CHOMSKY'S PROGRAM FOR SYNTAX: THE STATE OF THE ART

Sandra Chung

University of California, Santa Cruz

Abstract: Chomsky's *Syntactic Structures* was published over fifty years ago. Since that time, the Chomskyan approach to syntactic theory has undergone radical development and change every ten to fifteen years—most recently, with the development of Government and Binding Theory (in the early 1980's) and the Minimalist Program (in the mid 1990's). In this article, I will survey these major developments and illustrate their consequences for the analysis of Indonesian's two passives, focusing on the so-called zero passive in particular.

Key words: Chomsky, Syntactic theory, Government and Binding Theory, the Minimalist Program.

The publication of Noam Chomsky's *Syntactic Structur*es [1] in 1957 revolutionized the field of linguistics and initiated a research program, generative grammar, which is still the dominant paradigm for the investigation of natural language syntax. Generative grammar has undergone significant development and change over the last fifty years. Nonetheless, Chomsky's vision of the central material that linguistic theory should explain, and the form the explanation should take, have remained remarkably constant over the years [2].

My aim here is to give a rapid overview of Chomsky's program for syntax, examining its goals, the conceptions of syntactic theory it has pursued, and the consequences for syntacticians in the trenches who are attempting to do 'normal science' with generative grammar's analytic toolkit. The discussion will focus on three key stages of the program's development: standard Transformational Grammar (TG) of the 1960's [3], Principles and Parameters Theory (P&P) of the 1980's [4], and the current Minimalist Program (MP) [5-7]. I hope to show that the overarching goals of the program have remained mostly stable over the last half-century. At the same time, the tension between the drive for explanation and the need to capture the diversity of the world's languages has also remained stable. This continues to be the most difficult problem to be confronted. Many, if not all, of the conceptual shifts in generative grammar can be viewed as attempts to resolve this tension more successfully than had been done in the past. I will suggest that the most radical of these conceptual shifts occurred with Principles and Parameters Theory, the stage of development that witnessed some of generative grammar's most resounding successes as well as one substantial failure.

Whether the Minimalist Program involves as radical a shift is not yet completely clear. A case can be made that for the typical linguist engaged in the syntactic analysis of particular languages, MP bears many broad similarities to P&P, which it has replaced.

THE PROGRAM'S GOALS

In 1992, at the Fifteenth International Congress of Linguists, it was observed that Chomsky's views of the purpose and the goals of linguistic theory had not changed much from the views he had expressed thirty years earlier, at the Ninth International Congress of Linguists, in 1962 [2]. The observation remains true today: Chomsky's views have been remarkably consistent at the metatheoretical level. Consider his view of the central phenomenon that linguistic theory seeks to explain. In 1962, he had this to say:

> A mature speaker can produce a new sentence of his language on the appropriate occasion, and other speakers can understand it immediately, though it is equally new to them...On the basis of a limited experience with the data of speech, each normal human has developed for himself a thorough competence in his native language. ([8], p. 914-915)

In 2001, he says:

> Given this endowment, a human infant, but not her pet kitten, will reflexively categorize parts of the confusion around her as "linguistic" and develop rich and highly articulated capacities to enter into these peculiar modes of human thought and action. In contrast, the infant and kitten will, it seems, develop along a rather similar path in acquiring capacities to deal with many other aspects of the world. ([6], p. 89)

The two views are essentially the same.

Chomsky has also been remarkably consistent in his view of the overall goal of linguistic theory: to construct a theory of knowledge of language that solves the problem of language acquisition. As he put it in 1962:

> The learning model B is a device which constructs a theory G [= a generative grammar G of a certain language] as its output, on the basis of the primary linguistic data...as input...To perform this task, it utilizes its...innate specifications of certain heuristic procedures and certain built-in constraints on the character of the task to be performed. We can think of a general linguistic theory as an attempt to specify the character of the device B. ([8], p. 923)

Compare this statement from 1986:

> UG [= universal grammar] may be regarded as a characterization of the genetically determined language faculty. One may think of this faculty as a 'language acquisition device', an innate component of the human mind that yields a particular language through interaction with presented experience, a device that converts experience into a system of knowledge attained: knowledge of one or another language. ([9], p. 3)

And this statement from 2001:

> Like the other organs, FL [= the faculty of language] has an "initial state" S_0 that is an expression of the genes...FL undergoes state changes under triggering and shaping influences of the environment...Two immediate tasks of a theory of language are to characterize the languages (states) attained and the shared initial state...We understand Universal Grammar (UG) to be the theory of the initial state, and particular grammars to be theories of attained states. ([6], p. 90)

Although the rhetoric draws from various sources—computer science, philosophy, biology—the message is the same.

One development that stands out against this backdrop of metatheoretical stability has to do with the issue of so-called optimal design. The Minimalist Program differs from previous versions of generative grammar in explicitly asking whether language design might be perfect in some sense. The issue seems to be not whether the language faculty is perfect in and of itself, but rather how well it interacts with other innate systems; specifically, what Chomsky calls the sensorimotor system and the system of thought. He observes:

> we may ask: "Is [language] well designed for the interaction with these systems?"...the only condition that emerges clearly is that, given that the language is essentially an information system, the information it stores must be accessible to those systems...We can ask whether language is well designed to meet the condition of accessibility to the systems in which it is embedded. [10]

How significant a development is this? The question probably cannot be answered at this point. Chomsky himself has observed that it is unclear whether the scientific understanding of language and other biological systems has reached the point where one can investigate how well these systems are *designed* to interact. Should it turn out that the issue *can* be meaningfully addressed, MP will constitute an important departure from earlier versions of generative grammar. But for the moment, the jury is out.

SYNTAX: THE CORE ASSUMPTIONS

Over and above this, Chomsky's program has been remarkably constant in maintaining certain core assumptions about the nature of syntax. These I take to be the following.

First, a sentence is made up of elements that enter into multiple linguistic relations. Take the English sentence *The letter wasn't sent to anyone*. In this sentence, *anyone* serves as the object of the preposition *to*, the goal argument of the verb *sent*, and an indefinite under the scope of the negation expressed by *n't*. The words *the* and *letter* form a constituent that serves as the subject of the clause and the theme argument of the verb *sent*. And so on.

Second, each of these linguistic relations is represented in phrase structural terms. This means that grammatical relations such as subject, lexico-semantic relations such as theme or goal, scope relations, relations involving information structure, etc., are all encoded in terms of syntactic categories (bundles of syntactic features) and their dominance and precedence relations in constituent structure.

Given that each element can enter into multiple linguistic relations, and each relation has a designated phrase structural realization, it follows that multiple constituent structures may be required to represent all the relations that the elements of a sentence participate in. This leads to the third assumption (which is not maintained as such in MP): the analysis of a sentence consists of a set of constituent structures.

Fourth and finally, the constituent structures in this set are ordered, and each structure is related to the immediately preceding structure by one or more operations. Another term for this ordered set is the *derivation*.

These assumptions provide the foundation for the conceptions of generative syntax that are surveyed in the rest of this talk. But before moving to that topic, I want to briefly mention

AN ENDURING TENSION

One persistent feature of the generative research program has been the tension between the drive to explain the capacity for language and the need to describe language in its full intricacy. Chomsky characterized the situation succinctly in 1965:

> The real problem is that of developing a hypothesis about initial structure [= the structure of a language-acquisition system] that is sufficiently rich to account for acquisition of language, yet not so rich to be inconsistent with the known diversity of language. ([3], p. 58)

His comments in 2001 are similar:

> As soon as the two traditional goals [of descriptive and explanatory adequacy] were reformulated within modern generative grammar, serious tension arose between them: the search for descriptive adequacy seems to lead to ever greater complexity of rule systems, whereas the search for explanatory adequacy leads to the conclusion that language structure is largely invariant. It is this tension that has driven the research inquiry of generative grammar from its inception. ([6], p. 92)

Tension between theoretical explanation and descriptive coverage is hardly unique to generative grammar; it is found in almost all scientific research programs. What is notable about generative syntax is that the major conceptual shifts have been motivated by the desire to increase the theory's level of explanation, not by the desire to expand its descriptive coverage. With that said, I now turn to these major developments.

TRANSFORMATIONAL GRAMMAR

Transformational Grammar's model of syntax consisted of two rule systems: phrase structure rules and transformations. Phrase structure rules generated a constituent structure for the sentence into which words were inserted. This *deep structure*—the first structure in the derivation—provided the basis for semantic interpretation. Transformations then applied in order. Each transformation performed operations of deletion, insertion, or movement on the current constituent structure, producing a structure which could then be operated on by the next transformation. The last structure in the derivation—the *surface structure*—provided the basis for phonetic interpretation.

The rules of TG were construction-specific and language-specific. The English phrase structure rules for Sentence and Noun Phrase had little in common, and neither had much in common with the Maori phrase structure rules for these categories. See the rules in (1).

(1)a. English Phrase Structure Rules

$$S \rightarrow NP\ VP$$
$$NP \rightarrow (D)\ (A)\ N$$

b. Maori Phrase Structure Rules

$$S \rightarrow V\ NP\ NP$$
$$NP \rightarrow D\ N\ (A)$$

Similarly, the transformations which accounted for passive sentences in different languages were quite diverse, and no commonality emerged from their formalization.

n English, one transformation—the Passive—was responsible for relating an active sentence like (2a) to the corresponding passive sentence in (2b). This transformation moved the second noun phrase to the left, displaced the first noun phrase (the agent) to the right, inserted the preposition *by* in front of this displaced agent, and inserted the auxiliary *b*e in front of the verb. See the rough formalization in (3).

(2)a. The child read the book.

b. The book was read by the child.

(3) *The Passive transformation in English*

NP - V - NP
1 2 3
→ 3, **be** + 2, **by** + 1

But in Indonesian, two transformations were required to relate active sentences to their passive counterparts, because—as is well-known—Indonesian has two passive constructions. In the *di*-passive, the verb is prefixed with *di*- and the agent surfaces to the right of the verb, where it can optionally be preceded by the preposition *oleh*. In what I will call the zero-passive, the verb bears no voice prefix, and the agent—which must be a pronoun—surfaces to the immediate left of the verb. Compare the active transitive clause in (4a) with the *di*-passive in (4b) and the zero-passives in (4c-d).

(4)a. Ali membaca buku itu.
Ali read the book.
b. Buku itu dibaca (oleh) Ali.
The book was read by Ali.
c. Buku itu saya baca.
The book was read by me.
d. Buku itu tidak sedang saya baca.
The book is not being read by me.
(Tjung 2005: 20)

The two passives have overlapping distributions in many varieties of Indonesian. In prescriptive varieties they are in complementary distribution: the zero-passive is used when the agent is first or second person, and the *di*-passive is used otherwise. However, even in these varieties, two transformations would be necessary, because the agents in (4b) and (4c) show up in different locations with respect to the verb. Since TG's rules were construction-specific, the most straightforward approach would be to formalize these passive transformations as sketched, very roughly, in (5).

(5) *Two Passive transformations in Indonesian*

a. *di*-passive

NP - V - NP
1 2 3
→ 3, *di*+2, (*oleh*)+1

b. zero-passive

Pro - V - NP
1 2 3
→ 3, 1+2, 0

Even in this brief overview, it is possible to glimpse TG's appeal as well as some of its explanatory shortcomings. The facts just described require three distinct Passive transformations, one for English and two for Indonesian. More important, nothing about these transformations picks out the fundamental generalization uniting the English passive and Indonesian's two passives: namely, their subject is the NP corresponding to the direct object of a transitive clause. It is easy to show that this NP is indeed the subject of the passive. For instance, it can serve as the missing subject in a rationale clause, as can be seen from (6-7).

(6) I brought the paper to Francisco to be translated into Spanish.

(7)a. Saya membawa surat itu untuk dibaca perempuan itu.
I brought the letter to be read by the woman.
b. Saya membawa surat itu untuk (dapat) kau-baca.
I brought the letter to (be able to) be read by you.
(Arka & Manning 1998: (15))

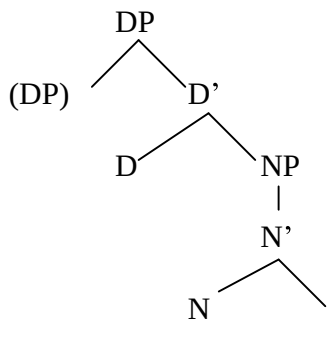
More generally, research in TG led to a proliferation of transformations and thus to an overall increase in complexity. The construction-specific, language-specific nature of transformations left the theory with no good strategy for capturing cross-linguistic generalizations. The perception that this was problematic led to further

developments within TG. It also sparked the rise of competing frameworks, such as Relational Grammar and Lexical-Functional Grammar, which approached the investigation of language universals from a different angle. All this set the stage for the conceptual shift to the next version of generative grammar,

PRINCIPLES AND PARAMETERS THEORY

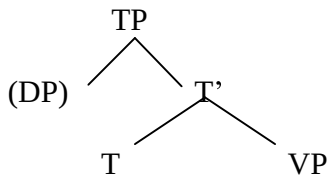
The Principles and Parameters model of syntax differs from the TG model in important ways. Though there are still two types of operations, corresponding to TG's phrase structure rules and transformations, there are no language-specific or construction-specific rules. Instead, the first constituent structure in the derivation—now called the *d-structure*—is put together according to general, universal principles of X-bar theory. X-bar principles dictate that phrases are built from heads in a uniform fashion, and that every head must be used to build a phrase. These assumptions lead to a more abstract view of constituent structure. For instance, "noun phrases" in English, Maori, and other languages with determiners are assumed to have the same d-structure, sketched in (8).

(8)



Sentences too are phrases, built from the functional head Tense (T), which can be realized as an independent word or an affix, or have no phonetic content at all. The structure of the top level of the sentence is shown in (9).

(9)



Later structures in the derivation are formed by applying one very general operation, Move, which can move any constituent anywhere, as long as the result conforms to X-bar principles. This operation leaves behind an empty copy of the moved constituent—a *trace*—in its origin site. The last structure in the derivation—the *s-structure*, a representation more abstract than TG's surface structure—is sent to the phonology for phonetic interpretation, and to logical form for semantic interpretation.

The radical simplification of the rule systems means that some other aspect of P&P must be responsible for narrowing down the range of syntactic possibilities. Here is where the theory's "principles and parameters" come into play. P&P holds that syntax is constrained by universal principles. These static constraints target some designated structure in the derivation—usually, the s-structure—and declare it ill-formed if it fails to satisfy certain conditions. The principles therefore serve a filtering function: they radically reduce the number of well-formed derivations. At the same time, they account for what the syntaxes of all languages share. Because the principles impose constraints on structures, not on operations, P&P is said to be a representation-based theory.

One P&P principle ensures that the semantic requirements of verbs and other heads are satisfied and that the meaning of every phrase can be integrated into the

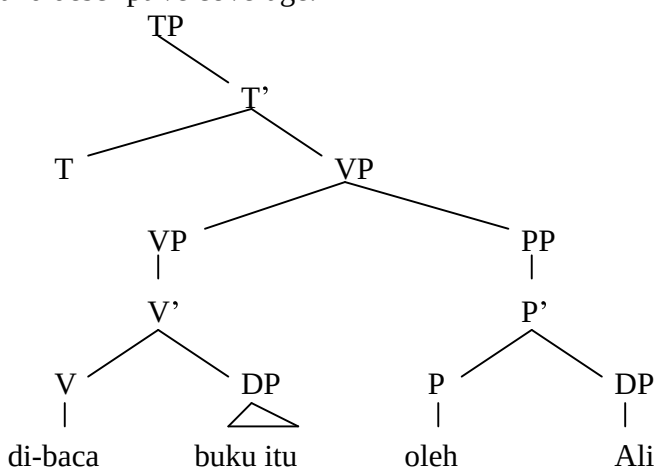
semantic interpretation. Another ensures that every DP is licensed by standing in some appropriate structural relation to a head. There is a set of principles that guarantee that movement is always upward and local, and another set that regulates the relation of anaphoric elements to their antecedents. And so on. Central to P&P is the hypothesis that all these principles refer to the same abstract phrase structural relation, known as *government.*

Second, P&P holds that a universal principle can have embedded in it one or more small, fixed sets of choices—*parameters*—that individual languages can choose among. X-bar principles, for instance, contain a parameter that determines whether heads appear on the left or the right of the constituents they form. A single parametric choice might have far-reaching consequences for the syntax of an individual language. The hope is that different combinations of parametric choices might account for *all* syntactic diversity. If so, P&P would have resolved the apparent conflict between explanatory generality and descriptive coverage.

What are the consequences of all this for the analysis of passive? To begin with, recall that P&P denies that there is a universal passive "construction". (I will, nonetheless, continue to use *passive* as a descriptive term.) What unites the English passive and Indonesian's two passives is that the verb cannot license its DP complement, even though the two stand in the appropriate structural relation. So this DP must move to the specifier of T in order to be licensed.

This view is abstract enough to be compatible with a range of language-specific analyses of passives. To see this, consider what a P&P analysis of Indonesian's two passives looks like [11]. Passive verbs formed with *di-* have two lexical properties: First, they semantically select a DP complement but cannot license it. Second, they are compatible with an agent modifier headed by the preposition *oleh* 'by'. X-bar theory and other principles ensure the *di*-passive in (4b) has the d-structure shown in (10).

(10)

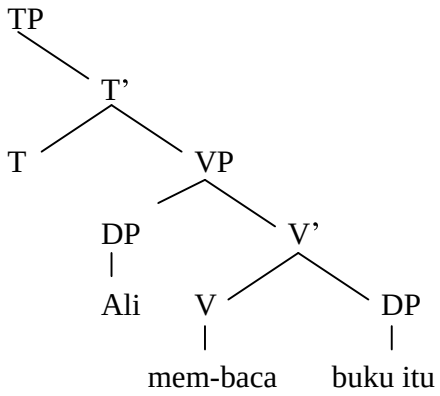


Further principles ensure that the DP *buku itu* moves to the specifier of T (the position in parentheses in (9)), where it is licensed by T. The English passive is analyzed in essentially the same way.

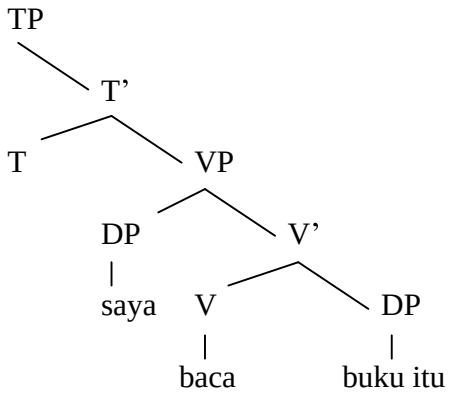
The analysis of the zero-passive is different. Like *di*-verbs, passive verbs with no voice prefix select a DP complement but cannot license it. But like active transitive verbs (*meN*-verbs), they also select a further DP, their external argument, which is realized as their specifier. This amounts to

saying that zero-passives and active transitive clauses have essentially the same d-structure. Compare (11), which shows the d-structure of the transitive (4a), with (12), which shows the d-structure of the zero-passive (4c).

(11)



(12)



What happens next in the derivation of these sentences is dictated by the lexical properties of their verbs. The transitive verb *membaca* licenses its complement (*buku itu*) but not its specifier (*Ali*), so the DP *Ali* in (11) must move to the specifier of T to be licensed. The zero-passive verb *baca* licenses its specifier (*saya*) but not its complement (*buku itu*), so in (12) it is the DP *buku itu* that must move to the specifier of T to be licensed. (See [11] for the details.)

The analysis captures the empirical similarities between the *di*-passive and the zero-passive by claiming that both have derived subjects that originate as complements of V. At the same time, it neatly accounts for the fact that the agent of the zero-passive patterns like a transitive subject for certain purposes. Arka and Manning have shown that the agent of the zero-passive can antecede a reflexive pronoun that serves as the d-structure complement of V, as in (13a) (see [12]). In this respect, it resembles the transitive subject in (13b) and differs from the agent of the *di*-passive in (13c).

(13)a. Dirimu mesti kau serahkan ke polisi.
You must surrender yourself to the police.
(Arka & Manning 1998: (16b))

b. Dia menyerahkan dirinya ke polisi.
He surrendered himself to the police.
(Arka & Manning 1998: (18a))

c. ?*Dirinya selalu diutamakan Amir.
(Himself was always prioritized by Amir.)
(Arka & Manning 1998: (29b))

Some speakers allow the agent of the zero-passive to serve as the controller of the missing subject in a rationale clause, as in (14a) (see [13]). In this respect too, the agent resembles the transitive subject in (14b) and differs from the agent of the *di*-passive in (14c).

(14) a. (?)Senjata itu kita buka untuk memperbaikinya.
We opened the gun to repair it.
b. Kita membuka senjata itu untuk memperbaikinya.
We opened the gun to repair it.
c. ??Senjata itu dibuka (oleh) Ali untuk memperbaikinya.
(The gun was opened by Ali to repair it.)

The P&P analysis derives these patterns from the hierarchical positions of these DPs in constituent structure. Like a transitive subject, the agent of the zero-passive occupies the specifier of V at d-structure. This means it is higher in the structure than the reflexive pronoun in (13) or the missing subject in (14), so it can antecede them. But the agent of the *di*-passive occupies a much lower position—too low to be able to serve as the antecedent.

In short, the P&P account of Indonesian's two passives is clearly superior to the TG account. More generally, the P&P research effort led to significant advances in the syntactic investigation of numerous languages. Research on English, French, German, Italian, Chinese, and Japanese—all languages associated with major world powers—was particularly extensive and fruitful. But as this research proceeded, there were certain troubling developments. No unique definition of the core structural relation, government, emerged from research on the principles. At the same time, it became clear that the search for parameters was a failure. Virtually every parameter proposed in P&P was later abandoned, either because the range of settings turned out to be far greater than initially claimed, or because the settings did not have the cascading pattern of syntactic effects originally envisioned [14]. In other words, it became harder and harder to distinguish parameters from the fact of language-particular differences. Third, research on syntactic licensing led to the positing of numerous abstract heads which were supposed to serve a licensing function but whose existence was not independently motivated. The overall increase in the system's complexity led directly to the next conceptual shift.

THE MINIMALIST PROGRAM

In some ways the Minimalist Program represents a stripped-down version of the early TG conception of syntax. It is a derivation-based approach that focuses on syntactic operations and is committed to minimizing other theoretical apparatus. In this approach, the analysis of a sentence involves no d-structure, no s-structure, and no ordered set of full-blown constituent structures. Instead, it consists of the process of building structures from a set of heads by using specific operations to combine them pairwise. Combination proceeds, not necessarily in a fixed sequence, until all elements in the set of heads have been used up; at this point, the derivation is complete.

Just three operations are responsible for building structures: Merge, Agree, and Move. Merge, the simplest operation, combines two heads when one satisfies selectional requirements of the other. The result is a category named after the head whose selectional requirement was satisfied. For instance, Merge combines the V *see* with the D *them* to give the V *see them*. As this example suggests, MP has no X-bar principles and, in fact, does not intrinsically distinguish between heads and phrases. Still, it is common practice within MP to

use X-bar notation for descriptive convenience, and I will do so here.

The second operation, Agree, assigns values to unvalued features. Like earlier stages of generative grammar, MP takes syntactic categories to be bundles of features, not all of which contribute to meaning. The person-number features on the noun *children*, for instance, have semantic consequences; the person-number features on the verb *were* do not. MP makes the innocent assumption that *children* enters the derivation with values specified for these features, but *were* enters the derivation with these features unvalued. Less innocently, it assumes that the operation responsible for assigning values to unvalued features plays a central role in syntactic licensing.

This operation is Agree. Suppose X and Y are syntactic categories standing in the appropriate structural relation, and X is unvalued for some feature for which Y has a value. Agree supplies a value for X's feature on the basis of Y's feature. For instance, in (15), Agree supplies values for the person-number features on the verb *were* from the person-number features on the noun *children*, because the two stand in the right structural relation.

(15) There were children on the balcony.

MP assumes that all unvalued features must be valued in order for the derivation to be well-formed. Hence, Agree serves a licensing function

The third operation, Move, is MP's version of movement. This complex operation combines Merge and Agree; it applies when two categories stand in the structural relation appropriate for Agree, and each has unvalued features which the other can value. Move values the features and re-merges the lower category with the higher category. Because the lower category remains merged in its original location, the result is not a standard constituent structure but rather a structure in which the re-merged category is attached twice. A general convention dictates that re-merged elements are pronounced in their highest location. Hence the appearance that the category has moved.

Finally, MP assumes that the building of structures is fundamentally local. The theory identifies two syntactic categories as *phases*: CP (a full sentence) and transitive small vP (the smallest category consisting of the verb plus its external argument). The derivation of a sentence proceeds phase-by-phase, meaning that each phase is constructed separately. Once a phase has been built, it is sent to the phonology for phonetic interpretation and to logical form for semantic interpretation; this makes it inaccessible to further syntactic operations.

The MP model represents a radical conceptual departure from P&P. Nonetheless, many syntactic analyses in MP are quite close to P&P analyses. This is because MP implicitly adopts many descriptive generalizations that emerged from P&P research. Let me illustrate the point by returning to Indonesian's zero-passive and sketching how it would be analyzed within MP.

To get the analysis off the ground, notice that in MP, the external argument of a transitive verb is selected not by V but rather by the functional head small v, which encodes information about voice, transitivity, and event structure [15]. I am going to push this idea further and assume that what makes the zero-passive special is that its small v bears person-number features that have values, but are not yet associated with phonetic content.

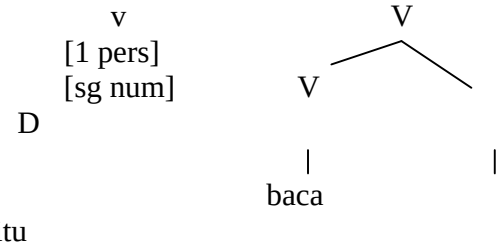
Given this somewhat unconventional assumption, the MP account of the zero-passive is straightforward. The zero-passive in (16a), for instance, is derived from the set of heads in (16b). I assume that small v in

(16b) is specified for first person, singular number.

(16)a. Buku itu saya baca.
The book was read by me.
b. {baca, buku, itu, v, T}

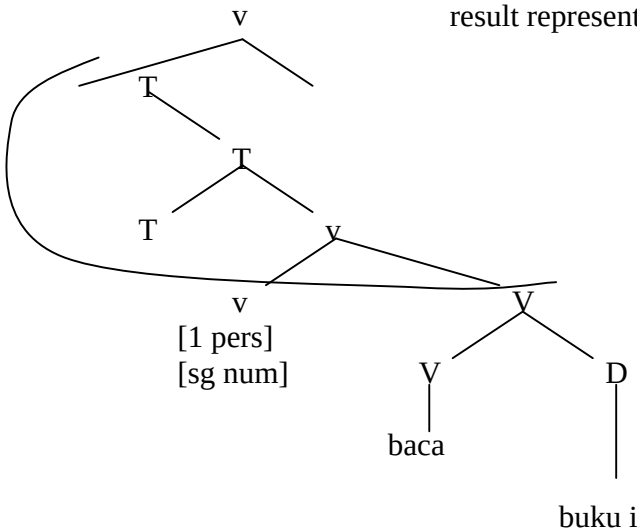
The derivation involves repeated applications of Merge, followed by one application of Move. In detail: First, *itu* merges with *buku* to produce the D *buku itu*. This D then merges with *baca* to produce the V *baca buku itu*. Next, this V merges with small v to produce the small v shown in (17). So far, except for category names, the result is not that different from the bottom half of the P&P d-structure in (12).

(17)



The small v in (17) then merges with T. Once this happens, Move comes into play. By assumption, T bears unvalued features that can be valued by D. Further, *buku itu* bears an unvalued feature (a Case feature) that cannot be valued by V or small v, but *can* be valued by T. Because T and *buku it*u stand in the right structural relation, Move can operate. It values the relevant features and re-merges *buku itu* with T, with the result represented, awkwardly, in (18).

(18)



This structure is not that different from the P&P structure that would result from moving *buku itu* in (12) to the specifier of T to be licensed. Finally, in the phonology, small v's person-number features are spelled out as *saya*, and *buku itu* is pronounced at the site of its highest merge, leading to the desired outcome (*Buku itu saya baca*).

For the derivation to work, it is important for the agent of the zero-passive not to be the specifier of small v. Otherwise, *buku itu* would not be the D closest to T, which would mean that *buku itu* and T would not be in the right structural relation for Move to occur. Interestingly, the claim that the agent is present in the syntax only as person-number features on small v has some independent motivation. The agent of the zero-passive must be a definite pronoun: it cannot be a common noun phrase or the unspecified generic agent.

(19)a. *Buku itu anak itu baca.
(The book is being read by the child.)
(Tjung 2005: 19)
b. *Buku itu baca.
(The book was read.)

(Tjung 2005: 19)

Further, Musgrave has shown that the agent cannot consist of pronouns that are coordinated [16].

(20) *Anjing itu saya dan dia pukul.
(I and he hit the dog.)
(Musgrave 2001: 90)

These patterns would be mysterious if the agent were a D in the syntax (because Ds can include common nouns, be unspecified, and be coordinated). But if the agent is merely the spell-out of person-number features on v, it follows that it must have the phonetic form and semantic interpretation of a definite pronoun. In short, the MP analysis of the zero-passive seems both fundamentally like the P&P analysis and slightly more successful.

ISSUES AND PROSPECTS

I want to conclude by addressing some larger issues that might arise at this point.

1. The preceding discussion suggests that Chomsky's program for syntax has become increasingly abstract. Does this mean that it has become less suitable as a vehicle for language-specific description? The answer, I would say, is no. To judge from the published literature, the proportion of syntactic research on language-specific topics is about as high in MP today as it was in P&P in the 1980's or TG in the 1960's. There are, to be sure, empirical domains explored by earlier generative syntax that MP is not suited for. Research in these domains now looks beyond syntax to other components of grammar, such as morphology or semantics—a healthy development. MP *has* made it harder to bring language-specific evidence to bear on theoretical issues—harder to use the evidence to grapple with issues of explanation. This is partly because MP's theoretical concepts are quite abstract, and it has become clearer that falsification of an abstract hypothesis is not a simple matter.
2. One might be tempted to ask about the future. What are the chances that MP, despite its rhetoric of conceptual austerity, will witness a gradual increase in complexity, just like earlier stages of generative grammar? I would say the chances are good. Already, research on certain aspects of the theory—phases, multiple specifiers, Merge versus Move—has led to "universal" proposals that may well not generalize beyond the language-specific patterns they were designed to describe. It would be unsurprising if this trend continued.
3. For the typical syntactician who is interested in using generative grammar's analytic toolkit for description and analysis, the good news is that many MP analyses are broadly similar to P&P analyses. (The MP analysis of the zero-passive, for instance, has a straightforward translation into P&P once the existence of small v is assumed.) Despite the significant theoretical developments in Chomsky's program, there has been some analytic continuity as well as remarkable metatheoretical consistency. One can certainly do research in generative syntax that contributes to theory without adopting the latest technology. What is important is to understand the substance of the theoretical claims made and to be able to trace out their empirical consequences.

REFERENCES

Anderson, S.R. Chung, S McCloskey, J and Frederick J. Newmeyer. 1994. Chomsky's 1962 programme for linguistics: a retrospective. In *Chomsky,*

Noam.: Critical Assessments, ed. Carlos Otero, 691-707. Routledge, London.

Angelika Kratzer. 1994. *The event argument and the semantics of voice.* Ms., University of Massachusetts, Amherst.

Arka, I.W and Manning, C.D. 1998. Voice and grammatical relations in Indonesian: a new perspective. In *Proceedings of the LFG98 Conference*, ed. Miriam Butt and Tracy Holloway King. CSLI Publications, Stanford, California.

Baker, M.C. 1996. *The polysynthesis parameter*. Oxford University Press.

Chomsky, Noam.. 1957. *Syntactic Structures*. Mouton, The Hague.

Chomsky, Noam.. 1964. The logical basis of linguistic theory. In *Proceedings of the Ninth International Congress of Linguists*, ed. Horace G. Lunt, 914-977. Mouton, The Hague.

Chomsky, Noam.. 1965. *Aspects of the Theory of Syntax*. MIT Press, Cambridge, Massachusetts.

Chomsky, Noam.. 1981. *Lectures on Government and Binding*. Foris, Dordrecht.

Chomsky, Noam.. 1986. *Knowledge of Language: Its Nature, Origin, and Use*. Praeger, New York.

Chomsky, Noam.. 1995. *The Minimalist Program*. MIT Press, Cambridge, Massachusetts.

Chomsky, Noam.. 1998. Minimalist inquiries: the framework. *In Step by Step: Essays on Minimalist Synax in Honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89-155. MIT Press, Cambridge, Massachusetts.

Chomsky, Noam.. 2000. An interview on Minimalism. Interview with Adriana Belletti and Luigi Rizzi, University of Siena, November 8-9, 1999 (revised March 16, 2000).

Chomsky, Noam.. 2001. Derivation by phase. In *Ken Hale: A Life in Language*, ed. Michael Kenstowicz, 1-52. MIT Press, Cambridge, Massachusetts.

Chung, S. 1976. On the subject of two passives in Indonesian. In *Subject and topic*, ed. Charles N. Li, 57-98. Academic Press, New York.

Guilfoyle, E. Henrietta Hung, and Lisa Travis. 1992. 'SPEC of IP and SPEC of VP: Two subjects in Austronesian languages. *Natural Language and Linguistic Theory* 10: 375-414.

Tjung, Yassir. 2005. *The formation of relative clauses in Jakarta Indonesian: A subject-object asymmetry*. Ph.D. dissertation, University of Delaware. Musgrave, S. 2001. *Non-subject arguments in Indonesian*. Ph.D. dissertation, University of Melbourne.