggestion and help during the preparation for the presentation of the paper, Prof. Soenjono and the audience at the fourth symposium on Indonesian/Malay Linguistics in Jakarta for their questions and comments. All errors are mine.

In (1) the verb ‘try’ is in the Active Voice (*men-coba*), in which (roughly) the argument with the Actor or Agent semantic role maps onto Subject, and the argument with the Theme semantic role maps onto Object. In (2a) the same verb is in the Objective Voice (henceforth OV), where the verb must be without the AV prefix *meN-*, otherwise the sentence is not acceptable (b)<sup>1</sup>:

b.\* [  $\_\_$  berunding dengan pembrontak ] sudah mereka<sub>i</sub> **men-coba**

This gives rise to a control-into-subject construction because the clausal subject has its own subject controlled. The evidence for the controlled clause being subject in (2a) comes from the facts that (i) the verb must not be prefixed with *meN-* (because *meN-* signifies actor subject mapping) (i.e. the badness of (2b)), (ii) the auxiliary *sudah* immediately comes after the (clausal) subject, and (iii) the acceptability of the (contrastive) FOC(us)/Relativiser with *yang* (because *yang* is exclusively subject) as shown by (3).

- (3) a. Mereka<sub>i</sub> **yang** sudah men-coba [  $\_\_$  berunding dengan pembrontak ] (cf. (1))  
 3PL FOC already AV-try negotiate with rebel  
 ‘They are the persons who have tried to negotiate with the rebels’
- b. [  $\_\_$  berunding dengan pembrontak ] **yang** sudah mereka<sub>i</sub> coba (= (2a))  
 negotiate with rebel FOC already 3SG OV.try  
 ‘Negotiating with the rebels is what they have tried (to do)’

The crucial point to note from (3) is the fact that these sentences are complex sentences, consisting of two clauses, one embedding the other, and sharing a common element. They differ in the morphological shape of the verb (Active Voice or Objective Voice), in the phrase structure position of the embedded clause (initially or finally), and in the grammatical function of the controller (Subject or non-Subject). The voice alternation in (3) does not change the control relation. In both sentences the controller is the Actor, but the Actor surfaces as the subject in the AV verb (3a) and non-subject in the OV verb (3b)<sup>2</sup>.

This paper is to discuss how control into subject exhibited by (3b) can be accounted for. The paper is organized as follows. After a brief account of how the data was collected (section 2), a brief overview of grammatical relations in Indonesian is given (section 3), followed by a discussion of issues in control constructions (section 4). Then, the analysis within the LFG (Lexical-Functional Grammar) framework is presented (section 5). Finally, conclusion is given in section 6.

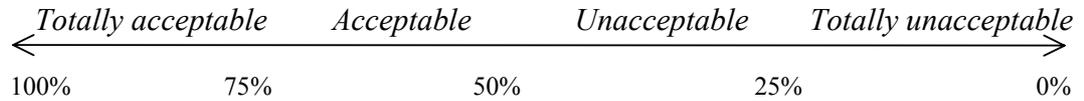
## 2 Data

The data in this paper reflects real language use. However, certain alternations/modifications of the data are needed to get degrees of acceptability. Judgements of acceptability are based on 27 respondents who are bilingual Indonesian speakers, each speaking Indonesian and one of the following languages: *Minang, Padang, Javanese, Madurese, Balinese, Sumbawan, Manggarai, Pajawa, Nagekeo, Sabu, and Kei*. The percentage in the following scale reflects degrees of acceptability, ranging from 0% (where

<sup>1</sup> For simplicity, the zero prefix marking the OV verb is not shown. Thus the OV verb ‘try’ is simply represented as *coba*, rather than  $\emptyset$ -*coba*.

<sup>2</sup> There is strong evidence that the Actor of the OV verb in Indonesian (Arka and Manning, to appear) and in other Indonesian languages such as Balinese (Arka 1998), Lio (Sawardi 2000) is a core/term argument, not an adjunct.

all respondents rated a construction as totally unacceptable) to 100% (where they all rated it as totally acceptable):



(The acceptability rating is given for certain examples only, indicated after the examples.)

### 3 Grammatical relations and Voice in Indonesian

There are three kinds of voice relevant for our discussion: A(gentive) V(oice), PASS(ive), and O(bjective) V(oice). The AV verb has the prefix *meN-*, exemplified by (4). In this verb, the logical subject (i.e. the Agent) is the surface grammatical subject (**gr-subject**, SUBJ for short).

(4)	Amir	mem-baca	buku	itu.
	Amir	AV-read	book	That
	'Amir is reading the book'			

Passive is marked by *di-*. The agent, if present, is generally expressed as an Oblique:

(5)	Buku	itu	di-baca	oleh	Amir
	book	that	PASS-read	by	Amir
	'The book was read by Amir'				

Objective voice (OV) has no affix and has its agent expressed by pronominals *saya/kamu/dia* or the clitics *ku-/kau/-nya*:

(6)	Buku	itu	<i>saya/kamu/dia</i>	baca
	book	that	1sg/2/3	read
	'The book, I/you/(s)he read.'			

### 4 Issues in control constructions

Control phenomena involve two clauses linked by embedding. One clause acts as an argument of the other. The subject of the embedded clause is not overtly expressed. This unexpressed subject is said to be controlled (or shared) by an expressed argument of the matrix verb. The following are among issues of control:

- (i) What is the category of the controlled clause (finite or non finite)?
- (ii) How do we represent the understood (albeit unexpressed) argument in the embedded clause?
- (iii) What determines the control relation, in particular the controller assignment?
- (iv) How do we represent the embedded clause structurally, an IP (=S) or simply a VP?
- (v) To what extent is the unexpressed argument referentially dependent upon an argument of the matrix clause (e.g. absolutely or not)?
- (vi) How is argument-sharing or control-relation represented in a sentence?
- (vii) What is the syntactic function of the embedded clause? Is it a core or non-core argument?

Answers to those questions are, to some extent, dependent on one's theory. In addition, not all of the questions become important in a particular theory. For example, the syntactic function of the embedded clause (iv) (i.e. whether it is an OBJ or a COMP(lement)) is an important issue for LFG because one of its component structures, namely the functional structure (*f-str*), requires attributes showing explicit functions SUBJ, OBJ, etc. In contrast, this function labeling might not be so an issue in other frameworks because the notion of grammatical relation/function is, for example, in transformational approach, configurationally defined in terms of phrase structure tree/X-bar, and there is no need for such explicit function labeling in the phrase structure tree.

For simplicity, I will not discuss the relative merits/advantages of one theory over another of the same issue. This paper will address the issues of control phenomena mentioned above in light of the data from Indonesian couched within LFG (Alsina 1996; Bresnan 2001; Dalrymple et al. 1995; Manning 1996), highlighting the role of argument structure.

#### 4.2 The category of the embedded clause

Indonesian, like many other languages, allows finite or non-finite clauses to act as arguments of a verb<sup>3</sup>. Sentence (7a) shows the verb *ingin* 'want' taking a non-finite controlled clause. The controlled clause cannot have a finite auxiliary *akan* (7b). In contrast, sentence (8) shows a finite embedded clause (no control), where *akan* is possible. Sentence (9) shows raising from a finite embedded clause, where *akan* is likewise possible.

(7) a. Para ibu<sub>i</sub> juga ingin [ \_\_<sub>i</sub> mengubah penampilannya] (*non-finite*)  
 Q mother also want AV.change appearance-3SG  
 'Mothers also want to change their appearance'

b. \* Para ibu ingin [ \_\_ akan mengubah penampilannya]

(8) Tapi saya belum tahu apakah saya akan mampu mengguguli Irene  
 (*finite*)  
 but 1SG not.yet know whether 1SG FUT able AV.defeat name  
 'But, I'm not sure yet whether I will be able to defeat Irene'

(9) [Penonton tanpa tiket]<sub>i</sub> di-perkirakan [ \_\_<sub>i</sub> akan mem-banjir-i Belanda ] (*raising from a finite comp.*)  
 spectator without ticket PASS-think FUT AV-flood-APPL Netherlands  
 'The Netherlands is believed to be flooded by (football) supporters without tickets'.

#### 4.3 What can be controlled?

Only Subjects can be controlled in Indonesian. Sentence (10a) shows subject controlled (acceptable); the verb is in AV. In contrast, sentence (10b) shows non-subject controlled (unacceptable); the verb is in OV.

(10) a. Dia<sub>i</sub> juga menolak [ \_\_<sub>i</sub> membicarakan kemungkinan formasi tim Italia ] (*subject controlled*)  
 3SG also AV.refuse AV.discuss possibility formation team name  
 'He also refused to discuss the possible formation of the Italian team'

b. \* Dia<sub>i</sub> juga menolak [kemungkinan formasi tim Italia \_\_<sub>i</sub> bicarakan] (*non-subject*)

<sup>3</sup> Warlpiri (Simpson 1991), like many Australian languages (e.g. Dixon 1995 for Dyirbal), has very few verbs that select SOA arguments (Hale 1982). In addition, there is a categorial restriction only allowing nominals to act as arguments of sentences (Simpson 1991).

3SG also AV.refusepossibility formation team name OV.discuss *controlled*

#### 4.4 What can be a controller?

It is generally accepted now that the meanings of matrix verbs are important in determining control relation; i.e. what gets controlled and what controls it (Kiparsky and Kiparsky 1971, Jackendoff 1972, Foley and Valin 1984; Sag and Pollard 1991, Van Valin 1993, Dixon 1995). For simplicity, I follow the classification of equi verbs in Sag & Pollard (1991) and Pollard and Sag (Pollard and Sag 1994), where verbs are divided into the ORIENTATION type, the COMMITMENT type and the INFLUENCE type.

##### 4.4.1 The INFLUENCE verbs

The INFLUENCE verbs are verbs like *suruh*, 'ask, require', *perintahkan* 'order, tell', *paksa* 'force', *mendorong* 'encourage', *biarkan* 'allow, let', *cegah* 'prevent', *desak* 'force, urge', and *larang* 'prohibit', *minta* 'ask, request'. Semantically, they represent SOA where the influenced person is influenced by someone to bring about a state of affairs. They are characterized by having the influenced argument (e.g. the person asked, not the asker) as controller. Consider:

- (11) a. Viagra **membuat** pria<sub>i</sub> [ \_\_<sub>i</sub> beraktivitas lebih giat dari normal  
 name AV.make man do.things more active than normal  
 'Viagra makes a man more active than he usually is'
- b. Presiden **di-desak** segera melakukan reshuffle kabinet.  
 president PASS-press soon AV.do reshuffle cabinet  
 'The president was under pressure to reshuffle his cabinet'

The influence verbs *buat* 'make' and *desak* 'press' in (11) has three semantic arguments: the actor/causer (the influencer), the undergoer (the influenced) and a state of affairs. It is the undergoer that becomes the controller in this type of verb. The undergoer/controller is the object of the matrix AV verb (*pria*) in 11a) and the subject of the passive matrix verb (*presiden*) in (11b).

##### 4.4.2 The COMMITMENT verbs

The COMMITMENT verbs are those in which the committer commits himself or herself to bring about some state of affairs. The committer is therefore the controller. There may or may not be a person to whom they commit themselves. The following verbs belong to this class: *berjanji* 'promise', *menolak* 'refuse', *bersumpah* 'swear, vow', and *(men)coba* 'try, attempt', *berusaha* 'attempt, try', *berencana* 'plan', *bersikeras* 'insist on', *nekat* 'determined (to do something)', *mengancam* 'threaten', ... In (12), the committer/controller is the Abu Sayyaf guerilla (a) and Kevi Keegan (b).

- (12) a. Gerilyawan Abu Sayyaf<sub>i</sub> kemarin **menolak** [ \_\_<sub>i</sub> bertemu negosiator pemerintah]  
 guerilla name yesterday AV.refuse meet negotiator government  
 'The Abu Sayyaf guerilla yesterday refused to meet the government negotiator'
- b. Kevi Keegan **berambisi** mempersembahkan gelar juara  
 name has.ambition AV.offer title champion  
 Piala Eropa kali pertama bagi negeri-nya  
 trophy name time frist for country-3

‘Kevi Keegan has ambition to offer the European Cup Championship title for his country for the first time’

#### 4.4.3 The orientation verbs

The ORIENTATION verbs are typically experiencer verbs, where the experiencer is oriented towards some state of affairs, the SOA. They are, therefore, characterized by having an Experiencer as controller. Indonesian orientation verbs are, among others, *ingin/mau* ‘wish, want’, *perlu* ‘need’ and *suka* ‘like (to do something)’, *berani* ‘dare’) *bisa/tahu* ‘know how to’ and *mengaku(i)* ‘admit (doing something)’, .... In the following example, the controller is Gus Dur, the experiencer of the matrix verb *suka* ‘like’.

- (13) Gus Dur<sub>i</sub> suka [ \_\_<sub>i</sub> menduduh orang tanpa menyebut nama]  
 name like AV.accuse people without mention name  
 ‘Gur Dur likes to accuse someone (else) but refuses to name (him/her)’

To summarize, control is subject to syntactic and semantic constraints. Syntactically, the controlled/lower argument must bear the grammatical function Subject. Semantically, the controller depends on the verb types: (i) influence verbs require the undergoer to be the controller, commitment verbs require the committer to be the controller, and orientation verbs require the experience to be the controller. A rough semantic constraint for control relation in an influence verb (e.g. ‘ask’) can be stated as ‘ask (asker, askee<sub>i</sub>, (DOer<sub>i</sub>, (thing to be DONE))), where the index (*i*) signifies control relation.

#### 4.5 Degrees of dependency

A controlled argument of a dependent verb may show different degrees of tightness with another argument (of matrix verb). The tightness can be seen from (a) whether it is obligatorily or optionally controlled, and (b) whether it is a core argument or not.

##### 4.5.1 Obligatory vs Optional

Verbs like *coba* ‘try’ are verbs having obligatory control, with the lower argument being obligatorily unexpressed (14a), otherwise the sentence is not acceptable (14b). Other verbs like *ingin* ‘want’ have the lower argument optionally controlled (15).

- (14) a. Italia<sub>i</sub> men-coba [ \_\_<sub>i</sub> mengubah pola serangan] (obligatory control)  
 name AV.try AV.change pattern attack  
 ‘Italy tried to change (its) attacking patterns’

- b.\* Italia<sub>i</sub> men-coba [ **ia/mereka**<sub>ij</sub> mengubah pola serangan]  
 name AV.try 3SG AV.change pattern attack  
 ‘Italy tried to change (its/their) patterns of attack’

- (15) a. Saya<sub>i</sub> hanya ingin [ \_\_<sub>i</sub> jadi yang terbaik ] (optional control)  
 1SG only want become REL best  
 ‘I simply want to become the best’

- b. Saya<sub>i</sub> hanya ingin [ **saya/dia**<sub>j</sub> jadi yang terbaik ]  
 1SG only want 1SG/3SG become REL best  
 ‘I simply want \*me/him/her to be the best’

##### 4.5.2 Arguments: Core vs non Core status

A controlled clause, which is a complex argument, appears to be treated in the same way as a simple argument with respect to core status marking, at least in Indonesian. For example, a complex argument (SOA), like a simple argument, can be Core and non-Core as shown by the marking with *untuk*.

First, consider the simple Benefactive argument marked by *untuk* in (16), syntactically OBLs (i.e. non-Core). In (16a), the head verb is intransitive with the sole Core argument being the subject. In (16b), the head verb is monotransitive with the two Core arguments being the SUBJ *Ayah* and the OBJ *baju*.

- (16) a. Ia menyanyi [*untuk*=mu] (intrans. pred; *untuk* = OBL<sub>ben</sub>)  
 3SG sing for=2SG  
 ‘(S)he sang for you’
- b. Ayah membeli baju [*untuk* adik] (monotrans. pred; *untuk* = OBL<sub>ben</sub>)  
 father AV.buy shirt for little.sibling  
 ‘Father bought a shirt for (our) little brother/sister’

Now, *untuk* also marks non-Core status for a complex clause as illustrated by (17). The head verbs *datang* and *berusaha* are intransitive verbs. Then, the postverbal complex clauses are not core. The complex clause in (17a) can be thought of as an adjunct whereas that in (17b) can be treated as a semantic argument of *berusaha* ‘try’ but it is not core. The evidence for these clauses being non-core for example comes from badness of (18) because the verbs are intransitive and cannot be passivized (i.e. the complex clauses cannot be linked to SUBJ).

- (17) a. Ia datang [*untuk* menjenguk Ayah]<sub>SOA</sub> (SOA = a complex adjunct)  
 3SG come untuk AV. visit father  
 ‘(S)he came to visit father’
- b. Ia berusaha [*untuk* menyembuyikan perasaan-nya]<sub>SOA</sub> (SOA = a complex argument)  
 3SG try untuk AV.hide feeling-3SG  
 ‘(S)he tried to hide his/her (true) feelings’
- (18) a. \* Untuk menjenguk ayah di-datang  
 b. \* Untuk menyembunyikan perasaannya diberusaha

Further evidence for the non-core status of *untuk*-units in (17) comes from the fact that the verb can undergo applicativisation by which the non-core argument is promoted to core. Again, this applies to simple as well as complex arguments. The core status promotion of simple arguments is illustrated in (19). The Benefactive argument *adik* in (19a) is non-core, marked with *untuk*, and the AV verb is without the applicative *-kan*. It is promoted to OBJ in (19b), where the AV verb is marked with the suffix *-kan*. The Benefactive argument comes immediately after the verb and loses its non-core marker *untuk*. When the applicative verb is passivized, the Benefactive argument is linked to SUBJ (19c), and, crucially, it must not be marked with *untuk* (19d).

- (19) a. Ayah membeli baju [*untuk* adik] (Ben = non-Core)  
 father AV.buy shirt for little.sibling  
 ‘Father bought a shirt for (our) little brother’
- b. Ayah mem-beli-kan adik baju (Ben = Core/OBJ)  
 father AV-buy-APPL little sibling shirt  
 ‘Father bought a shirt for (our) little brother’

- c. **Adik** di-beli-kan baju (Ben = Core/SUBJ)  
 little sibling PASS-buy-APPLshirt  
 ‘For (our) little brother, a shirt was bought’
- d. ?\* *Untuk adik* dibelikan baju (\*Ben = non-Core =SUBJ)

The same is observed with complex argument associated with the verb *berusaha* ‘try’ (intransitive), which may have a transitive counterpart with applicative *-kan, usahakan* (transitive). Sentence (20a) shows that the complex clause functioning as SUBJ (core), and crucially the verb must be the transitive verb with *-kan, usahakan*. The verb cannot be intransitive (20b) and the clause cannot be marked by *untuk* (20c).

(20) *berusaha* (*untuk*) (intransitive)  $\leftrightarrow$  *usahakan* (transitive):

- a. [<sub>i</sub> Menolong diri sendiri] yang harus kita<sub>i</sub> **usahakan** terlebih dahulu (SOA=SUBJ)  
 AV.help self FOC must 1PLInc OV.try first  
 ‘Helping ourselves is what we must try first’
- b. \* [<sub>i</sub> Menolong diri sendiri] yang harus kita<sub>i</sub> **berusaha** terlebih dahulu (SOA=SUBJ)  
 AV.help self FOC must 1PLInc OV.try first  
 ‘Helping ourselves is what we must try first’
- c. \* [<sub>i</sub> Untuk menolong diri sendiri] yang harus kita<sub>i</sub> **usahakan** terlebih dahulu  
 (\**Untuk*SOA=SUBJ)

Two points to conclude. A complex argument involving control can be Core, and it can therefore be SUBJ (of the OV verb). This gives rise to control into SUBJ. *untuk* can be analyzed as a functional category, marking non-Core status (for simple and complex arguments).

## 5 A-structure based analysis of control

### 5.2 LFG: a brief overview

#### 5.2.1 Parallel structures

In LFG (Lexical-Functional Grammar) (Alsina 1996; Bresnan 2001; Dalrymple et al. 1995; Manning 1996), language system is modeled in terms of parallel structures consisting of:

- constituent structures (c-str): morphological/syntactic realizations of grammatical relations in terms of linear/hierarchical structure of categorial units (e.g. NP, VP, ...);
- functional structures (f-str): surface grammatical relations (SUBJ, OBJ, ...);
- argument structure (a-str): (see below);
- semantic structure (sem-str): argument-taking predicates and their arguments, and decomposition of these into primitive units as in Jackendoff (1991) or Foley and Van Valin (1984). For simplicity, the sem-str will be represented by the traditional semantic role labels (Agent, Ben/Goal, Patient, ...).

Each structure is an independent structure with its own properties and constraints. The parallel structures are linked with each other by mapping or linking principles. Underlying the mapping is structural prominence, which in general can be defined on any level. Three structural layers highlighted throughout the discussion in this paper reveal three kinds of ‘subjects’:

- SUBJ(ECT) (conventionally written with capital letters) is the surface/grammatical subject, the most prominent function in f-str. It can be any role. So far observed, at least in the languages discussed here, it must be a core argument, not necessarily the most prominent core argument.
- A-subj(ect) is the a-str subject, the most prominent core argument in the a-str. Like SUBJ, it can be any role, not necessarily an Agent.
- Logical subject (l-subj) is the most prominent argument in the sem-str, typically this is the Agent.

For the purpose of our discussion in this paper, I adopt a version of a-str, namely the syntacticized a-str, wherein information about core (term) status is important (Manning (1996) Arka (1998) Wechsler and Arka (1998), Arka and Manning (to appear)):

(21) A-STR:

- It carries information about the syntactic valency of a predicate (i.e., number of arguments: one-place, two-place, ...);
- It carries information about core status (i.e., whether an argument is a core/term or not; hence syntactic intransitivity: intransitive, monotransitive, ...);
- It contains syntactic arguments having the following prominence:
  - cores outrank non-cores,
  - within sets of cores/non-cores, prominence reflects semantic prominence.

For simplicity, a lexical entry of an argument-taking predicate, e.g. ‘hit’ and ‘sit’, will be represented as (22). The list of semantic roles in the sem-str should be understood as a shorthand of an elaborate sem-str (e.g. as in Jackendoff-style structures). The a-str is also represented as a list of (default) core and non-core argument with the following conventional notations. (i) The left most is the most prominent core argument (i.e., a-subj). In (22a), for example, the a-subj is by default the Agent. However, as we will see, the a-subj can be any semantic roles. (ii) The sets of core and non-core are distinguished in the a-str representation by internal bracketing, with the core set being the left one. For the verb ‘sit’ (22b), for example, the a-subject is the leftmost and internally within different brackets from the second non-core argument that is normally associated with the Locative argument. In case where all arguments are cores as in (22a), no nested brackets are given.

(22)		(a)		(b)
<i>a-str</i> :	‘hit’	<	>	‘sit’ <<
		(1 <sup>st</sup> Core)	(2 <sup>nd</sup> Core)	>(<
				>)>
				(Core)(non-Core)
<i>sem-str</i> :	(Ag)	(Pt)	(Ag)	(Loc)

### 5.2.2 Voice alternations as mapping alternations

Voice and voice alternations can be analyzed as semantics-syntax mapping alternations via the syntacticised a-str (as an intermediate structure). The explanation of typologically different voices is based on cross-linguistic observation that:

- 1) a structural layer (*sem-str*, *a-str*, and *f-str*) has its own constraint and prominence (Bresnan 1995, 2001; Dalrymple 1993; among others),
- 2) the correspondences among the structural layers are not always straight.

Thus, mapping is not one-to-one relation and it is natural that it shows a prominence mismatch.

The principles of mapping (and the respective marking) associated with the three main voices (Active, Objective and Passive) in Indonesian (and also other Indonesian languages) can be formulated in (23). The explicit mapping representations of the three voices are shown in (24).

(23) Mapping (and Marking):

**I. SUBJ selection: SUBJ must be a Core argument**

- a. AV: map an Agent a-subject/Core argument onto SUBJ
- b. OV: map a non-Agent a-object/Core argument onto SUBJ
- c. PASS: Map a non-Agent a-subject/Core argument onto SUBJ

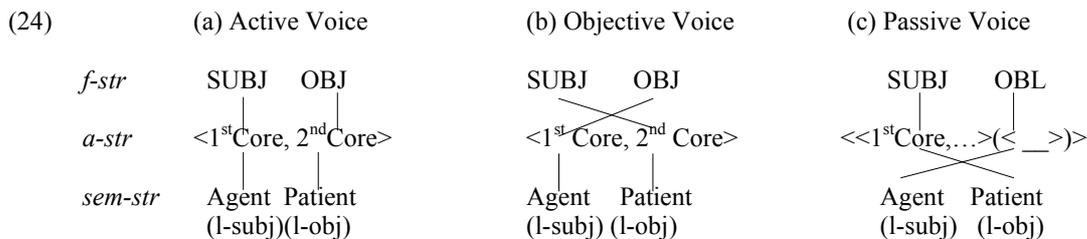
**II. Complement function:**

Map the other Core(s) onto OBJ(s)

**III. OBL non-Core**

PASS:

- (i). Treat an Agent as a non-Core, and map onto OBL (either optionally or obligatorily present)
- (ii) Remove the Agent completely



As noted, AV and OV share an a-str with the Agent being the first core and the Patient being the second core. OV and Passive share the property of Patient Core being SUBJ. We are now ready to demonstrate how a complex controlled clause is treated like a Patient Core argument (i.e. the second core argument in the OV or the first core in Passive).

### 5.3 Syntactic realizations of (complex) arguments involving control

#### 5.3.1 Control with Intransitive verbs

An intransitive verb has only one core, which is then mapped onto subject. For an intransitive verb like *nekat* ‘determined’ (25a), the sole core argument is thematically an actor. The verb may take a controlled clause, which is then treated as non-core. The evidence for the clause status to be non-core comes from its inability to be subject (25b).

(25) a. Ibu<sub>i</sub>    pun    ternyata ada yang **nekat**    [    <sub>i</sub> menyakiti anak-nya sendiri]  
 mother PART turn.out exist REL determined    AV.hurt child-3SG own  
 ‘It turns out that there are mothers who don’t care the effect of hurting their own children’

b.\* [    <sub>i</sub> Menyakiti anaknya sendiri] **yang** para Ibu<sub>i</sub> nekat

More interesting cases are control constructions with transitive verbs where core promotion and voice alternations are possible. In what follows, I will discuss the types of ‘control’ verbs (commitment, orientation and influence) and their possible voice alternations that allow control-into-subject phenomena.

### 5.3.2 Control with two-place transitive verbs

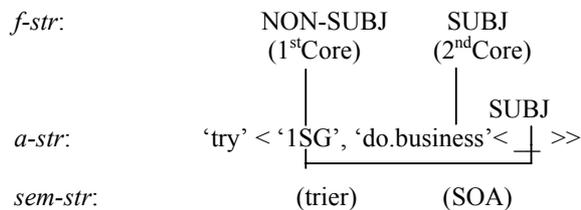
#### 5.3.2.1 Commitment verbs

The following examples illustrate the point that, in a (non-derived transitive) transitive commitment verb, the complex argument is treated as a Core argument. In (26a), the controlled clause (within brackets) comes postverbally and the matrix verb is in AV (*mencoba*). Recall that in the AV verb, the transitive non-actor argument is treated as the second core/OBJ (see 2.5.2) and the actor is the first core. Thus, for the AV verb *mencoba* (26a), the Actor/trier *saya* maps onto SUBJ. In (26b), the verb is in OV (*coba*), and the controlled clause comes preverbally in the SUBJ position. This gives rise to a control-into-SUBJ construction. The evidence for the preverbal controlled clause being SUBJ comes from (a) the possibility of having the FOC marker *yang* (exclusively for SUBJ) (26b) and the impossibility of the matrix verb having the AV prefix *meN-* (26c).

- (26) a. *Saya<sub>i</sub> sudah pernah men-coba [ \_\_<sub>i</sub> berdagang lewat internet]*  
 1SG already ever AV-try trade via internet  
 ‘I have tried to do business on the internet’
- b. [ *\_\_<sub>i</sub> Berdagang lewat internet*] (*yang*) *sudah pernah saya<sub>i</sub> coba*  
 trade via internet FOC already ever 1SG OV.try  
 ‘Doing business on the internet is what I have tried to do’
- c. \* [ *\_\_<sub>i</sub> Berdagang lewat internet*] (*yang*) *sudah pernah saya<sub>i</sub> men-coba*

The following mapping of sentence (26b) shows explicitly how the controlled clause is mapped onto SUBJ:

- b. The a-str linking of the OV.*coba*:



The SOA (‘do business’), which is syntactically expressed as an embedded clause with its own SUBJ being controlled, is treated as the second core. It can therefore be linked to SUBJ in the OV verb. This explains the structural property of the complex clause (i.e. coming preverbally in the SUBJ position). It also accounts why the verb cannot take the AV marker *meN-* (i.e. OV and AV verbs are mutually exclusive). The controller *saya* ‘1SG’, the ‘trier’ (semantically determined), is then mapped onto non-SUBJ (because there must be only one SUBJ)<sup>4</sup>.

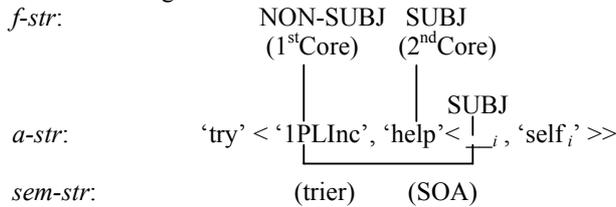
Intransitive-transitive verb pairs by means of applicativisation (e.g. *berusaha* ‘attempt, try’ (intransitive) → *usahakan* (transitive); *berencana* ‘have a plan/plan’ (intransitive) → *rencanakan,*’ (transitive) and *berjanji* ‘have a promise’ (intransitive) → *janjikan* (transitive)) also exhibit similar properties. (27a) is an example of a derived

<sup>4</sup> In LFG (and also in other approaches that assume hierarchy), SUBJ is the highest function in the hierarchy and it is of a general principle that there can be only one SUBJ associated with a single predicate.

transitive (*usahakan*) showing control-into-subject construction and (27b) shows the mapping.

- (27) a. [<sub>i</sub> Menolong diri<sub>i</sub> sendiri] yang harus kita<sub>i</sub> usahakan terlebih dahulu (=20a)  
 AV.help self FOC must 1PLInc OV.try first  
 ‘Helping ourselves is what we must try first’

b. The a-str linking of the OV.*usahakan*:



5.3.2.2 *Orientation verbs*

Transitive orientation verbs are generally derived, e.g. *ingin-kan*, *mau-i* ‘wish, want’, *perlu-kan*, and *suka-i* ‘like’. Like commitment transitive verbs, these verbs treat the controlled clause as a second core argument. As expected, it can be SUBJ of the OV verb. Sentence (28a) shows the base *ingin* ‘want’ which is intransitive; the controlled clause is non-core. Sentence (28b) shows the corresponding derived transitive verb *ingin-kan* (in OV) wherein the controlled clause is now promoted to core/SUBJ.

- (28) a. Mereka<sub>i</sub> **ingin** [<sub>i</sub> berkorban untuk negara dan bangsa]  
 3PL want sacrifice for country and nation  
 ‘They want to sacrifice themselves for the country and the nation’
- b. [<sub>i</sub> Berkorban untuk negara dan bangsa] yang mereka<sub>i</sub> **ingin-kan**  
 sacrifice for country and nation FOC 3PL OV.want-APPL  
 ‘Sacrificing (themselves) for the country and nation is what they want (to do)’

However, an interesting thing to observe is that promotion of the controlled clause to core/OBJ status in the AV verb *menginginkan* is not generally acceptable. Thus, in contrast to (28a) the following is marginally acceptable:

- c. ??Mereka meng-ingin-kan berkorban untuk negara dan bangsa  
 3PL AV-want-APPL sacrifice for country and nation

The explanation for this comes from a kind of blocking associated with pragmatic prominence, which is also common in other Indonesian languages such as Balinese, Lio, and Sikka (Arka 2000). That is, promotion to core for a non-actor argument may be solely pragmatically motivated, where the promoted argument must be assigned pragmatic prominence (e.g. contrastive FOC) and ‘fronted’ to a sentence initial position. In the absence of this, promotion is not licit. Thus, what happens in the unacceptable (28c) is that the verb is in the applicative form expressing the promotion of the controlled clause but the clause itself is not fronted and is not given contrastive FOC. For such a case, there is already an intransitive construction of the (28a), which is preferred and therefore blocks (28c).

To conclude, a controlled clause in the transitive verb can be treated as the second Core argument. It can therefore map onto SUBJ in the OV verb. However, for certain derived transitive verbs, there may be an additional constraint which requires that core

promotion is possible only when it is also accompanied by contrastive FOC assignment. Otherwise, the base/non-derived verb construction is preferred where the controlled clause is treated as a non Core argument.

### 5.3.3 Control with three-place transitive verbs

#### 5.3.3.1 The problem of asymmetrical object doubling: evidence from simple arguments

Voice alternations suggest that Indonesian has an asymmetrical double object system (Foley 1998, Arka 2000), where only one of the two objects can alternate to become SUBJ in non-active constructions. The one that can alternate with SUBJ is the first OBJ. Thus, applicativisation deriving a ditransitive verb from a monotransitive verb may change the possibility of OBJ-SUBJ alternation. Consider the monotransitive AV verb *membeli* ‘buy’ (29a) with the Patient *baju baru* ‘new shirt’ as the only OBJ. The Benefactive argument is non-core marked by *untuk*. In the corresponding ditransitive (applicative) verb with *-kan*, *membelikan*, the Benefactive argument is now promoted to Core, precisely to the second Core, and the Theme is now the third Core argument.

- (29) a. Ayah mem-beli baju baru itu untuk Joni                    ‘buy’ < ‘father’, ‘shirt’ > < ‘joni’ >  
 father AV-buy shirt new that for name
- b. Ayah mem-beli-kan Joni baju baru itu                    ‘buy-APPL’ < ‘father’, ‘joni’, ‘shirt’ >  
 father AV-buy-APPL name shirtnew that  
 ‘Father bought the new shirt for Joni’

Being the second core (i.e. the only OBJ) of the transitive verb *beli* (29a), the Theme *baju baru itu* can be SUBJ in the corresponding passive verb (30a). Likewise, being the second Core argument, the Benefactive *Joni* (29b) can be SUBJ of the passive verb *dibelikan* (30b). However, the Theme of the ditransitive verb *belikan* (29b) cannot alternate with SUBJ, as shown by the badness of (30c). This is because the Theme is the third argument and the asymmetrical object doubling system of Indonesian does not allow such an argument to be linked to SUBJ, albeit its being Core.

- (30) a. Baju baru itu di-beli oleh Ayah untuk Joni  
 shirt new that PASS-buy by father for name  
 ‘The new shirt was bought for Joni by Father’
- b. Joni di-beli-kan baju baru itu oleh Ayah  
 name PASS-buy-APPL shirt new that by father  
 For Joni, the shirt was bought by Father
- c.\* Buku itu dibelikan Joni oleh Ayah

#### 5.3.3.2 Controlled clause as a third non-Core argument

A three-place predicate that involves controlled clause is generally of the ‘influence type’, that is, semantically it involves (a) the influencer, (b) the influenced, and (c) the thing done. (The controller is the Undergoer argument of the matrix verb.) Syntactically, however, it is commonly mono-transitive (with two Core arguments) with the SOA (the controlled clause) being treated as the third non-core argument.

Evidence from voice alternations clearly shows that it is the influenced argument, not the SOA, that takes the second core status. Thus, in the following example (31), *Gubernur BI* is the ‘influenced’ controller (the second Core, put within brackets) and is therefore SUBJ of the passive matrix verb (31b). The controlled clause cannot be SUBJ of the passive matrix

verb (31c). However, one might argue that the SOA is possibly Core and the badness of (31c) is due to the asymmetrical object doubling system, similar to the badness of sentence (30c). While we do not exclude this possibility, further evidence from marking by non-core marker *untuk* illustrated in (31d) confirms the analysis that the SOA is indeed non-core.

- (31) a. Presiden minta Gubernur BI, Syahril Sabirin, [\_\_ mundur]  
 president (AV.)ask governor BI name step.down  
 ‘The president asked the Governor of *Bank Indonesia*, Syahril Sabirin, to step down’
- b. Gubernur BI di-minta [\_\_ mundur] (oleh Presiden)  
 governor BI PASS-ask step.down by president  
 ‘The governor of *Bank Indonesia* is asked to step down (by the president)’
- c. \*[\_\_ Mundur] (yang) diminta Gubernur BI, S.S., (oleh Presiden)  
 d. Presiden (me)minta Gubernur BI, Syahril Sabirin, [**untuk** mundur]

The parallel structures showing the (non) Core status of the arguments of the verb *minta* accounting for the examples in (31) are shown in (32):

- (32) The parallel structures of *minta*:
- |                  |       |                        |                        |               |    |
|------------------|-------|------------------------|------------------------|---------------|----|
|                  |       | (1 <sup>st</sup> Core) | (2 <sup>nd</sup> Core) | (non-Core)    |    |
| <i>a-str</i> :   | ‘ask’ | < ‘president’,         | ‘governor’ ,           | ‘step_down’ < | >> |
|                  |       | └──────────────────┘   |                        |               |    |
| <i>sem-str</i> : |       | (Agt)                  | (Pt)                   | (SOA)         |    |

Morphological causativisation may also yield a three-place predicate containing controlled clause; e.g. *berani* ‘dare, have the courage’ → *beranikan* ‘make oneself dare/have the courage to do something’. The controlled clause is also treated as a third non-Core argument because of the following evidence: (i) the possibility of taking the non-Core status marker *untuk* (33a) and (ii) the impossibility of its mapping onto SUBJ (33b). The a-str of the derived causative *beranikan* is shown in (33c), where the SOA is third non-Core argument.

- (33) a. Orang itu mem-berani-kan diri(nya)/\*dia (untuk) melapor ke kantor polisi  
 person that AV-dare-CAUSE self(3SG)/3SG AV.report to office police  
 ‘The person mustered up the courage to report to the police station’
- b. ?\* [ \_\_ Melapor ke kantor polisi ] yang dia beranikan dirinya  
 AV.report to office police FOC 3SG OV.dare-CAUS self-3  
 ‘Reporting to the police station was what (s)he mustered up the courage to do’
- c. *beranikan*:
- |                  |             |                        |                           |            |    |
|------------------|-------------|------------------------|---------------------------|------------|----|
|                  |             | (1 <sup>st</sup> Core) | (2 <sup>nd</sup> Core)    | (Non-Core) |    |
| <i>a-str</i> :   | ‘dare-CAUS’ | < ‘man’ <sub>i</sub> , | ‘3SG.self’ <sub>i</sub> , | ‘report’ < | >> |
|                  |             | └──────────────────┘   |                           |            |    |
| <i>sem-str</i> : |             | (Agt)                  | (Pt)                      | (SOA)      |    |

To conclude, the SOA of a three-place transitive predicate (derived or non-derived) in Indonesian is treated as non-Core. This explains its inability to be SUBJ of passive and its possibility to be marked by *untuk*.

#### 5.4 Split realization and ‘raising’

Controlled clause involving ‘raising’ can be treated as Core and non-Core. By ‘raising’ is meant the argument that is ‘thematically’ associated with an embedded clause but is then syntactically expressed as the argument of the matrix verb, where the matrix verb does not clearly assign any thematic role to the ‘raised’ argument. The a-str analysis of the raising verb adopted here essentially claims no raising in the sense commonly adopted in the transformational literature. In the analysis below, I show that the phenomenon of raising is a result of a mismatch in mapping, where a single semantic complex argument SOA corresponds to two syntactic arguments in the a-str (i.e. a split syntactic realization). Thus, technically we have argument sharing (with the lower argument being unexpressed, or controlled). (However, I will still use the term ‘raising’ bearing in mind that it is essentially argument sharing.)

##### 5.4.1 Sharing with the a-subject (1<sup>st</sup>Core)/SUBJ

The following example shows a mismatch involving semantically an intransitive predicate *tampak* ‘seem, appear, be visible’. Semantically, it can be argued that the whole proposition (SOA) is the semantic argument of the predicate: *tampak* ‘appear’(SOA). This explains why we can have (34a). However, it is not clear whether in this construction the whole post verbal clause acts as SUBJ (i.e. a V-SUBJ structure) or acts as a complement (i.e. V-Complement without SUBJ). What is clear is that we cannot have (34b), where the whole clause comes preverbally. The verb *tampak* shows an alternative ‘raising’ structure with two argument slots: the first argument is Core and this Core argument (i.e. the a-subject) is shared with the SUBJ of the embedded verb/ SOA giving rise the structure shown in (34b). The representation in (34d) explicitly shows argument sharing and linking.

(34) a. **Tampak** La Hoya payah di dua ronde akhir  
appear name exhausted in two round final

b. ?\* La Hoya payah di dua ronde akhir **tampak**

c. La Hoya **tampak** payah di dua ronde akhir  
name appear exhausted in two round final

‘La Hoya looked exhausted in the last two rounds’

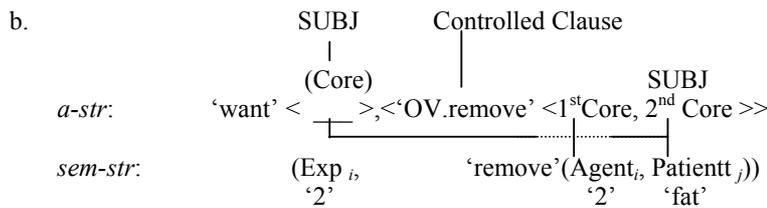
d.

a-str	:	<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="text-align: center;">SUBJ (Core)</div> <div style="text-align: center;">Controlled clause</div> </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 5px;"> <span>‘appear’ &lt; <u>      </u> , ‘exhausted’ &lt; <u>      </u> &gt;&gt;</span> </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 5px;"> <div style="border-top: 1px solid black; width: 100%;"></div> <div style="margin-left: 100px;"> </div> </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 5px;"> <span>sem-str</span> <span style="margin-left: 100px;">: ‘exhausted’(‘3SG’)</span> </div>
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Recall that in the preceding example with the verb *tampak*, the first Core argument thematically corresponds to no thematic role position in the semantic structure of the matrix verb. It is shared with and thematically identified with the controlled argument of the embedded verb. In the following example from an advertisement, the verb *ingin* shows a different nature of mapping mismatch. Semantically, the verb is a two-place predicate and syntactically it is a two-place predicate as well. Hence, there is no mismatch with respect to the number of the arguments. However, a mismatch of the mapping of the argument results

in the structure shown in (35a) where the thing wanted (*lemak* ‘fat’) is SUBJ of the intransitive *ingin* (i.e. not the wantee/Experiencer). The Experiencer *anda* appears overtly as a non-subject argument of the lower argument. Argument sharing and linking in sentence (35a) can be represented in (35b).

- (35) a. Setiap program dari Marie France ter-fokus pada  
 every program from name PASS-focus on  
 [*lemak yang [ingin [\_\_ anda hilangkan...]]]*  
 fat FOC want 2SG OV.remove  
 ‘Every program from Marie France specifically deals with the fat that you want to remove’



Note that, semantically, the verb *ingin* ‘want’ belongs to the orientation verb, hence the experiencer is identified with the doer/Agent of the lower verb (indicated by co-index *i*). However, apparently the motivation to highlight the Patient *lemak*, which is the second Core argument of the embedded verb, forces the Patient to get identified with the first Core/SUBJ argument of the matrix verb. (Usually in normal circumstances, this first Core position is linked to the Experience of the matrix verb.) The evidence that the Patient is the SUBJ of the matrix verb *ingin* comes from its ability to take the FOC marker/relativiser *yang* (exclusively for SUBJ).

It appears that the verb *ingin* ‘want’ is syntactically intransitive. The controlled clause is not Core, as evident from the badness of sentence (36) below where its linking to SUBJ is attempted:

- (36) \* [\_\_ anda hilangkan] yang ingin lemak

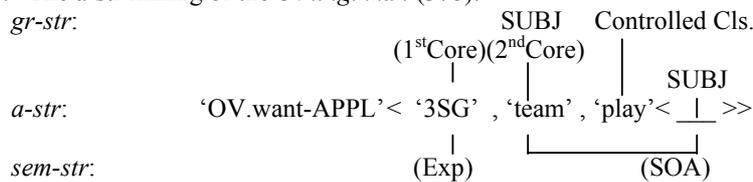
#### 5.4.2 Sharing with the a-object (2<sup>nd</sup> Core position)

Verbs traditionally called SOR (Subject to Object raising) verbs have the second Core argument of the matrix verb shared with the argument of the embedded verb. These verbs are three-place transitive verbs; e.g. by means of applicativisation: *ingin* → *inginkan*, *tahu* → *ketahui*. The controlled clause is treated as the third non-Core argument. Note that the transitive verb *inginkan* may have its controlled clause treated as the second Core argument (see example (28)).

The SOR verb *inginkan* in (37) below is syntactically a three-place transitive predicate. Its semantic SOA argument, however, may be split. Sentence (37a) illustrates the SOA in postverbal position, after AV verb *menginginkan*. In this instance, it is not clear whether the SUBJ of the embedded clause (*timnya*) is raised to/shared with (matrix) OBJ. A clear SOR case of the verb *inginkan* is exhibited by (37b), whose mapping representation is shown in (37c). In this situation, semantically (i.e. in the sem-str), the verb is a two-place predicate with the SOA being the second argument. However, syntactically (i.e. in the a-str), this verb is a three-place predicate with the second core argument being shared with the (SUBJ) argument of the embedded verb *bermain* ‘play’. This second Core (thematically

correspond to no role in the matrix verb) is then mapped onto SUBJ of the matrix OV verb (accounting for (37b)).

- (37) a. Dia sangat **meng-ingin-kan** tim-nya bermain sebaik-baiknya  
 3SG very AV-want-APPL team-3SG play as.good.as.possible  
 dan melangkah jauh di turnamen ini  
 and proceed far in tournament this  
 ‘He really wants his team to play their best and to proceed far in this tournament’
- b. Tim-nya sangat dia **inginkan** [ \_\_ bermain sebaik-baiknya]  
 team-3SG very 3SG OV.want-APPL `play as.good.as.possible  
 ‘He really wants his team to play their best’
- c. The a-str linking of the *OV.inginkan* (37b):



As noted from (37c), the controlled clause is syntactically treated as a third argument in the a-str. As expected, it is treated as non-Core and cannot be SUBJ of the OV verb, as confirmed by (38a). It is treated more like adjunct, where *agar* (a ‘purposive’ marker) may be inserted (38b).

- (38) a. ?\*[ \_\_ Bermain sebaik-baiknya] yang sangat dia inginkan tim-nya  
 play as.good.as.possible FOC very 3SG OV.want-APPL team-3SG  
 ‘Playing their best was what he wanted his team to do’
- b. Tim-nya sangat dia inginkan [**agar** bermain sebaik-baiknya]  
 team-3SG very 3SG OV.want-APPL agar play as.good.as.possible  
 ‘He wanted his team to play their best’

The (derived) verb *ketahui* can also show a split realization of its SOA. This is exhibited in (39). (39a) shows the active construction and (39b) shows the corresponding passive verb wherein the matrix SUBJ *Soeharto* is shared with the SUBJ of the embedded predicate *sakit*. Representation (40a) shows the a-str of the active verb and (40b) shows the a-str of its corresponding passive predicate. Note that *Soeharto* is the a-object (i.e. second Core) in (40a) and becomes the first Core in the a-str of the passive verb (40b), which is then linked to SUBJ. In both structures, *Soeharto* is associated with the SUBJ of the embedded predicate. Again, the badness of (39c) suggests that the controlled clause is treated as the third non-Core argument (i.e. it cannot be SUBJ of the passive).

- (39) a. Banyak orang tidak mengetahui Soeharto sakit  
 many person NEG AV.know.APPL name ill  
 ‘Many people do not know that Soeharto is ill’
- b. Soeharto tidak di-ketahui [ \_\_ sakit] (oleh banyak orang)  
 name NEG PASS-know.APPL ill by many person
- c. \*[ \_\_ sakit] tidak diketahui Soeharto (oleh banyak orang)  
 ill NEG PASS-know.APPL name by many person

(40) a. *ketahui* (transitive):

	(1 <sup>st</sup> Core)	(2 <sup>nd</sup> Core)	(Controlled Clause)
<i>a-str</i> :	'know' < 'people' , 'Soeharto, 'ill' < _ >>		
		└──────────┘	
<i>sem-str</i> :	(Exp)	(SOA)	

c. *diketahui* (PASS):

<i>f-str</i> :	SUBJ	Contr. Cls.	(OBL)
	(1 <sup>st</sup> Core)	(non-Core)	(non-core)
<i>a-str</i> :	'know' <<'Soeharto'>>'ill' < _ >, ('people') >>		
		└──────────┘	
<i>sem-str</i>		(SOA)	(Exp)

In conclusion, in the a-str-based analysis adopted here, 'raising' verbs are verbs that allow mismatches of mapping between sem-str and a-str. Particularly, one semantic complex argument (i.e. an argument that is itself an argument-taking predicate) receives split realisations: it corresponds to two syntactic arguments. One argument (i.e. the matrix verb's argument) is shared with the argument of the embedded verb. The upper argument can be the first Core argument (as in intransitive verbs such as *tampak* 'seem') or the second Core argument (as in transitive verbs such as *ketahui* 'know'). The controlled clause of a three-place verb is treated as non-Core and therefore cannot be SUBJ. For certain verbs there can be intransitive-transitive pairs where the second Core argument position is available due to transitivity. This core position may be associated with a controlled clause, which allows it to map onto SUBJ of the matrix (passive or OV) verb.

### 5.5 What determines the possibility to have a control-into-SUBJ construction

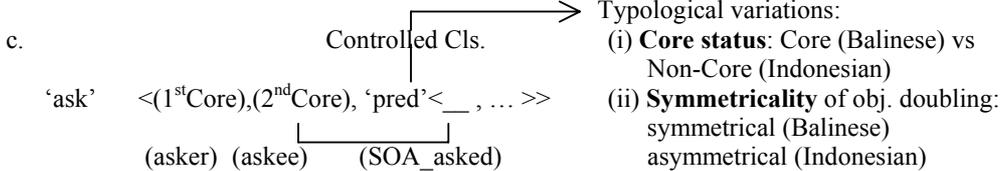
The crucial question is what determines the range of possibilities that a complex argument can or cannot be a Core/SUBJ? Cross-linguistic observation reveals that there are at least four parameterized aspects.

First, lexically specific properties. Languages vary with respect to their lexical stock of 'synonymous' verbs that may have different a-strs. For example, the verb 'know' may receive different syntactic expressions in different languages. In Indonesian, it can be *tahu* (intransitive) and *ketahui* (transitive), in Balinese it is *tawang* (transitive only) and in English it is *know* (transitive). In Indonesian, the SOA of 'know' can be either non-Core (particularly for the intransitive *tahu*) or Core (for the transitive *ketahui*). In Balinese, on the other hand, it is always Core (with or without 'raising' see below).

Second, language specific properties: symmetry in object doubling. Not all languages allow ditransitive constructions and, when they do, not all of them treat the two objects in the same way with respect to possible mappings onto SUBJ in non-active construction. When the language allows the first object and the second object to alternate with SUBJ, the language is said to have a symmetrical object doubling system (Foley 1998), otherwise it is said to have an asymmetrical system. Indonesian, like English, exhibits an asymmetrical system (see examples in 5.3.3.1) whereas Balinese (Arka 1998) shows a symmetrical system<sup>5</sup>. Given the SOA can be the third argument, then its status as Core or non-Core may be determined by the symmetry in the object-doubling system. For example, the SOA of the verb 'ask' in Balinese and Indonesian is the third argument. It is

<sup>5</sup> I do not want to claim that all second OBJs can alternate with SUBJ in Balinese. There appear to be restrictions due to lexical semantics of the verbs and definiteness of the OBJs. Generally, for the second OBJ to alternate with SUBJ, it must be definite and highly prominent pragmatically (e.g. given a contrastive FOCUS, see Arka (1998, 2000a, 2000b)).

treated as Core in Balinese and can be linked to SUBJ (41a). In Indonesian, in contrast, an attempt to make it SUBJ results in a bad sentence (41b) (with an acceptability rating of 25%). The a-str of the three-place predicate of ‘ask’ is displayed in (41c), where the SOA is the third argument but is typologically subject to cross linguistic variations as for its core status and therefore for possible linking to SUBJ.

- (41) a. [ngemaang panak-ne ubad] **orahin** tiang ia (Balinese)  
 AV.give child-POSS medicine OV.ask 1 3  
 ‘Giving his/her child medicine is what I asked him/her’
- b. \* [Mundur] yang **diminta** Gubernur BI, Syahril Syabirin, oleh Presiden (Indonesian) (=28c)  
 (acc. rating: 25%)
- c. 

Third, pragmatic prominence. It has been observed that ‘fronting’ is associated with promotion to Core status and, crucially, it is pragmatically motivated (Arka 2000a, 2000b). A complex clause is generally a heavy unit and tends to appear later in the sentence. In a marked structure, it can appear sentence initially. In certain languages, this must be marked by a FOCUS marker, a marker that is also generally a relativiser (e.g. *yang* in Indonesian).

- (42) a. Mereka suka [nongkrong di pinggir jalan] (acc. rating: 92%)  
 3PL like sit.around at side road
- b. [Nongkrong di pinggir jalan] lah yang paling mereka suka-i (acc. rating: 70%)  
 sit.around at side road PART FOC most 3PL OV.like-APPL
- c. ?\* Mereka menyuka-i [nongkrong di pinggir jalan] (acc. rating: 34%)  
 3PL AV.like-APPL sit.around at side road
- ‘They like sitting around at the road sides doing nothing’

Fourth, languages seem to vary with respect to which structural types (f-str, a-str, and sem-str) they are sensitive to. Languages like English appear to be sensitive to surface grammatical organisation (i.e. f-str). For languages of this type, Visser’s generalisation holds. The generalization says that (i) verbs with OBJ as the controller can be passivized, (ii) verbs with SUBJ as the controller cannot be passivized. Thus, *persuade* is a verb with OBJ control and it can have a passive alternation as shown in (43). In contrast, *promise* is a verb with SUBJ control and therefore it cannot have a passive alternation (i.e. the badness of (44b)). *Try* is a SUBJ control verb and therefore behaves like *promise* (45).

- (43) a. We persuaded Lisa to go  
 b. Lisa was persuaded to go
- (44) a. We promised Lisa to go  
 b.\* Lisa was promised to go
- (45) a. They tried to negotiate with the rebels.  
 b. \* To negotiate with the rebels was tried by them

According to Bresnan (1982), the controller (of obligatory control construction) appears to be restricted to Core arguments (i.e. SUBJ/OBJ). Since passivisation removes or demotes the Agent/Experiencer (controller) from Core status to non-Core status, then it is expected that a verb with SUBJ controller cannot be passivised, explaining the badness of (44b).

However, there is evidence that control relation is semantically, rather than syntactically, determined. Jackendoff (1997), for example, present cases like (46) where the controller of the infinitive clause is the ‘promiser’, irrespective of whether ‘promise’ is a verb (46a) (where the controller is SUBJ) or a noun (46b) (where the controller is a genitive noun). The same is true for the Indonesian (47) where a genitive pronoun *-nya* can still be a controller of the embedded clause.

- (46) a. John<sub>i</sub> promised [ \_\_<sub>i</sub> to leave]  
 b. John<sub>i</sub>'s promise [ \_\_<sub>i</sub> to leave]
- (47) a. Ia<sub>i</sub> (ber-)janji kepada saya [ \_\_<sub>i</sub> untuk datang]  
 3SG promise to 1SG for come  
 ‘(S)he promised (to) me that (s)he would come’
- b. Janji=*nya*<sub>i</sub> kepada saya [ \_\_<sub>i</sub> untuk datang]  
 promise=3POSS to 1SG for come  
 ‘Her/his promise to me to come’

Because the controller is semantically determined, it is expected to receive different syntactic realizations, as (46) and (47) show. Indeed, it can even be a non-core argument, as shown by (48) where a verb with subject control can be passivized in Indonesian (contrary to Visser’s generalisation). Note that the acceptability rating for (48c) where the controller is an oblique is quite high (92%).

- (48) a. [ \_\_<sub>i</sub> Berdagang lewat internet] (yang) sudah pernah **di**<sub>i</sub> **coba** (acc. rating: 96%)  
 trade via internet FOC already ever 3SG OV.try  
 ‘Doing business on the internet is what (s)he has tried’
- b. [ \_\_<sub>i</sub> Berdagang lewat internet] sudah pernah **di-coba**=*nya*<sub>i</sub> (acc. rating: 92%)  
 c. [ \_\_<sub>i</sub> Berdagang lewat internet] sudah **di-coba oleh Ayah**<sub>i</sub> (acc. rating: 92%)  
 d. Berdagang lewat internet sudah **di-coba** (the agent is understood) (acc. rating: 85%)

Sentences in (49) further show core status alternations do not affect control relations. In (49a), a non-Agent (i.e. the influenced) controller is a non-Core and in (49b) it is a Core.

- (49) a. Gus Dur minta [kepada rakyat Indonesia]<sub>i</sub> [ \_\_<sub>i</sub> (untuk) bersabar]  
 name ask to people Indonesia patient  
 ‘Gus Dur asks the Indonesian people to be patient’
- b. Rakyat Indonesia<sub>i</sub> di-minta [ \_\_<sub>i</sub> untuk bersabar]  
 people name PASS- asked- patient  
 ‘Indonesian people were asked to be patient’
- c. \* [ **Kepada** rakyat Indonesia]<sub>i</sub> **yang** di-minta [ \_\_<sub>i</sub> untuk bersabar]  
 to people name FOC PASS- asked- patient
- d. ??[ \_\_<sub>i</sub> bersabar] **yang** diminta Gus Dur [kepada rakyat Indonesia]<sub>i</sub>  
 patient FOC PASS-ask name to people name  
 ‘Being patient is asked by Gus Dur to the Indonesian people’

(49c) is bad because non-core is focussed/relativised with *yang*, and (49d) is not quite good because a complex argument (i.e. SOA) of the verb ‘ask’ in Indonesian<sup>6</sup> is always, as discussed earlier, a third non-core argument. Therefore, it cannot be linked to SUBJ (i.e. focussed with *yang*). In Lio, a language in eastern Flores, the sentence of the type (49d), showing control into SUBJ by an Oblique, is perfectly acceptable (Sawardi 2000). This is shown by (50a). Control by a core argument is certainly fine (50b). The fact from Lio suggests that this language allows the ‘askee’ and ‘the proposition/SOA’ of the verb ‘ask’ to be equally promoted to core, which makes it eligible to map onto SUBJ. Crucially, when the proposition assumes the core status and is linked to SUBJ, the askee argument must be demoted to non-core status, marked by the preposition *leka* as shown in (50a).

- (50) a. [ <sub>i</sub> pai aku ] (eo) aku rina [leka Maria]<sub>i</sub>  
           call 1SG FOC 1SG ask to name  
           ‘Calling me is what I asked (to) Maria (to do)’
- b. Maria<sub>i</sub>(eo) aku rina [ <sub>i</sub> pai aku ]  
           name FOC 1SG ask call 1SG  
           ‘Maria, I asked (her) to call me’

## 6 Conclusion

The a-str-based analysis of voice alternations and control constructions presented in this paper provides an explicit account of how control-into-subject is possible in Indonesian. Typologically, it appears that possible control-into-subject constructions are determined by a number of factors. They involve specific semantic/lexical/verb-class properties as well as language-specific grammatical systems such as symmetrical object doubling and voice systems (e.g. Indonesian allows Objective Voice, which does not exist in English).

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<sup>6</sup> The three-place semantic argument structure for ‘ask’ is ‘ask’<asker, askee, proposition\_asked>. When the verb *minta* is used transitively, it appears that the askee argument gets the second core status and the proposition is always the third argument. Since Indonesian double object system is asymmetrical, it can never be linked to SUBJ (even though the verb is regarded ditransitive with the proposition being a core argument). This seems to be a language specific constraint because Lio allows a flexible alternation between the askee and the proposition (see example (50)).

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