THE -IN GRID:

A Mathematical Order in Language by way of Tagalog Verb Phrases

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In papers and lectures since 1995 I have proposed, as a mathematician turned lexicographer, that here is an underlying mathematical order in Tagalog ruled by quadrisections.

The idea derives from not one but two instances of the same perfect 2 x 2 permutation—an elementary mathematical construction—manifesting in the play of roots and affixes of Tagalog verb phrases (VPs):

The mathematic surfaces morphologically, in the first case, in the way our verbs express exactly four different time aspects; and semantically in the other, in the way the seven affixes of Tagalog VPs actually subdivide our verbs into four basic verbal actions.

The two quadrisections suggest a repeating combinatorial structure underlying our verbbuilding. For years, I sought evidence of it: first in VPs of the *-um-* affix, and then in those of the *mag-*. But the results were inconclusive, failing to resolve the very large databases into well-defined, self-evident grammatical sets, which was my objective.

The evidence, as it turns out, was waiting elsewhere, but nearby: in the VPs of the -in affix. Shifting over, an order quickly emerges, matching all expectations. The quadrisections are surer and the resulting order unmistakable, evincing an underlying mathematical process.

This monograph reports the results for the first time.

It will be demonstrated how a large random sample of Tagalog verb phrases may be progressively quadrisected to reveal a well-defined and symmetrical network, what appears to be a *grid*, of cognitive and linguistic contrasts, lying at the core of our language-building.

The method used is empirical and distributional. I take a large set of Tagalog VPs and progressively quadrisect it into smaller and smaller subsets of similar verbs. At each stage a different similarity or dissimilarity is brought to light so distinguishing the VPs in ever increasing detail until they are resolved into distinct grammatical sets

Seven quadrisections of the grid are laid out. A database of more than a thousand -in VPs with nuanced English translations is used from the fourth quadrisection on to demonstrate the method. Four successive quadrisections are performed on the database, systematically subdividing it into 128 distinct grammatical sets (= 4^3 x2, only half of the fourth quadrisection is explored.

1. Permutations.

In mathematics, problems which involve the investigation at any stage of a discrete number of possibilities usually fall under the general designation of combinatorial problems.

Consider the simplest possible problem in *permutations*: What binary numbers of two figures each can be formed with the digits 0 and 1? We may obviously form a table as follows:

	0	1
0	00	01
1	10	11

The combinations are all distinct and are $2 \times 2 = 4$ in number. The same is true even if we are permuting two non-numerical objects, a and b, or if we permute two different pairs of objects $(a,b) \times (c,d)$:

	a	b
a	aa	ab
b	ba	bb

	c	d
a	ac	ad
b	bc	bd

In other words, the intersection of two sets of contrasting possibilities produces exactly four possibilities. We call this a 2 x 2 permutation.

Conversely, given a set of four combinations exhibiting intersecting attributes of the kind described above, we are led to surmise that a 2 x 2 permutation is at work.

Take the foursome (R,s,T,u). Closer investigation reveals that each element is the result of two either-or attributes: uppercase or lowercase, italic or normal type?

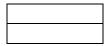
uppercase	Γ
lowercase	

	normal	italic	
ſ	R	T	
	u	S	

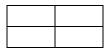
Thus, a random set of objects may be shown to exhibit the fundamental mathematical order of a 2 x 2 permutation if it divides perfectly into the four possible permutations of two either-or attributes.

DEFINITION. We call the division of any set into two distinct subsets a *bisection* and represent it by a quadrilateral divided by a line down or across its middle.





We call a *quadrisection* the division of a set into four distinct subsets by the application of two simultaneous bisections and represent it by a quadrilateral divided by lines down *and* across its middle, as below:



2. Tagalog verb phrases

The minimal or "basic" form of the Tagalog verb phrase (VP), combines a simple root with a "basic" affix:

$$VP \rightarrow |$$
 basic affix + simple root |.

There are seven basic affixes used in Tagalog verb-building:

the infix -umthe prefixes i-, mag-, mang-, mathe suffixes -in, -an The simple root *pasok* (enter), for example, combines with all of the basic affixes to become the following basic VPs.

pumasok go-into, enter, go-to-school, report-for-work

magpasokmangpasokput-in, bring-inbreak-and-enter

mapasok get-to-enter-it, get-entered-into

ipasok put-it-in, bring-it-in

pasukin enter-into-it, break-into-it, enter-into-the-business enter-through-it, report-for-it, enter-the-agreement

3. Time aspects: Q1 (the first quadriection)

Tagalog VPs manifest four distinct time aspects, the verbal actions being any of the following

Tentative proposed, possible, but unforeseeable

Predicted planned, expected Ongoing begun and unfinished

Completed finished

The Tentative time aspect is expressed by the basic VP. We use it when giving a direct

command <u>Magbihis</u> ka. <u>Dress up.</u> permission <u>Sige, itapon mo</u> Okay, <u>throw it.</u>

injunction <u>Mahiyâ</u> ka namán. You should <u>be ashamed</u>.

invitation *Tikimán mo*. Taste it

or when imagining an event in an unforeseeable future.

Puede ka <u>tamaan</u>. You could <u>get hit</u>.

Makabawì man siyá... Even if he recovers...

Baká kaya ko siyá talunin Maybe I can beat him.

Sana umulán. Hopefully it rains.

From the basic Tentative verb form we generate the three other time aspects as follows:

- (a) Tentative to Predicted: repeat the first syllable of the root, keep the affix unchanged;
- (b) Tentative to Completed: keep the root unchanged, and inflect the affix—either turn "m" to "n" or introduce an infix -in- or -um-.
- (c) Tentative to Ongoing: inflect the affix as in (b) *and* repeat the root's first syllable as in (a).

The different time aspects of the *pasok* VPs above are as follows, with the affix changes (flections) in **bold** and repetitions of the root's first syllable (reduplications) <u>underlined</u>:

Tentative	Predicted	Ongoing	Completed
magpasok	magpa <u>pa</u> sok	nag pa <u>pa</u> sok	nag pasok
mangpasok	mangpa <u>pa</u> sok	nang pa <u>pa</u> sok	nang pasok
mapasok	mapa <u>pa</u> sok	na pa <u>pa</u> sok	na pasok
ipasok	ipa <u>pa</u> sok	ip in a <u>pa</u> sok	ip in asok
pasukin	pa <u>pa</u> sukin	p in a <u>pa</u> sok	p in asok
pasukan	pa <u>pa</u> sukan	p in a <u>pa</u> sukan	p in asukan
p um asok	pa <u>pa</u> sok	p um a <u>pa</u> sok	p um asok

VPs of the -um- infix are the only ones that seem to break the pattern: dropping the affix in the Predicted and retaining the same affix in the Completed. The discrepancy disappears when the minimal, primitive form of the -um- VP, i.e., the root alone minus the affix, is used as the basic form, as we do in *Alis ka diyan!* (Get out of there!), *Kain tayo* (Let's eat), *Tulog na* (Sleep now).

Studied closely, the pattern of flections and reduplications above may be seen to be a 2 x 2 permutation at work. The morphology of the time aspects of Tagalog VPs, it would appear, derives from two intersecting either-or decisions. Inflect or not? Reduplicate or not?

	simple root	repeated syllable
basic affix	Tentative	Predicted
inflected affix	Completed	Ongoing

The four time aspects are revealed to be the four subsets of a double bisection of the universe V of Tagalog VPs, giving us our first quadrisention (Q1):

4. Verbal actions: Q2 (the second quadrisection)

A Tagalog VP of any time aspect has a *focus*. It is either doer-focus or object-focus, depending on whether the VP is describing a reflexive action on the doer or a directed action on an object. It is the difference in English between "He ate" (*Kumain siya*). and "He ate it" (*Kinain niya*). or between "He grew tired" (*Napagod siya*) and "It tired him" (*Pinagod siya*).

A minimal Tagalog sentence (S) is a verb phrase (VP) of any time aspect immediately followed by a noun phrase (NP).

$$S \rightarrow VP - NP$$

The NP may be either a doer noun phrase dNP (*Hinampas* <u>ko</u> "<u>I</u> hit it") or an object noun phrase oNP (*Tinamaan* <u>ako</u> "It hit <u>me</u>" or "<u>I</u> was hit").

Tagalog naturally distinguishes between doer-focus and object-focus VPs by its use of functional markers in the noun phrase(s) following the VP Doer-focus VPs use so-called m₁ markers for their dNP and m₂ markers for their oNP. The reverse is true for object-focus VPs. ¹

As it turns out, VPs using the -um-, mag-, and mang- affixes are always doer-focus; while those using the i-, -in, and -an affixes are always object-focus.

VPs using the *ma*- prefix, however, go both ways.

Some are doer-focus: e.g. matulog (go to sleep), makipaglaban (compete-with), maupo (take a seat) makakuha (manage to get); some are object-focus: e.g. måabót (manage to reach it), måtakot (be frightened by), måulanan (get rained on), måbilí (get to buy it). To distinguish the two, we use a marked $m\mathring{a}$ - (with an $^{\circ}$ over the a) from hereon for the object-focus affix and retain the unmarked *ma*- for the doer-focus.

Thus, all VPs whose basic affixes are -um-, mag-, mang-, and ma- are doer-focus; while all VPs with basic affixes i-, -in, -an, and ma- are object-focus.

doer-focus	-um- mag- mang- ma-
object-focus	iin -an må-

This serves to bisect the universe V of Tagalog VPs of all time aspects into two distinct subsets according to focus. It is the first bisection in our second quadrisection.

The second bisection is revealed when we take stock of a large sample of both doer-focus and object-focus VPs.

We soon note that Tagalog VPs of whatever affix or focus, will often conjure up two contrasting semantic values. Consider the VPs

umikot	turn, whirl, spin
magtagál	be a long time
mangdirì	revolt at
magalit	get angry
ibuhos	pour it
buhayin	make it live
bagsakán	drop onto it
måkuha	get taken

In every case, the semantic content of the VP is either of "someone acting on purpose" or of "something happening of itself." Even in English translation these VPs are ambiguous in the same way.

Is it a dancer whirling or a top spinning?

¹ m_1 markers = {aritcles ang (followed by common noun) and si (plural $sin\acute{a}$) followed by proper name(s); pronouns akó, ka, siyá (I, you, he/she/it), kamí, kayó, silá (we, you, they), itó, iyán, iyón (this one, that one with you,

 m_2 markers = {aritcles ng (followed by common noun) and ni (plural $nin\acute{a}$ followed by proper name(s); pronouns ko, mo, nivá (me, you, him/her/it), namin, ninvo, nilá (us, you, them), nitó, niván, noón (this one, that one with you, that one over there)}.

We use "doer-focus" and "object-focus" to describe the affixes as well as the resulting VPs

Is it to stand-around or to last long?

Is it to retreat in disgust or to feel aversion?

Is it to act in anger or to become angry?

Is it poured water or pouring rain?

Is it doctoring or engendering?

Is it to send onto or to collapse onto?

Is it taken as planned or by mistake?

That is, is the described action "volitional"—deliberate, conscious, self-controlled, an act of man—or "non-volitional"—non-deliberate, unconscious, autonomic, an act of nature?

A Tagalog VP is not always ambivalent in this way. Verbs like *maglutò* (cook), *aralin* (study it), or *isumpâ* (swear it) are always volitonal; while verbs like *tumulò* (drip) *manganák* (give birth) or *tamadin* (get lazy) are always non-volitional.

But, whether doer-focus or object focus, all the eight affixes of the first bisection above will combine with roots to create both volitional and non-volitional kinds of VPs.

Thus, we can draw a line down the middle of the first bisection above, bisecting the same VPs a second time, now into volitional and non-volitional VPs.

Using uppercase and lowercase fonts to distinguish volitional and non-volitonal affixes, the first and second bisections combine to give us our <u>second quadrisection</u> (Q2):

	non-volitional	volitional
doer-focus	-um- mag- mang- ma-	-UM- MAG- MANG- MA-
object-focus	iin -an må-	IIN -AN MÅ-

We discover that the universe V of Tagalog VPs is divisible into four distinct subsets according to the intentionality—focus and volition combined—of the described verbal actions . Like Q1, Q2 is a 2×2 permutation: two either-or choices resulting in four combinations:

non-volitional doer-focus VPs volitional doer-focus VPs volitional object-focus VPs non-volitional object-focus VPs

Four basic predications are distinguished:

Volitional doer does.

Volitional doer does to it.

Non-volitional doer does.

Non-volitional doer does to it.

It happens

It happens to it

In Q2, we learn that all our sentences essentially describe only four basic verbal actions, as defined and exemplified by the four basic predications above.

All quadrants of Q1 being equally and simultaneously quadrisected by Q2, the first two quadrisections together(Q1Q2) now subdivide the universe V of Tagalog VPs into $4^2 = 16$ distinct subsets, representing four basic verbal actions in four time aspects³

TENTATIVE happen	TENTATIVE do	PREDICTED happen	PREDICTED do
TENTATIVE	TENTATIVE	PREDICTED	PREDICTED
happen	do to it	happen to it	do to it
to it			
COMPLETED	COMPLETED	ONGOING	ONGOING
	COMPLETED do		ONGOING do
COMPLETED happen		ongoing happen	
happen	do	happen	do

5. Modalities of action: Q3 (the third quardisection)

A third quadrisection is apparent from the distribution of the affix sets in Q2 above. Clearly, each of the four subsets produced by Q2 is divisible into four distinct affix sets

DEFINITION. An *affix set* is a set of Tagalog VPs with the same basic affix. In Q1 we noted that all the affix sets subdivided similarly into four different time aspects; in Q2 we subdivided the eight affix sets into four different intentionalities.

In Q3, we finally distinguish the affix sets according to their particular affixes. We affirm the obvious: All doer-focus VPs—volitional or non-volitoanal, of whatever time aspect—subdivide into the *-um-*, *mag-*, *mang-*, and *ma-* affix sets. While all object-focus VPs subdivide into the *i-*, *-in*, *-an*, and *må-* affix sets.

This is our third quadrisection (Q3).

	non-volitional		volitional	
doer-	-um-	mag-	-UM-	MAG-
focus	ma-	mang-	MA-	MANG-
object-	i-	-in	I-	-IN
focus	må-	-an	MÅ-	-AN

³ <u>Combining quadrisections</u>: If Q1 and Q2 simultaneously quadrisect V such that Q1(V) = $A_1+B_1+C_1+D_1$ and Q2(V) = $A_2+B_2+C_2+D_2$ then the operation Q1Q2 is:

a) distributive such that $Q1Q2 = (A_1 + B_1 + C_1 + D_1)(A_2 + B_2 + C2 + D2) = A_1B_1 + A_1B_2 + ... + D_1C_2 + D_1D_2$, subdividing V into sixteen distinct subsets

b) commutative, i.e., Q1Q2 = Q2Q1; in general, QxQy = QyQx.

c) associative such that QaQb...Qx(V), subdividing V into 4^n distinct subsets where n is the total number of quadrisections combined.

According to Q3, Tagalog naturally recognizes four modalities of verbal actions, what manifest in our basic VPs as the four doer-focus affixes (-um-, mag-, mang-, ma-) and the four object-focus affixes (i-, -in, -an, må-).

After three quadrisections thus (Q1Q2Q3) the universe V of Tagalog VPs is subdivided into $4^3 = 64$ distinct and well-defined subsets representing four modalities each of four verbal actions in four time aspects.

tentative happen -um-	TENTATIVE happen mag-	TENTATIVE do -UM-	TENTATIVE do MAG-	PREDICTED happen -um-
happen ma-	TENTATIVE happen mang-	TENTATIVE do MA-	TENTATIVE do MANG-	PREDICTED happen ma-
TENTATIVE happen to it i-	TENTATIVE happen to it -in	TENTATIVE do to it I-	TENTATIVE do to it -IN	PREDICTED happen to it i-
TENTATIVE happen to it må-	TENTATIVE happen to it -an	TENTATIVE do to it MÅ-	TENTATIVE do to it -AN	PREDICTED happen to it må-
COMPLETED happen -um-	COMPLETED happen mag-	COMPLETED do -UM-	COMPLETED do MAG-	ONGOING happen -um-

5.1 The difference between -um- and mag-

Q3 above is well-defined morphologically, but what 2 x 2 permutation accounts for this quadrisection is not easily established

The correct use of these verbal affixes is the most difficult for the non-native speaker to master in Tagalog. No dependable grammatical rules are discernible. Compare a long list of UM-and MAG- VPs and no clear semantic contrast emerges, however strong the intimation of an underlying order. Consider the following:

Pumasok (enter) and magpasok (bring in) are very different verbs while pumaroón and magparoón are almost synomyms (go there). We say umawit (sing) and magbihis (dress-up) but never *magawit or *bumihis. In the case of bumasa (read out), umisip (think up), or lumakad (walk) there is an odd shift in stress from middle to last syllable in magbasá (read through) magisíp (think about), maglakád (go by foot).

In his *Preliminary Study of Affixes in Tagalog* (Manila: Bureau of Printing., 1937) Cecilio Lopez tells of "the almost inexplicable difficulty of distinguishing when to use *-um-* and when *mag-*, the safest way, perhaps, being an appeal to the *Sprachgefuehl*, the speech feeling."

Similar difficulties are encountered among the other affixes

Even native speakers are not agreed—should it be *isulat* or *sulatin* (write it), *itulak* or *tulakin* (push it)? *Subukin* or *subukan* (try it). *pakuluin* or *pakuluan* (boil it), *butasin* or *butasan*

(bore it), isusi or susian (lock it)? Is it matulog or tumulog (sleep), maligò or lumigò (bathe)? Magpahingá or mamahingá (rest)?

In a way, this entire work has been propelled by the desire to solve these difficulties: by a series of logical quadrisections to deconstruct the morphosemantic system of Tagalog and perhaps arrive at the sources of the *-um-/mag-* opposition and other troublesome constructions.

Having arrived at a seventh quadrisection below, I am able in retrospect to offer without further comment the following solution

	non-volitional	volitional
-um-	it happens of itself	make self happen
mag-	it does of itself	make self do
mang-	it does-to of itself	make self do-to
та-	it happens-to of itself	make self happen-to
i-	it makes it happen	make it happen
-in	it makes it done	make it done
-an	it makes it done-to	make it done-to
må-	it makes it happen-to	make it happen-to

6. Basic movements: Q4 (the fourth quardisection)

Examine a large sample of any of the affix sets of Q3 and two semantic contrasts soon present themselves, bisecting the sample twice along well-defined lines.

The more obvious of the two bisections has to do with the range or "location" of the verbal action—

Does the described action all transpire in the same place or does it move between places? In other words, is the doer-agent of the action statonary or transient?

The case of the construction *hila*-IN (pull it)—pronounced and spelled *hilahin*—is instructive Many different actions are signalled by this single VP. To tell them apart we depend largely in Tagalog on the object nouns given; in English the postpositions are critical:

hilahin ang karitón	pull the cart along
hilahin ang lubid	pull on the rope
hilahin ang salubsób	pull the splinter out
hilahin ang kaibigan	pull the friend over
hilahin ang tiradór	pull back the slingshot
hilahin ang sako	pull the sack across
hilahin ang drawer	pull open the drawer
hilahin ang buhók	pull by the hair
hilahin ang ancla	pull the anchor in
hilahin ang batà	pull the child back
hilahin ang bangkâ	pull the boat out

We can clearly distinguish between actions where the doer "stays in place" and where the doer "moves between places".

action	action
in place	between places
pull on the rope	pull the cart along
pull back the slingshot	pull the friend over
pull by the hair	pull the boat out
pull the drawer open	pull the sack across
pull the splinter out	
pull the anchor in	
pull the child back	

The second, less obvious but more compelling, bisection has to do with the stages or "progress" of a verbal action. Does the VP decribe an action being put "into motion" or being brought "to a conclusion"? In other words, is it an "effort" or an "effect"?

Note in the *hilahin* VPs above how certain actions seem to signal the beginning of something new, while others seem to decribe the end of something before.

	in place	between places
into motion	pull on the rope pull back the slingshot pull the drawer open pull by the hair	pull the cart along pull the friend over
into conclusion	pull the splinter out pull the anchor in pull the child back	pull the boat out pull the sack across

The first bisection tells us that every verbal action has a spatial component, it occupies space, and that language naturally bisects that space into a "here" and a "there".

The second bisection, in turn, tells that verbal actions have a temporal component, i.e., they are temporary, they begin and end, and that language naturally distinguishes actions into beginnings and endings.

The two bisections together serve to subdivide TagalogVP into four basic movements

motion in place	BEGIN to do
conclusion in place	END doing
motion between places	GO to do
conclusion between places	COME from doing

This is our <u>fourth quadrisextion</u> (Q4) It is a 2 x 2 permutation appearing to define the basic spatio-temporal boundaries of a verbal action. All the affix sets of Q3 submit to this manner of double-bisection.

After four quadrisections (Q1Q2Q3Q4), thus, the universe V of Tagalog VPs is subdivided into $4^4 = 256$ distinct and well-defined subsets representing four basic movements, four modalities each of four basic verbal actions, and four time aspects.

7. The –IN grid: Q4 to Q7 (the fourth to the seventh quadrisections)

To the mathematically-inclined four successive quadrisections of the kind described above tell strongly of a repeating combinatorial structure underlying our verb-building.

Seeking conclusive proof of it, I proceeded to examine large samples of -UM- and, later, MAG- VPs to see if they would submit to further such quadrisections. The results although always encouraging were never conclusive, failing to resolve the very large databases into well-defined, self-evident grammatical sets, which was my objective.

DEFINITION. I call a *grammatical set* any distinct and well-defined subset of V, arrived at after a series of quadrisections, whose elements are morphologically alike, semantically similar and syntactically equivalent. In a grammatical set, in other words, VPs of the same basic affix would share some common meaning and turn into the same kinds of sentences

.The evidence that I sought, it would turn out, lay elsewhere but nearby—in the VPs of the -IN affix. Shifting over, an order quickly emerges, matching all expectations. After Q4, three more quadrisecions are manifested. The resulting order is unmistakable, evincing an underlying mathematical process.

We do not attempt in this paper to delineate the 2x2 permutations that account for these next three quadrisections. From Q5 to Q7 we are content merely to establish the subdivisions-into-four that would appear to produce our objective grammatical sets.

For the purpose, we focus our attention on the –IN affix set of Q3—the theory being that whatever order might manifest here, in a large sample of one affix set, should be similarly applicable to all the other affix sets.

In the Tables that follow we demonstrate how a large random sample of –IN VPs may be successively quadrisected into distinct grammatical sets, revealing a well-defined and symmetrical network, what appears to be a *grid*, of cognitive and linguistic contrasts, lying at the core of our language-building.

Table 1: The –IN database (p. 19)

Table 1 serves us our database. It is a Tagalog-English dictionary of close to 1,100 –IN VPs. Only the Tagalog rootwords are listed but they must be read with the basic affix *-in* to become the Tentative actions (**Q1**) described in the English translation.

Different values of the same –IN VP are listed separately.

By definition all the VPs listed are volitional and object-focus ($\mathbf{Q2}$) and use the -in affix ($\mathbf{Q3}$). For purposes of this study, the list is limited to the "stationary" –IN VPs that describe actions "in place" ($\mathbf{Q4}$) – on the theory (again) that whatever order manifests here shall prove to be a useful template for an ordering of the "transient" –IN VPs that move between places.

Some of the Tagalog rootwords are led by secondary affixes—pa-, pag-, pa

Rootwords or syllables that are underlined are meant to be pronounced twice.

The English translations include a subscript triangle $_{\Delta}$ specifying where the object noun belongs in the translation; when a specifuc object-type is indicated by the usage an example

immediately follows_{Δ}(in parentheses). The *italicized* English word is the direct equivalent of the Tagalog rootword; when no word matches in the English no word is italicized.

The listing does not necessarily exhaust all the values of the same -IN VP. The objective was to provide just a sufficient selection to establish the particular relevance of each of the final grammatical sets .

I follow no strict rules in the spelling of Tagalog rootwords. All of the English and many of the Spanish words used as –IN roots are listed in their original spellings unmarked.

Table 2: Grammatical sets (p. 25)

Table 2 presents the results after the seventh quadrisection, effectively subdividing a dictionary of 1,140 –IN VPs into a thesausrus of 128 grammatical sets.

The table divides into two parts under the headings {BEGIN, END} representing the "stationary" half of Q4.

Both parts are divided into four columns, representing **Q5**, each under an English keyword (all-CAPS and centered)

Each column is then divided into four subsets, representing **Q6**, each subset headed by an English keyword (all-CAPS and flushed right)

Finally each of the four subsets of a column is divided into four grammatical sets, representing **Q7**, each grammatical set under its own English keyword (all-CAPS and flushed left).

Table 3: The English keywords (p. 33)

Table 3 collects all the English keywords of Table II into a single table representing the **-IN grid.**.

All of the English keywords, like the –IN VPs themselves, are used as transitive verbs, with direct objects understood to be following them. Read "MAKE it", "DO it", etc.

An English keyword applies only in the particular sense offered by the range of VPs it overheads. Each is carefully selected but is not be taken at face value. As in Tagalog, many of these English verbs are polysemous and, given the relevant postpositions and object nouns, could easily belong elsewhere in the grid.

In some cases, the keywords may have been better served by English noun-forms, but we have decided to stay with the verbs throughout.

Table 1. The –IN database

Affix an *-in* to the Tagalog rootword to obtain the English meaning

abá, humble_∧ abala, trouble_∧ abót, reach-to-hold_∧ abót, reach-to attain_∧ abót, reach-to receive∧ abuso, abuse_{Λ} adhikâ, $desire_{\Delta}$ adobo, $adobo_{\Lambda}$ agaw, $preempt_{\Delta}$ akáy, guide_{Δ} akit, bequile_{Δ} akò, assume_{Δ} aksayá, *waste*∧ alaala, $recall_{\Delta}$ alám, *inquire*∧ alám, $learn_{\Delta}(truth)$ alila, keep_∆as-a-servant alipin, keep_∆as-a-slave alipin, enslave_{Λ} alipustá, $mock_{\Lambda}$ alís, eliminate∧ alís, remove_{Λ} alíw, entertain∧ almusál, have_∆for-*breakfast* ambición, ambition∧ amin, $admit_{\Lambda}(truth)$ amò, $tame_{\Lambda}by$ -petting amóy, smell_{\wedge} ampát, stanch $_{\Lambda}$ ampón, $adopt_{\Lambda}(needy)$ amputate, amputate_{Λ} anák, sponsor_{Δ}as-a-god*child* bali, *bend*_{Δ}apart angkát, *import*∧ angkín, $claim_{\Delta} for$ -oneself ani, $harvest_{\Delta}$ annul, $annul_{\Delta}$ antala, $delay_{\Lambda}$ antáy, $await_{\Delta}$ apí, bull y_{Δ}

aral, $learn_{\Delta}(poem)$

aral, $study_{\Lambda}$ (problem) aral, $study_{\Lambda}$ (theory) aresto. $arrest_{\Lambda}$ arreglo, $settle_{\Delta}(dispute)$ aruga, nurture $_{\Lambda}$ asawa, keep∆as-a-spouse asikaso, *attend*-to_∧ asintá, sight_{Λ} asintá, target assemble, $assemble_{\Lambda}(car)$ assemble, $assemble_{\Lambda}(facts)$ assemble, $assemble_{\Delta}(parts)$ ataque, $attack_{\wedge}$ atsara, pickle $_{\wedge}$ atupag, $prosecute_{\Delta}(plan)$ awat, quench_{Λ}(fire) awat, $separate_{\Delta\Delta}$ fighters away, provoke_∧ awit, reveal_{Δ} awit, sing_∧ ayos, $arrange_{\Lambda}$ ayos, fix_{Λ} ayos, straighten $_{\Delta}$ baak, *split* $_{\Delta}$ *in-two* baboy, $slobber_{\Lambda}$ bago, *change* $_{\Delta}$ around bago, discard_△for-the-new bahâ, $flood_{\Lambda}$ bahagì, take $_{\Lambda}(share\text{-of})$ balabal, use, as-a-shawl balak, intend_∧ balangkás, *chart*∧out balangkás, $outline_{\Delta}(facts)$ balewala, disregard bálewalâ, ignore_∆ balì, bend_{Λ} balì, $break_{\Lambda}(length)$ in-two baligtád, reverse_∧ balot, $wrap_{\Lambda}$ baluktót, bend*∆crooked* banat, *stretch* taut banggit, mention $_{\Lambda}$

bará, cut_{Λ} (speaker) off

barena, $drill_{\wedge}$

baríl, shoot_∆with-gun basa, $read_{\Lambda}(book)$ basa, $read_{\Lambda}$ (situation) basa, $read_{\Delta}(text)$ out basâ, wet_{Λ} basag, $crack_{\Delta}$ basag, shatter $_{\Lambda}$ batì, greet_{Λ} batì, remark_{\wedge} batí, $scramble_{\Lambda}$ batíd, find_∆out batikos, *harangue*∧ bató, stone_{Λ} batutà, club∆with-*nightstick* bawas, *subtract*∧away bawas, *subtract* ∆ from bawì, reclaim $_{\Lambda}$ bawì, $recover_{\Lambda}(advance)$ bawì, rescind_{Λ} bayani, $recruit_{\Lambda}(volunteer)$ bayó, *pound*_{Δ}*heavily* biák, *crack*∆in-two biák, *split* $_{\Delta}$ open bigkás, pronounce_{Δ} bigkís, $bind_{\Lambda}(wound)$ bigkís *bundle*_∆ bigkís, tourniquet_∧ bigô, $disappoint_{\Delta}$ bihag, take_∧*captive* bihasa, accustom $_{\Lambda}$ bilang, $count_{\Lambda}$ bilí, $buy_{\Delta}(product)$ bilí, buy_{Δ} (theory) bilog, $ball_{\Lambda}(mass)$ bingwit, $hook_{\Delta}(fish)$ *w-line* birá, hit_{\wedge} birò, $tease_{\Lambda}$ bitay, $hang_{\Lambda}by$ -the-neck bola, play_∆false bomba, bombard $_{\Lambda}$ boycott, $boycott_{\Lambda}$ brush, $brush_{\Lambda}$ bugaw, *drive*_∧*away* bugbóg, $pommel_{\Delta}$ buhát, $lift_{\wedge}$

buhay, activate_{Λ} buhay, bring to-life buhay, maintain $_{\Lambda}$ buhay, $revive_{\Delta}$ buháy, turn∧on bulabog, $disturb_{\Delta}(quiet)$ bulag, *blind*_{\\\}to-the-truth bulaga, surprise∧ bulók, *compost*∧ bulos, take_{Λ}(second-serving) bungkál, *till*∧ bunot, *draw*∧out bunot, $uproot_{\Lambda}(plant)$ buntál, $punch_{\Lambda}$ buò, compose_∧ buò, $construct_{\Lambda}(whole)$ buô, $collect_{\Lambda}(a \text{ set})$ buô, $complete_{\Lambda}(job)$ buô, *complete* $_{\Delta}$ (measure) buô, $complete_{\Lambda}(crossword)$ buô, reconstruct_∧ burá, erase_∆ buro, salt-pickle $_{\Delta}$ busisì, pester_{Δ} busóg, sate∧ busted, reject_{Δ}(suitor) butas, puncture_{Λ} butingting, disentangle_{Δ} buwag, dismantle_{\wedge} buwál, *fell*∧ buyó, goad_∧ calculá, calculate_∆ campaña, woo_{Δ} (supporter) cancel, $cancel_{\Lambda}$ capón, $castrate_{\Delta}$ cargá, carry∧ cemento, cement $_{\Lambda}$ cepillo, toothbrush $_{\Lambda}$ cesante, $terminate_{\Delta}(worker)$ cigarilló, $smoke_{\Lambda}$ (cigarette) colecta, $collect_{\Delta}$ (a sampling) colecta, $collect_{\Lambda}(fee)$ complete, $complete_{\Lambda}(job)$ completo, $complete_{\Lambda}(total)$ componé, repair∧

contrata, $contract_{\Lambda}$ control, $control_{\Delta}$ convincé, convince_∧ cópia, $copy_{\Delta}$ $\cos \acute{e}$, $cook_{\Lambda}((food))$ $\cos \acute{e}$, $cook_{\Lambda}(feast)$ cuchara, spoon_∧ cuenta, $compute_{\Delta}$ dakilà, glorify $_{\Lambda}$ dakíp, nab_{Λ} dakót, *pick*∆*up-w-dustpan* dakót, *scoop*∆*up-w-hands* dalá, *carry* $_{\Delta}$ dale, hit dale, kill_A damá, feel dampót, $pick_{\Delta}up$ -w-fingers dasál, $pray_{\Delta}$ dayà, *cheat* $_{\Delta}$ (results) delete, $delete_{\Delta}$ demonio, bedevil_∧ deny, $deny_{\Delta}$ deny, $deny_{\Lambda}$ satisfaction derecho, straighten $_{\Lambda}$ detená, detain∧ diciplina, discipline dikdik, *pound* $_{\Lambda}$ *lightly* dilíg, water_{Λ} diníg, $hear_{\Delta}$ dinig, $heed_{\Lambda}$ doble, $double_{\Delta}$ doctór, doctor∧ doctór, $doctor_{\Delta}(original)$ drawing, $draw_{\Lambda}$ dukit, $gouge_{\Lambda}$ dukit, *gouge*_∧away dukit, $poke_{\Lambda}(icing)$ dukot, *fetch* $_{\Delta}$ *out-of-hole* dukot, *picpocket*[∧] duling, make_∆see-double dungaw, *view*∆*from window* durog, $crumble_{\Delta}$ dustá, oppress_A gahasà, $rape_{\Delta}$ galang, $honor_{\Delta}(promise)$ galáw, molest $_{\Delta}$ galáw, move A

galáw, tease_{Δ}

galugad, scour-around_{\wedge} gambalà, $disturb_{\Delta}(busy)$ gamit, $expend_{\Lambda}$ gamit, use_{Λ} gamót, $cure_{\Lambda}$ gamot, repair $_{\Lambda}$ gamót, $treat_{\Lambda}(patient)$ gamot, $treat_{\Delta}(wound)$ ganáp, consummate $_{\Lambda}$ ganchillo, $knit_{\Delta}(doily)$ ganchillo, $knit_{\Delta}(yarn)$ gapas, $reap_{\Delta}(grain)$ gastá, spend_{Δ} gastos, spend $_{\Lambda}$ gatas, $express_{\Delta}(milk)$ gawâ, execute_{Λ} gawâ, $make_{\Delta}$ gawâ, $obey_{\Delta}$ gawâ, perform $_{\Delta}$ gaya, *imitate* $_{\Delta}$ gayat, slice_{Λ} gayuma, *charm* $_{\Delta}$ gibâ, demolish $_{\Lambda}$ giling, $grind_{\Delta}$ gipít, put, in-a-squeeze gising, rouse_{Λ} golpé, $maul_{\Lambda}$ guhit, sketch $_{\Lambda}$ gulat, *surprise* $_{\Delta}$ gulay, $cook_{\Delta}(vegetables)$ guló, $confuse_{\Delta}$ guló, disarrange_{Λ} guló, $disturb_{\Delta}$ (peaceful) gunitâ, remember∧ gupít, *snip*∧away gupít, *snip*_{\(\lambda\)}in-two gupít, $snip_{\Lambda}$ to-shape gupit, snip-through_{Δ} gusót, wrinkle $_{\wedge}$ gutay, tear_∆to-pieces gutom_{Δ} starve_{Δ} habi, $weave_{\Delta}(cloth)$ habol, pursue_{Λ} hagíp, $catch_{\Delta}$ (meaning) hagod, $spread_{\Lambda}$ evenly hagupít, batter $_{\Lambda}$ haka, conceive

halay, molest_{Λ}

halina, $attract_{\Lambda}$ halò, $stir_{\Delta}$ halukay, rummage-through halungkát, ransack∧ hamak, $mock_{\Delta}$ hamon, $dare_{\Lambda}$ hampás, hit_{Λ} to hampás, strike $_{\Lambda}$ hampás, *swat*∧away hanap, $seek_{\Lambda}$ hanapbuhay, use_∆as-a-living hangò, $derive_{\Lambda}(story)$ hangó, $ladle_{\Delta}$ out hangò, $lift_{\Delta}$ (pot)*out-of-fire* haplós, $stroke_{\Delta}(skin)$ haplós, $stroke_{\Lambda}(surface)$ haplós, $stroke_{\Lambda}(pain)$ away hapunan, have_∆for-*supper* harang, $block_{\wedge}$ harang, $rob_{\Delta} of$ -profit haráp, $face_{\Lambda}$ (consequences) harass, $harass_{\Delta}$ hatì, divide $_{\wedge}$ hawan, $clear_{\Lambda}$ (weeds)out hawan, *clear* of hibáng, drive_∧*crazy* higit, *pull*_∆taut higít, *pull*-on_∧ higít, *yank*∧out higop, sip_{Λ} from cup hikayat, $persuade_{\Delta}$ hila, $pull_{\wedge}out$ hiling, $request_{\Delta}$ hiling, take_{\(\lambda\)}as-bonus hilo, make∧*dizzy* hilod, $scrub_{\Lambda}(skin)w$ -stone hilot, $massage_{\Lambda}$ masahe, *massage*∆away himagas, have_∧for-dessert himas, $caress_{\Lambda}$ himás, $rub_{\Delta}(pain)$ himáy, $debone_{\Delta}$ himáy, dissect∧ himod, $lick_{\Lambda}$ himok *entice*∧ hingá, *inhale* $_{\Lambda}$ hingî, ask-for $_{\Lambda}$ hintáy, *await* $_{\Delta}$

hipò, $feel_{\Delta}$ hipò, touch_∧ hirám, borrow_{Λ} hirang, *appoint* $_{\Delta}$ hirang, $exclude_{\wedge}$ hitít, $puff_{\Lambda}$ hiwà, $slit_{\Lambda}$ hiyâ, *humiliate*∧ hubád, $take_{\Lambda}(clothes)$ off hubô, $take_{\Delta}(pants)$ off hubog, $shape_{\Delta}(mass)$ hugot, pull out hukay, dig_{Δ} (earth)out hukay, $dig_{\Delta}(ground)$ hukay, dig_{Δ} (rootcrop) up hukay, dig-for_{Λ} hukay, dig-into_∧ huli, $catch_{\Delta}(prey)$ huli, $catch_{\Delta}(words)$ huli, nab_{Δ} hulmá, $cast_{\Lambda}$ (copies) hulmá, $mold_{\Delta}(dough)$ huni, $sound_{\Lambda}(tune)$ hustó, *fill*∆(quota)*up* hypnotize, hypnotize $_{\Lambda}$ ibá, alter∧ iba, *discard*_∆for-another ibô, $move_{\Lambda}$ ihaw, $grill_{\Lambda}$ imis, $clear_{\Delta}$ (mess)up inóm, $drink_{\Lambda}$ insulto, *insult* $_{\Lambda}$ intindí, comprehend_∧ inventario, inventory $_{\Lambda}$ invento invent_∧ invitá, invite ipít, $clamp_{\Delta}$ ipit, *constrict* $_{\Delta}$ ipit, withhold_{\wedge} ipon, *acumulate* $_{\Delta}$ (a quantity) ipon, gather $_{\Delta}$ up isdâ, *fish-for* $_{\Delta}$ isip, $think_{\wedge}$ over isip, imagine_{Δ} isíp, *think*-of-doing $_{\Lambda}$ iwì contract-raise iyót, $fuck_{\wedge}$

iyót, have-sex-with₁

iyót, make-love-to_∧ kabig, pull-back-on_∧ kabig, *scoop*_∆*back* kagát, bite_{Λ} kain, eat_{Λ} kalabít, $flick_{\Lambda}(switch)$ kalabít, *twitch*_∆w-fingertip kalabít, $pluck_{\Lambda}(strings)$ kalabít, trigger_∧ kalamay, $kalamay_{\Lambda}$ kalás, $detach_{\Delta}$ kalas, unbind_{Λ} kalaykáy, *rake*∆*up* kalbó,make*∆bald* kalinga, $foster_{\Delta}$ kaliwâ, cheat-on_∧ kalkál, scrounge-around kalóg, shake Δ (rattle) kalong, $sit_{\Lambda}on$ -lap kaltas, $deduct_{\Lambda}$ kamkám, appropriate_{Λ} kamot, $scratch_{\Delta}(itch)$ away kaniyá, claim_∧for-*his-own* kasáw, whisk $_{\wedge}$ kaskás, *shave* $_{\Lambda}$ (ice) katám, *plane*∧away katás, extract_{Λ}(*juice*) katay, slaughter $_{\Lambda}$ kathá, $compose_{\Lambda}$ katok, call_∆by-*knocking* kawit, $hook_{\Lambda}$ kayod, $grate_{\Lambda}$ kikil, *file*∧away kilala, $acknowledge_{\Lambda}(heir)$ kilala, *identify* $_{\Lambda}$ (which) kilala, recognize∧as kilala, $decipher_{\Lambda}$ kilatís, appraise_{Λ} kilaw, $cook_{\Lambda}in$ -vinegar kilitî, *tickle*_∆ kipkíp, $clutch_{\Lambda}$ kita, $earn_{\Delta}$ kontra, $oppose_{\Lambda}$ kuha, get_{Δ} kuha, purchase $_{\Lambda}$ kuha, $take_{\Lambda}$ (course-of-study) kulam, bewitch_∧ kulít, $coax_{\Lambda}$

kulót, *curl*∧ kumot, use₁as-a-blanket kumustá, ask*∧how-are-you*? kumustá, ask-after∧ kunwarì, deceive∧ kupit, filch $_{\wedge}$ kupkóp, take_∧*under-wing* kurót, *pinch*_∆to-constrict kurót, *pinch*∆to-hurt kuryente, disinform_∧ kuskós, scrub∧ kusót, $handwash_{\Delta}(fabrics)$ kutingting, troubleshoot $_{\Delta}$ kutkót, *scrape*∧off kuwarta, exchange_∆for-*cash* kuwarta, $profit_{\Lambda}$

k-away, quarrel-with $_{\wedge}$ k-batî, reconcile-with Λ k-ibig-n, befriend_∧ k-laban, fight-with $_{\wedge}$ k-laban, $oppose_{\Lambda}$ k-larô, play-with $_{\Delta}$ k-piling, live-with Λ k-sama, team-up-with $_{\Delta}$ k-sangkap-n, use_{Λ}as-a-tool_{Λ} k-sayáw, dance-with_{Δ} k-sundô, recocile-with $_{\Delta}$ k-talik, copulate-with Λ k-tulong, work-with_{Δ} k-tuwáng, pair-up-with $_{\Delta}$ k-usap, *consult-with* $_{\Delta}$ k-usap, converse with Λ k-usap, *speak-to*_∧ labág, *violate* $_{\Lambda}$ (a law) lagarì, *saw*∧away lagarì, saw_{Λ} in-two lagarì, saw_∧to-size lait, vilify $_{\Lambda}$ lala, weave_{Λ}(matting) lamas, handmix $_{\Lambda}$ lambát, $dragnet_{\Lambda}$ lambing, $caress_{\Delta}$ lamon, $engorge_{\Lambda}$

langháp, breathe_{Δ} lansag, overthrow $_{\Lambda}$ lapastangan, $maltreat_{\Lambda}$ larô, $divert_{\Lambda}$ larô, fondle_{Δ} larô, *play-with* $_{\Lambda}$ (toy) lasáp, $savor_{\Delta}$ lasing, intoxicate, lason, poison $_{\Lambda}$ látigo, $lash_{\Lambda}$ layon, aspire_{Λ} lechón, roast∧ lente, flashlight $_{\Lambda}$ libáng, divert∧ ligalig, harass $_{\Lambda}$ ligáw, disorient∧ liha, $sand_{\Lambda}$ away likaw, $coil_{\Lambda}$ likhâ, create∧ likhâ, *originate*∧ likom, *accumulate* $_{\Lambda}$ (a sum) likom, $roll_{\Lambda}(sheet)$ likót, *touch*_∧*w/o-permission* lilok, $sculpt_{\Lambda}(clay)$ lilok, $sculpt_{\Lambda}(statue)$ limás, $bail_{\Lambda}$ (water) out \lim ás, $dredge_{\Lambda}(pond)$ of limás, dredge_∧up limbág, publish_{Δ} limós, beg_A limot, $forget_{\Lambda}$ linaw, clarify $_{\Delta}$ lingón, *look-back-at*∧ linis, clean_∧ linláng, defraud∧ lipol, $mow_{\Delta}down$ litis, $litigate_{\Lambda}$ litó, befuddle∧ liwanag, bring to-light liwanag, elucidate_{Λ} loko, $dupe_{\Lambda}$ loco, $tease_{\Lambda}$ lubid, twine_∆into-rope lugi, deprive $_{\Lambda}$ of-profit lukot, $crumple_{\Lambda}$

lulón, swallow₁

lampaso, mop_{Λ}

luma, age_{Δ} lunók, swallow_∧ lunok, $swallow_{\Lambda}(pride)$ lusaw, $melt_{\Lambda}$ lustáy, $splurge_{\Lambda}$ lutás, $solve_{\Lambda}(problem)$ lutò, $cook_{\Lambda}(food)$ lutò, $cook_{\Delta}$ (meal) makinilya, $type_{\Lambda}$ manejo, $steer_{\Delta}(wheel)$ martillo, *hammer* $_{\Delta}$ in masa, knead $_{\Lambda}$ masahe, massage hilot, *massage*∆away masilla, $caulk_{\Lambda}$ massacre, $massacre_{\Lambda}$ meeting, hold-a-meeting-w_∆ memoria, memorize $_{\Delta}$ mithî, wish, multó, haunt mumog, $gargle_{\Lambda}$ mura, $curse_{\Delta}$ m-dalî, *hurry*∧up m-liít, be*little* $_{\Lambda}$ m-liít, think-little-of_{Λ} nakaw, steal $_{\Lambda}$ ngalót, munch $_{\Lambda}$ ngatâ, *champ* $_{\Lambda}$ ngutngút, gnaw∧ nguyâ, chew∧ operá, operate-on_∆ operá, remove∧by *surgery* organizá, $organize_{\Delta}$ (pieces) organizá, *organize* $_{\Lambda}$ (event) organizá, *organize* $_{\Lambda}$ (unit) paét, *chisel* away pagod, tire_{Λ} pagpág, *shake*_∆(sheet)*clean* pahì, $erase_{\Lambda}$ pakyáw, buy∆*wholesale* pala, shovel $_{\Delta}$ palò, bat_{Δ} to palò, $spank_{\wedge}$ panà, shoot_∆with-*arrow* panayám, *interview* pandáy, *smith*_{Δ}(knife) pandáy, $smith_{\Lambda}(metal)$ panot, close- $crop_{\Lambda}(pate)$

pansin, aknowledge (asker) pansin, remark_{Δ} pantáy, cut_∧evenly pantáy, *even*∧out pasán, bear $_{\Lambda}$ pasán, shoulder $_{\Lambda}$ pasok, $enter_{\Lambda}$ (business) pasok, explore_{Δ} paspás, *swat*∧away patag, level, by-scraping patáy, $kill_{\Delta}$ patay, turn $_{\Delta}$ off patíd, cut_{Δ} into-lengths patid, $pull_{\Delta}(\text{string })apart$ patid, $trip_{\Delta}(foe)$ pawì, $erase_{\Lambda}$ pera, exchange_∆for-money pigâ, wring_∧ pick-up, $solicit_{\Delta}(\text{sex-worker})$ punit, $tear_{\Delta}in-two$ pigil, dissuade_{Δ} pigil, $prevent_{\Delta}$ p-igsî, shorten $_{\Delta}$ pihit, $turn_{\Lambda}(knob)$ piho, ascertain_∆ pikpík, compress_∧ pilas, $tear_{\Lambda}(page)$ from pilì, $choose_{\Lambda}(burden)$ pili, $exclude_{\wedge}$ pili, $select_{\Lambda}$ pili, take_∆(*choice*-piece) pilipit, $twist_{\Delta}$ pilit, $force_{\Lambda}(movement)$ pilit, $force_{\Delta}(reluctant)$ pilit, $urge_{\Lambda}$ pindót, $press_{\Lambda}(button)$ pingot, twist-the-ears-of_{Λ} pino, refine_{Λ} pipî, $squash_{\Delta}$ piraso, take $_{\Lambda}(piece\text{-of})$ pirat, $crush_{\Delta}flat$ pirata, *pirate* $_{\Delta}$ pisíl, *press* $_{\Delta}$ into pisíl, *squeeze* $_{\Delta}$ tenderly pisíl, *squeeze* $_{\Delta}$ to-constrict pisíl, *squeeze*_∆to-test pita, aspire_{Λ} pitás, $pick_{\Lambda}(fruit)by$ -stem pitík, *flick*∧away

pitík, *flick* $_{\Lambda}$ to pitík, snap_∧w-finger plano, $plan_{\Lambda}$ out plano, *plan*-on_∆ plantsa, $iron_{\Lambda}$ powersaw, *chainsaw*∧down prune, $prune_{\Lambda}$ puhunan, use_∧as-*capital* pukpók, *hammer*_∧in pukpók, *hammer*_∆into-shape pulbós, *pulverize* $_{\Delta}$ pulong, confer-with pulot, $extract_{\Delta}(passage)$ pulot, $pick_{\Delta}up$ -w-hand puná, deprecate_{Δ} punit, $tear_{\Lambda}$ (fragment) from punit, $tear_{\Delta}up$ punit, $tear_{\Delta}open$ punô, $fill_{\Delta}(space)up$ purì, $praise_{\Lambda}$ putók, *burst* $_{\Delta}$ putol, $cut_{\Lambda}(action)$ short putol, cut_{Λ} away putol, $cut_{\Lambda}down$ putol, cut_{Λ} in-two putol, cut_{Λ} to-size putol, *cut*-through_∧ puwersa, $force_{\Delta}(unwilling)$ puwersa, $force_{\Lambda}$ in p-abot, *make*_∧*reach*-a-total p-abót, $make_{\Lambda}last-up-to$ p-alís, $send_{\Lambda}away$ p-alís, *send*∧packing p-alís, $let_{\Lambda} leave$ p-alsá, let_A(dough)rise p-andár, $operate_{\Lambda}(system)$ p-asim, $let_{\Delta}sour$ p-asim, make ∧sour p-babâ, *call*∆down p-babà, $lower_{\Delta}(height)$ p-babà, m_{Δ} (pulse)*subside* p-babà, $make_{\Delta}$ (pitch)*lower* p-babâ, make_∆descend p-babaw, *make*_{\(\right)}shallower p-bagal, *make*_{\(\right)}slower p-bagsák, collapse_A p-bagsák, *knock*∆down

p-baít, *make∧tame* p-bigát, *make*_∧*heavier* p-bilís. *make*_∧*go-faster* p-bulaklák, *cause*_∆*to-flower* p-bunga, *cause*_∆*to-fruit* p-busá, *make*∧*crackle* p-daan, *let*_∧*pass* p-daan, $make_{\Delta}pass-by$ p-daan, *make*_∧*pass*-through p-damdám, give_{Δ}a-feel-of p-dami, $cause_{\Delta}to$ -multiply p-dami, let_{\(\right)}accumulate p-dilím, *make*∆*darker* p-dugô, bleed_∧ p-gaán, $lighten_{\Delta}(weight)$ p-galáw, *make*_∧*move* p-galing, make_{\(\rho\)}expert p-galing, make_∆heal p-galing, *make*_∧*recover* p-gawâ, *make*_∆*do* p-gulong, *make*_∧*roll* p-habà, *make*∆*last-longer* p-habà, let_{\(\right)}grow-long p-habà, *make*_∧*longer* p-higâ, let_∧lie-down p-higâ, *make*_∧*lie-down* p-hinóg, *let*_∧*ripen* p-iklî, *shorten*∧ p-ikot, *make*_∆*revolve* p-ikot, $put_{\Lambda}in$ -a-tizzy p-inóm, $give_{\Delta}to$ -drinkp-iral, enforce $_{\Lambda}$ p-itít, $give_{\Lambda}to$ -absorbp-iyák, *leave*_∆*in-tears* p-iyák, *make*∧*cry*-in-pain p-iyák, *make*_∧*cry*-in-shame p-iyák, *let*_∧*cry* p-kain, give Δto -eat p-kain, let_∧eat p-kilos, $make_{\Delta}act$ p-kintáb, *clean*∧*to-a-shine* p-kulô, cook_∆(plan)up p-kulô, *make*∆*boil* p-kulô, *let*_∆*boil* p-labás, *call*∧out p-labás, *imply*∧ p-labás, *make*_{\(\rangle\)}go-out p-labò, *make*∆*dimmer*

p-laganap, *cause* $_{\Lambda}$ *to-spread* p-lagô *let*∆*grow-dense* p-lakás, *make*√*formidable* p-lakás, *make*_∆*louder* p-lakí, make∧bigger p-laki, raise_{Λ} p-lalim, deepen_∧ p-lambot, *let*_∧*soften* p-lamíg, *let*_∧*cool* p-lamíg, *make*_∧*cold* p-lamíg, *make*_∆*cool-down* p-lampás, *let*_∧*pass* p-lampás, *make*∆*go-through* p-lapad, *make*_∆*wider* p-lapit, *call*_∆*near* p-lapit, *let*∧*approach* p-lapot, *make*_∧*thicken* p-lawak, *make*_∆*vaster* p-lawig, *cause*_∧to-advance p-ligaya, *make*_∧*happy* p-liit, make_Λ(flame)*small*er p-liit, $reduce_{\Delta}(size)$ p-lingas, *cause* $_{\Lambda}$ *to-inflame* p-lipád, $make_{\Lambda}(arrow)fly$ p-lipád, $make_{\Lambda}(kite) fly$ p-lutang, *make*_∧*float* p-lutóng, *make*∧*crisp* p-mana, give_{Λ}a-bequest p-pasok, *let*∧*enter* p-pasok, *make*∧*enter* p-pulá, make∆redden p-puntá, *make*∆go-to p-putî, *clean*∧*to-a-white* p-putî, *make*∧*whiten* p-putók, *make*√*fire* p-putók, make, pop p-putók, reveal_∧ p-sabog, $explode_{\Delta}$ p-sabog, $break_{\Lambda}$ (news)out p-sakáy, *let*∆*ride* p-saráp, $make_{\Delta}tasty$ p-sayá, *make*_∆*merry* p-siból, *cause*_{\(\lambda}to-sprout\) p-siglá, $make_{\Delta}lively$ p-suso, give $_{\Lambda}$ to-suckle p-taás, *make*∆rise p-tabâ, fatten∧ p-tabâ, *make*∆*fatter*

p-tagál, $make_{\Lambda}(\text{supply })last$ p-tahimik, *make*_∧*quiet-down* p-tahimik, silence_∧ p-takbó, $operate_{\Lambda}(system)$ p-talbóg, *make*_∧*bounce* p-talsík, *slap*∧*away* p-talsík, *catapult* $_{\Delta}$ p-talsík, $fire_{\Lambda}(worker)$ p-tanggáp, give_{Δ}a-sending p-tawa, $make_{\Delta}laugh$ p-tawad, $forgive_{\Delta}(sinner)$ p-tawad, $forgive_{\Delta}(debt)$ p-tawad, give Δa -discount p-tawag, *make*_∆*telephone* p-tawag, *wait-for*_∆*to-call* p-tibay, *make*_∆*sturdier* p-tigás, *let*_∆*harden* p-tigil, $make_{\Delta}(motion)stop$ p-tigil, *make*_∆*desist* p-tikím, give Δa -taste p-tiktik, $drain_{\Delta}$ p-tubò, *cause*_∧*to-grow* p-tugtóg, play_∆(recording) p-tugtóg, turn₁(radio)on p-tukâ, give_∧to-peck p-tulò, $drain_{\Lambda}(container)$ p-tulog *knock*∧*out* p-tulog *make*_∆*fall-asleep* p-tulog, *let*_∧*sleep* p-tulóy, *let*_∆*through* p-tulóy, make_∧go-in p-tumbá, $fell_{\Delta}$ p-tumbá, *knock*∆*down* p-tunog, *wait-for* $_{\Lambda}$ *to-sound* p-tunóg, $make_{\Lambda}$ (flute) sound p-tuyõ, leave_∆to-dry p-ulan, $cause_{\Delta}to$ -rain p-una, $make_{\Lambda}go$ -ahead p-upô, $let_{\Delta}sit$ p-upô, $make_{\Delta}sit$ p-utang, give_{Δ}a-loan p^almusál, give_∆breakfast p^apat, $divide_{\Delta}into$ -four p^{α} aral, $make_{\alpha}study$ p^aral, $make_{\Delta}train$ p^bayad, *make*_∧*pay* p^bayad, press₁into-paying

p-tagál, $make_{\Lambda}(duration) last$ p^bukód, $separate_{\Lambda\Lambda}(kinds)$ p^bukód, sort∧ p^dalawá, *divide*∧*into-two* p^hatì, $m_{\Lambda\Lambda}$ share-equallly p^hintáy *let* wait p^hustó *make*_∧*fit*-into p^hustó, *make*_∧*suffice* p^ibá, differentiate $_{\Delta\Delta}$ $p^{\underline{iba}}$, $sort_{\Lambda}$ $p^{\lambda}ibayo$, further $p^{\wedge}ingat, warn_{\wedge}$ p^isá, *make*∆go-solo $p^isá, put_{\Delta}in$ -solitary p^kamáy, *make*_∧*do-by-hand* p^kasya, *make*∆*fit*-into p^kasya, *make*_∧*suffice* p^m-dalî, *make*∧*hurry* p^palad, $give_{\Delta}a$ -boon p^sisi, make_∧regret p^tapós, *have*∆*finish*-studies p^tapós, *let*_∆*finish*-doing p^tatló, $divide_{\Delta}into$ -three p^tibay, strengthen_∧ p^tibay, *affirm* $_{\Delta}$ p^yelo, *let*_∧*ice* p~arap, $dream_{\Lambda}$ p~tood, view_∧ p~tood, watch $_{\Lambda}$ p^{\wedge} batî, *cause*_{$\Delta\Delta$}to-reconcile p^^buhól, *knot*_{∧∧}together p^{\wedge} dikít, $set_{\Delta\Delta}touching$ p^{\wedge} dikít, *stick* $_{\wedge\wedge}$ together p^^dugtóng, $link_{\Delta\Delta}together$ p^{\wedge} halò, stir $_{\wedge}$ together p^{\wedge} haráp, set_{\wedge} facing p^{\wedge} hatì, give_{$\wedge \wedge$}a-half-each p^{\wedge} hiwaláy, *separate*_{$\Lambda\Lambda$}(pair) p^hiwaláy, $separate_{\Delta\Delta}$ (foes) sakmál, $grab_{\Delta}by$ -the-teeth $p^{hiwaláy}$, distinguish, $p^{\wedge \wedge}$ hiwaláy, sort_{Δ} $p^{\wedge}ibá$, $make_{\Delta\Delta}not$ -match $p^{\wedge}is\acute{a}$, bundle_{$\Delta\Delta$}together $p^{\hat{i}}$ sá, join_{$\Delta\Delta$}together p^{\wedge} kabít, *hold*_{$\Delta\Delta$}together p^{\wedge} kamáy, $get_{\wedge \wedge}to$ -shake p^{\wedge} kita, *cause*_{$\wedge \wedge$}to-meet p^{\wedge} lahók, mix_{$\wedge \wedge$}together

 p^{\wedge} lapit, set_{\wedge} close-together

 p^{α} layô, break $_{\Delta\Delta}$ (foes)apart p^{\wedge} layô, $set_{\Delta\Delta}(pair)$ apart p^{\wedge} pantay, set_{\wedge} even p^^pareha, $pair_{\Delta\Delta}together$ p^^pareho, $set_{\wedge\wedge}alike$ p^{\wedge} patong, set_{\wedge} overlying p^{\wedge} sabáy, $set_{\wedge\wedge}in$ -tandem $p^{\wedge \wedge}$ sala, $put_{\wedge \wedge}out$ -of-synch p^{\wedge} salubóng, $set_{\wedge\wedge}head$ -on $p^{\wedge \wedge}$ sama, $put_{\wedge \wedge}together$ p^^sunód, $set_{\Delta\Delta} successive$ p^^tabí, $set_{\Delta\Delta}side$ -by-side p^^tagpô, *cause* $_{\Delta\Delta}$ *to-meet* p^^talikód, $set_{\Delta\Delta}aboutfaced$ p^{\wedge} tamà, $set_{\Delta\Delta}aright$ p^{\wedge} tapát, $set_{\wedge \wedge} opposite$ pp^aral, $give_{\Delta}a$ -scholarship pp~talo, give_∆a-prize pp~yari, *make*_∆*happen* questión, question $_{\Delta}$ quote, $quote_{\Lambda}$ sabi, *say*∆ sabón, *soap*∧ sagót, $answer_{\Delta}(blank)$ sagót, $answer_{\Lambda}$ (question) sagót, $answer_{\Lambda}$ (questioner) sagot, $answer_{\Lambda}(suitor)$ yes sahod, *catch*_∆into-vessel sahod, $collect_{\Lambda}(wages)$ saíd, $empty_{\Lambda}$ (container) of saíd, *eradicate*∧ saíd, $exhaust_{\Lambda}$ said, finish, to the last saíd, *remove*∧*all* sakál, *strangle*∧ sakál, strangulate sakláw, *claim*∧*within* sakop, *claim*_∧*among* saksák, *stab*∆ salà, strain∧ salà. $filter_{\Delta}(data)$ salág, fend_{\(\right)}with-shield salaksák, $poke_{\Delta}(hole)$ clean salaksák, *poke-into*∧ salát, *palpate*∧ salbahe, savage salitâ. *speak*∧

salô, $catch_{\Lambda}$ into-safety salok, $scoop_{\Lambda}$ salpók, bang salungát, *disobey*∧ salungát, dispute∧ salvage, *execute*_∧ex-judicio samantalá, $exploit_{\Lambda}(chance)$ samantalá, $exploit_{\Delta}(weak)$ samantalá, *cheat*∧of-gain samba, worship∧ sambát, net_{Δ} sambót $_{\Lambda}$ *catch* $_{\Lambda}$ into-hand(s) samò, entreat∧ sampál, $slap_{\Delta}(cheek)$ samsám, $forfeit_{\Delta}$ sanay, $train_{\Lambda}$ sandók, $ladle_{\Lambda}$ sanggá, $fend_{\Delta}$ sapá, *chew* $_{\Delta}$ to a pulp sarili, monopolize_{Δ} sawatà, foil $_{\Lambda}$ sawáy, $reproach_{\Delta}$ sayáw, dance_∧ secreto, ask*∧secretly* secreto, keep-secrets-from secreto, tell_{\(\lambda\)}in-secret segurado, ascertain∧ sibák, *chop*∧ sibát, shoot_∆with-*spear* siíl, repress_{Λ} sikap, endeavor $_{\Lambda}$ siko, *elbow* $_{\Lambda}$ siksík, *cram*∧ silaw, $dazzle_{\Lambda}$ silaw, *blind* $_{\Lambda}$ *with-light* silip, $probe_{\Lambda}$ silip, $sight_{\Lambda}$ silò, $lasso_{\Delta}$ singíl, *ask*√*for-payment* singíl, *press*∆*for-payment* singíl, $exact_{\Delta}$ for-unpaid-debt sintá, $court_{\Delta}$ sinturón, belt_{Λ} sinturón, use_{Δ}as-a-belt sipà, $kick_{\Lambda}$ (member)out sipà, *kick*∆away sipà, $kick_{\Lambda}$ to sipà, *kick*∆to-hurt

sipat, $sight_{\Lambda}$ sipit, $clamp_{\Delta}$ sipol, whistle_{\wedge} sipsíp, sip_{Δ} with straw sirà, *break*∆(order) sirà, $break_{\Lambda}$ (promise) sirà, *break*∧open sirà, $ruin_{\Delta}$ sisi, $accuse_{\Lambda}$ siyasat, research_{Δ} snob, $snob_{\Lambda}$ sponsor, $sponsor_{\Delta}$ subok, spy- on_{Δ} suka, *ferment*_∆into-*vinegar* sukat, *measure* $_{\Delta}$ sukláy, *comb*_∆into-place sulat, *write*_∆out sumpít, shoot_∆w*-blowgun* sundót, $poke_{\Delta}$ sundót, $prod_{\Delta}$ sungkit, $pick_{\Delta}with$ -a-poke sunód, $obey_{\Delta}$ sunog, $burn_{\Lambda}$ sunog, $burn_{\Delta}$ (capital) sunong, $carry_{\Lambda}on$ -head suntók, $punch_{\Delta}$ supsóp, $suck_{\Lambda}$ suri, diagnose_{\wedge} suwáy, $disobey_{\Delta}$ suyò, woo_{Λ} tabás, *mow*_∧down tabas, $trim_{\Lambda}(cloth)$ to-shape tabas, *trim*∧away tablá, slice_∆into-*planks* tabò, fetch, with-a-dipcan tadtád, mince tagâ, slas h_{Λ} tagtág, $loosen_{\Delta}$ timplá, mix_{Λ} (recipe) $tah\hat{i}$, $sew_{\Delta}(dress)$ tahî, sew*∆together* takal, $measure_{\Delta}(volume)$ takot, $scare_{\Delta}$ into-doing takták, tap_{Δ} (container)clean tiyagâ, suffer_ Δ talakay, discuss_A talima, abide_{Λ} taló, challenge taló, contradict_{Δ}

tamasa, $enjoy_{\Lambda}$ tambol, play like-a- drum tampisáw, splash A tanáw, view $_{\Lambda}$ tanggál, *eliminate*∧ tanggál, remove $_{\Lambda}$ tanggáp, $accept_{\Lambda}(applicant)$ tanggáp, $accept_{\Delta}(charge)$ tanggáp, $accept_{\Lambda}(logic)$ tanggáp, $accept_{\Delta}(delivery)$ tanghal, $proclaim_{\Delta}$ tanóng, *interview* $_{\Delta}$ tanóng, *invite* $_{\Delta}$ tanteá, estimate_A tapá, $smoke_{\Delta}$ tapát, tell, *honest*ly tapid, $trip_{\Delta}(runner)$ tapik, $pat_{\Delta}(pain)$ away tapík, tap_{Λ} on-shoulder tapos, end_{Δ} tapos, $finish_{\Delta}(course)$ tarantá, $fluster_{\Delta}$ tastas, unstitch $_{\Lambda}$ tastás, unstitch $_{\Lambda}$ tawad, ask-for_∧as-discount tawad, take_∧as-*discount* tawag, $call_{\Lambda}$ (meeting) tawag, $call_{\Lambda}$ (name)out tawag, *call*_∆a-name tawag, $call_{\wedge}over$ tawag, call- to_{Δ} tibâ, $harvest_{\Lambda}(bananas)$ tiís, endure_∧ tilád, *slice*_∆*end-to-end* timbáng, weigh $_{\Lambda}$ timplá, concoct tina, cook*₁in-dye*bath tinidór, $fork_{\Delta}$ tipâ, strum $_{\Lambda}$ tipák, *chip* $_{\Delta}$ tipíd, $stint_{\Delta}$ tipon, $compile_{\Delta}(a \text{ sampling})$ tira, $shoot_{\Lambda}$ tiyák, assure tiyák, confirm_{Δ}

tiyák, inspect∧

tiyák, verify $_{\Delta}$

tomado, *advance*∧on-wages tomado, take as-advance totoo, *actual*ize_{Λ} trabajo, work-on_∧ tubò, $profit_{\Lambda}$ tubós, redeem $_{\wedge}$ tugtóg, $play_{\Lambda}$ (instrument) tugtóg, play $_{\Lambda}(music)$ tukâ, *peck*∧ tukláp, $peel_{\Delta}off$ tuklás, $discover_{\Delta}(truth)$ tuklás, explore tukóy, $pinpoint_{\Delta}(which)$ tuksó, tease tuksó, $tempt_{\Delta}$ tuktók, *knock*∧ tulâ, declaim $_{\Delta}(poem)$ tulì, *circumcise* $_{\Delta}$ tuligsâ, *assail*∧ tumpók, $heap_{\Delta}$ tunaw, dissolve_{\wedge} tunggâ, imbibe $_{\Delta}$ tunton, $track_{\Lambda}$ tuós, compute_{Λ} tupád, *fulfill* tusok, *impale* $_{\wedge}$ tusok, pierce $_{\Lambda}$ tuwíd, *straighten*∧ tuyô, patdry $_{\Lambda}$ ubos, $exhaust_{\Lambda}$ ubos, exterminate_{Δ} ubos, *finish*∧*all*-up ugali, make∧a *habit* ugóy, $rock_{\Lambda}(cradle)$ ukit, $carve_{\Lambda}(design)$ ukit, *carve*_A(figure) ukit, $carve_{\Lambda}(wood)$ ukit, *carve*∆away ulit, $repeat_{\Lambda}(activity)$ ulit, $repeat_{\Delta}(song)$ ulit, $repeat_{\Delta}$ (information) ulól, $fool_{\Delta}$ umpóg, *headbutt*∧ unat, $stretch_{\Delta}$ out unawà *understand*∧ usap, *recruit*∧ usig, *impeach*∧

usig, persecute_{Δ}

usig, $prosecute_{\Lambda}(case)$ usig, $prosecute_{\Lambda}(project)$ usisà *probe*∧ usisà, *inquire*∧ usisà, *interview*∧ usisà, $look_{\Lambda}$ utang, $loan_{\Lambda}$ utang, take $_{\Delta}$ on-loan utô, *sucker*∧ vale, *advance*_∧on-earnings vale, take_∆as-advance walanghiyâ, *defile* $_{\Delta}$ walis, sweep $_{\Delta}up$ wasak, $destroy_{\Lambda}$ welcome, $welcome_{\Delta}$ wili, *interest*∧ yabang, bluff $_{\Lambda}$ yakap, $embrace_{\Delta}$ yakap, *embrace* $_{\Delta}$ on-arrival yapós, *clutch* $_{\Delta}$ yapós, hug_{Λ} yapós, hug_{Δ} on-arrival yarì, $produce_{\Lambda}$ yayà, *invite* $_{\Delta}$ yugyóg, $shake_{\Lambda}(tree)$ yukô, $look_{\Lambda}$ by bending over yupî, $dent_{\Lambda}$

Table 2. Grammatical sets

	BEG	GIN	
MAKE	ADVANCE	ADDRESS	ADOPT
DDODUCE	EVECUTE	ADOLIGE	FOLLOW
PRODUCE INVENT	EXECUTE SPEAK	AROUSE GREET	FOLLOW REVIVE
isip, imagine _{Δ}	sabi, say_{Δ}	batì, $greet_{\Lambda}$	buhay, $revive_{\Delta}$
haka, $conceive_{\Delta}$	salitâ. $speak_{\Delta}$	tawag, $call$ - to_{Λ}	alaala, $recall_{\Delta}$
-	<u> </u>	_	I - I
buò, $compose_{\Delta}$	tawag, $call_{\Delta}$ (name)out	tapík, tap_{Δ} on-shoulder	gunitâ, <i>remember</i> _∆ COPY
kathá, $compose_{\Delta}$	bigkás, <i>pronounce</i> _∆	kalabít, $twitch_{\Delta}$ w-fingertip	
sulat, <i>write</i> ∆out	awit, $reveal_{\Delta}$	k-usap, <i>speak-to</i> $_{\Delta}$	cópia, $copy_{\Delta}$
plano, $plan_{\Delta}$ out	amin, $admit_{\Delta}(truth)$	TOUCH	makinilya, $type_{\Delta}$
balangkás, <i>chart</i> ∆out	banggit, $mention_{\Delta}$	hipò, $touch_{\Delta}$	guhit, $sketch_{\Delta}$
ukit, $carve_{\Delta}(design)$	ulit, $repeat_{\Delta}(information)$	haplós, $stroke_{\Delta}$	drawing, $draw_{\Delta}$
invento $invent_{\Delta}$	p-putók, $reveal_{\Delta}$	himas, $caress_{\Delta}$	quote, $quote_{\Delta}$
likhâ, $originate_{\Delta}$	p-sabog, $break_{\Delta}$ (news)out	pisíl, <i>squeeze</i> _∆ tenderly	pulot, $extract_{\Delta}(passage)$
CREATE	p-labás, $imply_{\Delta}$	$larô, fondle_{\Delta}$	hangò, $derive_{\Delta}(story)$
likhâ, $create_{\Delta}$	PERFORM	lambing, $cuddle_{\Delta}$	gaya, <i>imitate</i> $_{\Delta}$
gawâ, $make_{\Delta}$	tugtóg, play $_{\Delta}(music)$	amò, pet_{Δ}	ulit, mimic _{Δ} (action)
yarì, $assemble_{\Delta}$	awit, $sing_{\Delta}$	yapós, hug_{Δ}	limbág, $publish_{\Delta}$
buò, bring $_{\Delta}(whole)$ together	tulâ, declaim $_{\Delta}(poem)$	yakap, $embrace_{\Delta}$	hulmá, <i>cast</i> -copies-of _{Δ}
organiza, organize _∆ (unit)	sayáw, $dance_{\Delta}$	iyót, make-love-to _∆	UNDERTAKE
pandáy, $smith_{\Delta}(knife)$	huni, $sound_{\Delta}(tune)$	ENTERTAIN	kuha, $take_{\Delta}$ (course-of-study)
lilok, $sculpt_{\Delta}(statue)$	sipol, <i>whistle</i> $_{\Delta}$	larô, $divert_{\Delta}$	aral, $study_{\Delta}$ (theory)
ukit, $carve_{\Delta}$ (figure)	gawâ, $perform_{\Delta}$	libáng, $divert_{\Delta}$	basa, $read_{\Delta}(book)$
lutò, $cook_{\Delta}$ (meal)	baybáy, $spell_{\Delta}$	alíw, entertain $_{\Delta}$	pasok, $enter_{\Delta}$ (business)
\cos é, $cook_{\Delta}$ (feast)	basa, $read_{\Delta}(\text{text})$ out	p-tawa, <i>make</i> ∆laugh	ulit, $repeat_{\Delta}(activity)$
timplá, mix_{Δ} (recipe)	ulit, $repeat_{\Delta}(song)$	p-ligaya, <i>make∆happy</i>	OBEY
lala, $weave_{\Delta}$ (matting)	p-tugtóg, play _∆ (recording)	p-siglá, <i>make∆lively</i>	sunód, $obey_{\Delta}$
habi, $weave_{\Delta}(cloth)$	ACCOMPLISH	p-sayá, <i>make∆merry</i>	talima, $abide_{\Delta}$
ganchillo, $knit_{\Delta}(doily)$	trabajo, <i>work</i> -on _{Δ}	k-usap, converse with _{Δ}	galang, $honor_{\Delta}(promise)$
$tah\hat{i}$, $sew_{\Delta}(dress)$	asikaso, <i>attend</i> -to _{Δ}	TEASE	diníg, $heed_{\Delta}$
COLLECT	atupag, $prosecute_{\Delta}(plan)$	loco, $tease_{\Delta}$	gawâ, $obey_{\Delta}$
tipon, $compile_{\Delta}(a \text{ sampling})$	usig, $prosecute_{\Delta}(project)$	galáw, $tease_{\Delta}$	ugali, make∆a <i>habit</i>
buô, $collect_{\Delta}(a \text{ set})$	lutás, $solve_{\Delta}(problem)$	tuksó, $tease_{\Delta}$	
likom, <i>accumulate</i> _{Δ} (a sum)	arreglo, $settle_{\Delta}(dispute)$	birò, <i>tease</i> $_{\Delta}$	USE
ipon, <i>acumulate</i> _{Δ} (a quantity)	tapos, $finish_{\Lambda}(course)$	kiliti, <i>tickle</i> $_{\Delta}$	EMPLOY
colecta, $collect_{\Delta}$ (a sampling)	complete, $complete_{\Delta}(job)$	kalabit, <i>tweak</i> $_{\Delta}$	alila, keep∆as-a- <i>servant</i>
assemble, $assemble_{\Delta}(facts)$	buô, $complete_{\Delta}(job)$		asawa, keep∆as-a- <i>spouse</i>
p-dami, <i>let</i> ∆accumulate	FULFILL	ANIMATE	alipin, keep∆as-a- <i>slave</i>
CAUSE	ganáp, $consummate_{\Delta}$	ROUSE	iyót, have-sex-with _∆
buhay, bring _∆ to- <i>life</i>	tupád, $fulfill_{\Delta}$	gising, $wake_{\Delta}$	k-ibig-n, <i>befriend</i> $_{\Delta}$
organiza, $organize_{\Delta}(event)$	totoo, <i>actual</i> ize _{Δ}	gulat, $surprise_{\Delta}$	k-larô, <i>play-with</i> $_{\Delta}$
p-bunga, $cause_{\Lambda}to$ -fruit	gawâ, execute $_{\Delta}$	bulaga, <i>surprise</i> $_{\Delta}$	k-tuwáng, <i>pair-up-with</i> $_{\Delta}$
p-bulaklák, <i>cause</i> ∆ <i>to-flower</i>	tawag, $call_{\Delta}$ (meeting)	DISTURB	k-tulong, $work$ -with _{Δ}
p-tubò, $cause_{\Delta}to$ -grow	p-iral, $enforce_{\Delta}$	abala, $trouble_{\Delta}$	k-sama, team-up-with $_{\Delta}$
p-siból, <i>cause</i> _{Δ} to-sprout	$pp\sim yari, make_{\Delta}happen$	demonio, $bedevil_{\Delta}$	k-sayáw, dance-with _{Δ}

p-dami, *cause*_{\(\lambda\)}to-multiply p-laganap, cause_∆to-spread p-lingas, *cause* $_{\Lambda}$ *to-inflame* p-lawig, *cause*_{Δ}to-advance p-ulan, *cause*_∧*rain* p^ibayo, further_∧ pp~yari, *cause*_∧*happen* p^{\wedge} kita, cause_{$\wedge \wedge$}meet p^{\wedge} tagpô, cause_{$\wedge \wedge$}meet p^^batî, *cause* $_{\Delta\Delta}$ *to-reconcile* p^^kamáy, $cause_{\Delta\Delta}to$ -shake

WORK

FORM hubog, $shape_{\Lambda}(material)$ bilog, $ball_{\Lambda}(mass)$ hulmá, $mold_{\Lambda}(dough)$ pandáy, $smith_{\Lambda}(metal)$ lilok, $sculpt_{\Lambda}(clay)$ ukit, $carve_{\Lambda}(wood)$ COOK $\cos \acute{e}$, $cook_{\Lambda}(food)$ lutò, $cook_{\Delta}(food)$ ihaw, $grill_{\Lambda}$ tapá, *smoke*∧ lechón, roast∧ kalamay, $kalamay_{\Lambda}$ adobo, $adobo_{\Lambda}$ atsara, pickle_{\wedge} buro, salt-pickle $_{\wedge}$ kilaw, $cook_{\Lambda}in$ -vinegar gulay, $cook_{\Delta}(vegetables)$ tina, cook*₁in-dye*bath p-lutóng, *make*_∧*crisp* p-lapot, *make*_∧*thicken* p-putók, *make*_∧*pop* p-busá, *make*∧*crackle* p-kulô, *make*_∧*boil* p-putî, *make*∧*whiten* p-pulá, *make*_∧*redden* p-asim, *make*_∧*sour* p-lamíg, $make_{\Lambda}cold$ p-saráp, *make*_∆*tasty* MIX halò, $stir_{\Lambda}$ kasáw, *whisk* $_{\Delta}$

batí, scramble_∧

lamas, handmix $_{\Delta}$

ENERGIZE MOVE ibô, $move_{\Lambda}$ galáw, move _{\Delta} likót, *touch* $_{\Lambda}$ *w/o-permission* kabig, pull-back-on $_{\Lambda}$ higít, *pull*-on_∧ pihit, $turn_{\Lambda}(knob)$ pindót, $press_{\Lambda}(button)$ kalabít, $flick_{\Lambda}(switch)$ yugyóg, $shake_{\Lambda}(tree)$ PROPEL kalabít, $trigger_{\Delta}$ tampisáw, splash A sipà, $kick_{\Lambda}$ to hampás, *hit* ₁to palò, bat_{Λ} to pitík, *flick* $_{\Delta}$ to p-talsík, *catapult* p-lipád, $make_{\Delta}(arrow)fly$ p-lutang, *make*_∧*float* p-gulong, *make*_∆*roll* p-putók, *make*_∧*fire* p-puntá, $make_{\Lambda}go$ -to **OPERATE** buhay, $activate_{\Delta}$ kalóg, *shake* $_{\Delta}$ (rattle) ugóy, $rock_{\Lambda}$ (cradle) tugtóg, $play_{\Lambda}$ (instrument) larô, *play-with* $_{\Lambda}$ (tov) tambol, play_∆like-a- *drum* tipâ, $strum_{\Lambda}$ kalabít, $pluck_{\Lambda}(strings)$ manejo, $steer_{\Lambda}(wheel)$ p-galáw, *make*_∧*move* p-ikot, *make*_∧*revolve* p-andár, $operate_{\Lambda}(system)$ p-tunóg, make_{\(\lambda\)}(flute)sound p-tugtóg, turn_∧(radio)on p-taás, *make*∧*rise* p-lipád, $make_{\Lambda}(kite) flv$ p-takbó, $operate_{\Delta}(system)$ p-talbóg, *make*_∆*bounce* p-bilís. *make*_{\(\range\)}*go-faster* p-lakás, *make*∆*louder*

p-habà, *make*_∧*last-longer*

p-tagál, $make_{\Delta}(duration) last$

multó, *haunt*∧ guló, $disturb_{\Delta}$ (peaceful) bulabog, $disturb_{\Lambda}(quiet)$ ligalig, bother \wedge busisì, pester harass, $harass_{\Lambda}$ gambalà, $disturb_{\Lambda}(busy)$ **URGE** pilit, $urge_{\Lambda}$ kulít, *coax*∧ sundót, $prod_{\Lambda}$ buyó, $goad_{\Lambda}$ takot, $scare_{\Lambda}$ into-doing hamon, $dare_{\Delta}$ singíl, *press*_∧*for-payment* m-dalî, *hurry*∧up p^bayad, press_{\(\lambda\)}into-paying COMPEL pilit, $force_{\Lambda}(reluctant)$ puwersa, $force_{\Lambda}(unwilling)$ p-upô, *make* ∧*sit* p-gawâ, *make*_∆*do* p-kilos, *make*_∧*act* p-labás, *make*∧*go-out* p-una, $make_{\Delta}go$ -ahead p-tulóy, make \go-in p-daan, *make*_∧*pass-by* p-higâ, *make*_∆lie-down p-tawag, $make_{\Delta}telephone$ p^{α} aral, $make_{\alpha}study$ p^m-dalî, *make*∆*hurry* p^kamáy, make_{\(\lambda\)}do-by-hand p^{\wedge} kamáy, m_{\wedge} shake-hands p^hatì, $m_{\Delta\Delta}$ share-equallly

BENEFIT

GIFT sagót, $answer_{\Lambda}$ (questioner) pansin, aknowledge Λ (asker) k-piling, *live-with*∧ k-talik, *copulate-with* $_{\Delta}$ UTILIZE gamit, use_{Λ} samantalá, $exploit_{\Lambda}(chance)$ kumot, use₁as-a-blanket sinturón, use_∆as-a-*belt* balabal, use_{\(\Lambda\)}as-a-shawl hanapbuhay, use_∆as-a-living puhunan, use_∧as-*capital* contrata, $contract_{\Lambda}$ k-sangkap-n, use_{\(\lambda\)}as-a-tool_{\(\lambda\)} **CONSUME** kain, eat_{Λ} lamon, $engorge_{\Lambda}$ almusál, have_∧for-*breakfast* hapunan, have_∧for-*supper* himagas, have_∆for-dessert tukâ, peck∧ inóm, $drink_{\Lambda}$ higop, sip_{Λ} from cup sipsíp, sip_{Λ} with straw supsóp, $suck_{\Delta}$ tunggâ, *imbibe*∧ himod, $lick_{\Lambda}$ kagát, bite∧ lunók, swallow_∆ lulón, swallow_∧ **SAVOR** nguyâ, *chew* $_{\Lambda}$ sapá, *chew* $_{\Delta}$ to a pulp ngatâ, *champ* $_{\Delta}$ ngalót, $munch_{\Lambda}$ ngutngút, $gnaw_{\Lambda}$ mumog, $gargle_{\Lambda}$ tamasa, $enjoy_{\Lambda}$ lasáp, $savor_{\Lambda}$ damá, feel $_{\Lambda}$ langháp, breathe $_{\Lambda}$ hingá, *inhale* $_{\Lambda}$ hitít, $puff_{\Lambda}$

ACCEPT

APPROVE

sagot, $answer_{\Delta}$ (suitor)yes tanggáp, $accept_{\Lambda}(applicant)$ kilala, $acknowledge_{\Delta}(heir)$

cigarilló, $smoke_{\Lambda}$ (cigarette)

tapát, tell*honest*ly secreto, tell_∆in-secret p-tanggáp, give∧a-sending p-mana, give_{Δ}a-bequest p-utang, give_{Δ}a-loan p-tawad, give_{\wedge}a-discount p-damdám, give_{Δ}a-feel p-tikím, give_{\wedge}a-taste p^palad, give_{Δ}a-boon

masa, $knead_{\Lambda}$ timplá, mix_{Δ} (ingredients) p^^lahók, $mix_{\Lambda\Lambda}together$ p^halò, $stir_{\Delta\Delta}together$ **MATURE** luma, age_{Δ} suka, *ferment*_∆into-*vinegar* p-asim, let_{\(\right)}sour p-alsá, $let_{\Lambda}(dough)$ rise p-kulô, *let*_∧*boil* p-lamíg, $let_{\Lambda}cool$ p-tigás, let_{Λ} (gelatin)harden p-hinóg, *let*∧*ripen* p-habà, *let*_{\(\right)}grow-long p-lagô *let*∧*grow-dense* p-lambot, let_{Λ} (meat)soften p^yelo, *let*_{\(\rangle\)}*ice*

SUPPLY

COMPLETE

punô, $fill_{\Lambda}(space)up$ sagot, $answer_{\Lambda}(blank)$ buô, $complete_{\Lambda}(crossword)$ **DRESS** balot, $wrap_{\Lambda}$ cemento, cement $_{\Lambda}$ masilla, $caulk_{\wedge}$ gamot, $treat_{\Delta}(wound)$ bigkís, $bind_{\Lambda}$ (wound) p-tibay, *make*_∧*sturdier* **INCREASE** buô, $complete_{\Delta}$ (measure) completo, $complete_{\Lambda}(total)$ hustó, $fill_{\Delta}(lack)up$ doble, $double_{\Lambda}$ p-abot, *make*_∧*reach*-a-total p-habà, *make*_∆longer p-lakí, *make*∆*bigger* p-lawak, *make*_∆*vaster* p-lapad, *make*_∆*wider* p-tabâ, *make*_∧*fatter* p-babaw, *make*_{\(\right)}shallower p-bigát, *make*_∆*heavier* FILL basâ, wet_{Λ}

dilíg, water $_{\Delta}$

busóg, sate_{Λ}

bahâ, $flood_{\Lambda}$

p-abót, $make_{\Delta}last$ -up-to PUSH pisíl, $press_{\Delta}$ into siksík, $cram_{\Delta}$ pukpók, $hammer_{\Delta}$ in pilit, $force_{\Delta}$ (movement) martillo, $hammer_{\Delta}$ in puwersa, $force_{\Delta}$ in p-pasok, $make_{\Delta}enter$ p-lampás, $make_{\Delta}go$ -through p-daan, $make_{\Delta}pass$ -through p^kasya, $make_{\Delta}fit$ -into p^hustó $make_{\Delta}fit$ -into

INDICATE

DESIGNATE

tawag, $call_{\Lambda}$ a-name tanghal, $proclaim_{\Lambda}$ kilala, $recognize_{\Delta}$ as hirang, appoint Λ pili, $select_{\Lambda}$ **PRAISE** pansin, remark_{\wedge} batì, $remark_{\Lambda}$ tukoy, specify $_{\Delta}$ purì, $praise_{\Delta}$ dakilà, glorify samba, worship $_{\Lambda}$ DISCUSS sagót, $answer_{\Delta}$ (question) talakay, discuss_∧ balangkás, *outline* $_{\Lambda}$ (facts) linaw, clarify $_{\Lambda}$ liwanag, elucidate∧ tiyák, confirm_∧

LOOK

OBSERVE sipat, $sight_{\Delta}$ silip, $sight_{\Delta}$ asintá, $sight_{\Delta}$ tanáw, $view_{\Delta}$ usisà, $look_{\Delta}$ lente, $flashlight_{\Delta}$

p^tibay, affirm_A

tukóy, $pinpoint_{\Delta}(which)$

kilala, *identify* $_{\Lambda}$ (which)

IDENTIFY

p^hatì, $give_{\Delta\Delta}a$ -half-each pp^aral, $give_{\Delta}a$ -scholarship pp~talo, give_∧a-prize **COMFORT** doctór, doctor gamót, $treat_{\Lambda}(patient)$ masahe, $massage_{\Delta}$ hilot, $massage_{\Lambda}$ p-galing, *make*_∧*recover* p-lamíg, *make*_∧*cool-down* p-tulog *make*_∧*fall-asleep* p-tahimik, make, quiet-down **SERVE** aruga, *nurture* $_{\Lambda}$ buhay, *maintain* $_{\Lambda}$ kalinga, $foster_{\Delta}$ p-laki, raise_{Λ} p-suso, give $_{\Lambda}$ to-suckle p-inóm, $give_{\Lambda}to$ -drinkp-kain, *give*_∆to-eat p-tukâ, give∧*to-peck* p^almusál, give, breakfast **TRAIN** bihasa, accustom $_{\Lambda}$ wili, interest_∧ sanay, $train_{\Lambda}$ akáy, guide_{Δ} p-galing, *make*_△*expert* p-lakás, *make*∆*formidable* p-baít, *make*_∧*tame* p^isá, *make*_∧go-solo p^aral, *make*_∆train

ASK

CALL tawag, call_Δover katok, call_Δby-knocking p-lapit, call_Δnear p-babâ, call_Δdown p-labás, call_Δout INTERVIEW tanóng, interview_Δ kumustá, ask_Δhow-are-you? secreto, ask_Δsecretly panayám, interview_Δ usisà, interview_Δ singíl, ask_Δfor-payment pulong, confer-with_Δ

p-daan, $let_{\Delta}pass$ p-kain, $let_{\Delta}eat$ p-tulog, *let*_{\(\lambda\)}sleep p-pasok, $let_{\Delta}enter$ p-alís, $let_{\Lambda} leave$ p-lapit, *let*_∧*approach* p^tapós, *let*_∆*finish*-doing **CARRY** buhát, $lift_{\Lambda}$ pasán, shoulder $_{\Lambda}$ cargá, carry∧ kipkíp, *clutch* $_{\Lambda}$ dalá, $carry_{\Lambda}$ sunong, $carry_{\Lambda}on$ -head kalong, $sit_{\Lambda}on$ -lap p-sakáy, *let*∧*ride* **ASSUME** iwì contract-raise∧ ampón, $adopt_{\Lambda}(needy)$ kupkóp, take_∧under-wing akò, assume_{Λ} sponsor, $sponsor_{\Delta}$ anák, sponsor₁as-a-godchild p^tapós, *have*_∧*finish*-studies **ENDURE** tiís, endure tiyagâ, suffer $_{\Delta}$ pasán, bear haráp, $face_{\Delta}$ (consequences) tanggáp, $accept_{\Lambda}(cost)$ lunok, $swallow_{\Lambda}(pride)$ pilì, $choose_{\Lambda}(burden)$

WANT

PLAN
balak, $intend_{\Delta}$ plano, $plan-on_{\Delta}$ isíp, think-of-doing_{\Delta}
p-kulô, $cook_{\Delta}(plan)$ up
SEEK
hanap, $seek_{\Delta}$ tunton, $track_{\Delta}$ hukay, dig- for_{Δ} siyasat, $research_{\Delta}$ usisà, $inquire_{\Delta}$ alám, $inquire_{\Delta}$ kumusta, ask- $after_{\Delta}$

PURSUE

p-tabâ, fatten $_{\Delta}$ p-itít, $give_{\Delta}to$ -absorb p^tibay, strengthen

FIX

STRAIGHTEN ayos, straighten $_{\Lambda}$ sukláy, comb₁into-place plantsa, $iron_{\Lambda}$ tuwid, straighten_∧ derecho, straighten∧ banat, stretch_∆taut higit, *pull*_∆taut unat, $stretch_{\Lambda}$ out pantáy, even∧out hagod, *spread*∆evenly p^^pareho, $set_{\wedge\wedge}alike$ $p^{\wedge \wedge}$ pantay, $set_{\wedge \wedge}even$ CONNECT tahî, sew_{\lambda}together ipit, clamp_∆together p^^kabít, $hold_{\Delta\Delta}together$ p^{\wedge} dikít, *stick* $_{\Delta\Delta}$ together p^^dugtóng, $link_{\Delta\Delta}together$ p^^buhól, $knot_{\Delta\Delta}together$ $p^{\wedge \wedge}$ isa, join $_{\wedge \wedge}$ together **ORGANIZE** ayos, $arrange_{\Delta}$ bigkís bundle_{\wedge} likaw, $coil_{\Lambda}$ likom, $roll_{\Lambda}(sheet)$ ipon, gather $_{\Lambda}$ tumpók, $heap_{\Delta}$ organizá, *organize* $_{\Lambda}$ (pieces) p^{\wedge} isá, bundle_{$\Lambda\Lambda$}together p^{\wedge} pareha, *pair*_{$\Delta\Delta$}together $p^{\ sabáy}$, $set_{\Delta\Delta}in$ -tandem p^^sama, $put_{\Lambda\Lambda}together$ p^{\wedge} sunód, set_{\wedge} successive p^^tabí, $set_{\wedge\wedge}side$ -by-side p^{\wedge} lapit, set_{\wedge} close-together $p^{\wedge \wedge}$ patong, $set_{\wedge \wedge} overlying$ p^^salubóng, $set_{\Delta\Delta}head$ -on p^^tapát, $set_{\Delta\Delta}opposite$ p^haráp, $set_{\Delta\Delta}facing$ p^^talikód, $set_{\Delta\Delta}aboutfaced$

 p^{\wedge} dikít, *set*_{$\Delta\Delta$}touching

subok, $spy-on_{\Delta}$ dungaw, *view*∆*from window* yukô, *look*∧by *bending* over lingón, *look-back-at*_∆ p~tood, view_∧ **MEASURE**

cuenta, $compute_{\Delta}$ tuós, compute_∧ bilang, $count_{\Lambda}$ sukat, measure_{Λ} takal, $measure_{\Lambda}(volume)$

timbáng, weigh $_{\Lambda}$ inventario, inventory $_{\Lambda}$ usig, $prosecute_{\Lambda}(case)$

litis, *litigate* $_{\Lambda}$ calculá, calculate tanteá, estimate_A

STUDY

isip, *think* $_{\wedge}$ over aral, $study_{\Lambda}$ (problem) suri, diagnose_A

salát, $palpate_{\Lambda}$ hipò, $feel_{\Lambda}$

haplós, $stroke_{\Lambda}(surface)$ pisíl, *squeeze*_∆to-test

tuktók, knock_∆ tiyák, inspect_∧

kilatís, appraise_∧ butingting, disentangle_{Δ}

salà. $filter_{\Lambda}(data)$

kilala, $decipher_{\Delta}$

sundót, $poke_{\Delta}$ amóy, $smell_{\Lambda}$

himáy, dissect

basa, $read_{\Delta}$ (situaiton)

RESTORE

ayos, fix_{Λ} componé, repair∧ buô, reconstruct_∧ p^{\wedge} tamà, $set_{\Delta\Delta}aright$

meeting, confer-with, k-usap, consult-with Λ

INVITE

tanong, *invite* $_{\Delta}$ yayà, invite_{Λ} invitá, *invite* $_{\Delta}$ usap, $recruit_{\Delta}$

bayani, $recruit_{\Lambda}(volunteer)$ pick-up, *solicit*_{\(\lambda\)}(sexworker)

PERSUADE tuksó, $tempt_{\Lambda}$ halina, $attract_{\Lambda}$ akit, bequile_{Λ} hikayat, $persuade_{\Delta}$ himok *entice*∧ suyò, woo∧ sintá, $court_{\Lambda}$

hamon, challenge $_{\Lambda}$ campaña, woo_{Λ} (supporter) convincé, *convince*∧into

adhikâ, hope∧ mithî, wish_{Δ}

pita, aspire_{Λ} layon, aspire_{Δ}

sikap, endeavor $_{\Lambda}$ habol, $pursue_{\Lambda}$

ambición, ambition∧ asintá, target_A

abót, reach-to-attain_∧

p~arap, $dream_{\Lambda}$ **DESIRE**

dasál, $pray_{\Lambda}$ limós, beg_{Λ} hiling, request_{Λ} hirám, borrow_{Λ}

tawad, *ask-for*_∧*as-discount*

utang, $loan_{\Lambda}$

hingî, ask- for_{Λ}

vale, $advance_{\Lambda}$ on-earnings tomado, *advance*∧on-wages

EXPLORE

galugad, scour-around_{\wedge} hukay, dig-into_{\wedge} salaksák, poke-into∧ halukay, rummage-through $_{\Lambda}$ halungkát, ransack∧ kalkál, *scrounge-around*_∧

tuklás, $explore_{\Lambda}$ silip, $probe_{\Lambda}$ kutingting, $troubleshoot_{\Lambda}$ usisà *probe*∧ pasok, explore $_{\Lambda}$ operá, *operate-on*∧

	EN	ND	
UNMAKE	COUNTER	OFFEND	OBTAIN
ERASE	ABANDON	ATTACK	LEARN
DELETE	CANCEL	TARGET	VERIFY
burá, $erase_{\Delta}$	bawì, $rescind_{\Delta}$	bomba, $bombard_{\Delta}$	piho, $ascertain_{\Delta}$
pawì, $erase_{\Delta}$	cancel, $cancel_{\Delta}$	bató, $stone_{\Delta}$	segurado, $ascertain_{\Delta}$
pahì, $erase_{\Delta}$	annul, $annul_{\Delta}$	tira, $shoot_{\Delta}$	tiyák, <i>verify</i> $_{\Delta}$
delete, $delete_{\Delta}$	REPLACE	baríl, shoot∆w <i>gun</i>	liwanag, bring _∆ to- <i>light</i>
limot, $forget_{\Delta}$	bago, discard _∆ for-the- <i>new</i>	panà, shoot _∆ with- <i>arrow</i>	DISCOVER
p-tawad, $forgive_{\Delta}(debt)$	iba, $change_{\Delta}$ for-another	sibát, shoot _∆ with- <i>spear</i>	tuklás, $discover_{\Delta}(truth)$
DESTROY	CONCLUDE	sumpít, shoot _∆ with- <i>blowgun</i>	alám, $learn_{\Delta}(truth)$
wasak, $destroy_{\Delta}$	tapos, end_{Δ}	silaw, <i>blind</i> ∆ <i>with-light</i>	batíd, $find_{\Delta}out$
gibâ, $demolish_{\Delta}$	putol, $cut_{\Delta}(action)$ short	PUNISH	MEMORIZE
basag, $shatter_{\Delta}$	DISOBEY	buntál, $punch_{\Delta}$	aral, $learn_{\Delta}(song)$
$sirà, ruin_{\Delta}$	labág, $violate_{\Delta}(a law)$	hampás, $strike_{\Delta}$	memoria, $memorize_{\Delta}$
punit, $tear_{\Delta}up$	salungát, $disobey_{\Delta}$	suntók, $punch_{\Delta}$	ABSORB
gutay, <i>tear</i> _∆ to-pieces	suwáy, $disobey_{\Delta}$	sampál, $slap_{\Delta}$ (cheek)	diníg, $hear_{\Delta}$
sunog, $burn_{\Delta}$	sirà, $break_{\Delta}$ (promise)	birá, hit_{Δ}	huli, $catch_{\Delta}(words)$
putók, $burst_{\Delta}$	balewala, $disregard_{\Delta}$	salpók, $bang_{\Delta}$	intindí, $comprehend_{\Delta}$
p-sabog, $explode_{\Delta}$	CONTROL	sipà, <i>kick</i> ∆to-hurt	unawà <i>understand</i> _∆
EXPEND	CONTROL	siko, $elbow_{\Delta}$	hagíp, $catch_{\Delta}$ (meaning)
gastá, $spend_{\Delta}$	STOP	umpóg, $headbutt_{\Delta}$	$p\sim tood$, $watch_{\Delta}$
gamit, $expend_{\Delta}$	pigil, $prevent_{\Delta}$	batutà, $club_{\Delta}$	1655
gastos, $spend_{\Delta}$	awat, $quench_{\Delta}(fire)$	hagupít, $batter_{\Delta}$	MEET
lustáy, $splurge_{\Delta}$	ampát, $stanch_{\Delta}$	bugbóg, $pommel_{\Delta}$	RECEIVE
aksayá, $waste_{\Delta}$	pisíl, $squeeze_{\Delta}$ to-constrict	golpé, $maul_{\Delta}$	abót, <i>reach</i> -to-receive _{Δ}
ubos, $exhaust_{\Delta}$	kurót, $pinch_{\Delta}$ to-constrict	pingot, <i>twist-the-ears-of</i> $_{\Delta}$	tanggáp, $accept_{\Delta}(delivery)$
saíd, $exhaust_{\Delta}$	ipít, $clamp_{\Delta}$	kurót, $pinch_{\Delta}$ to-hurt	sahod, $collect_{\Delta}(wages)$ CATCH
sunog, $burn_{\Delta}(capital)$	bigkís, tourniquet _{Δ}	pitík, $flick_{\Delta}$ on-knuckles	
pera, exchange _∆ for- <i>money</i>	p-tigil, $make_{\Delta}$ (motion) $stop$ RELIEVE	palò, $spank_{\Delta}$	sambót _{Δ} catch _{Δ} into-hand(s)
kuwarta, exchange $_{\Delta}$ for- <i>cash</i>	·	latigo, $lash_{\Delta}$	salô, $catch_{\Delta}$ into-safety
KILL	gamót, $cure_{\Delta}$	sinturón, $belt_{\Delta}$	sahod, <i>catch</i> ∆into-vessel WELCOME
patáy, $kill_{\Delta}$	himás, rub_{Δ} (pain)away	dale, hit_{Δ}	yapós, hug_{Δ} on-arrival
katay, $slaughter_{\Delta}$	haplós, $stroke_{\Delta}$ (pain)away kamot, $scratch_{\Delta}$ (itch)away	p-tulog <i>knock</i> ∆out	yakap, $embrace_{\Delta}$ on-arrival
lason, $poison_{\Delta}$	_\ /	p-bagsák, <i>knock∆down</i>	welcome, $welcome_{\Lambda}$
bitay, $hang_{\Delta}by$ -the-neck	masahe, <i>massage</i> ∆away	p-tumbá, <i>knock</i> ∆ <i>down</i>	p-tawad, $forgive_{\Delta}(sinner)$
sakál, $strangulate_{\Delta}$	hilot, <i>massage</i> _∆ away	p-iyák, <i>make∆cry</i> -in-pain	k-batî, reconcile-with Λ
salvage, <i>execute</i> _∆ ex-judicio	$tapik$, $pat_{\Delta}(pain)$ away	p^sisi, <i>make</i> ∆regret	k-batt, reconcile-with $_{\Delta}$ k-sundô, recocile-with $_{\Delta}$
massacre, $massacre_{\Delta}$	p-galing, make∆heal	p^bayad, <i>make₄pay</i>	AWAIT
ubos, $exterminate_{\Delta}$	p-babà, <i>m</i> _∆ (pulse) <i>subside</i> MODULATE	MISTREAT	hintáy, $await_{\Delta}$
saíd, $eradicate_{\Delta}$	patay, turn _{Δ} off	galáw, $molest_{\Delta}$	antáy, $await_{\Delta}$
lipol, $mow_{\Delta}down$	control, $control_{\Delta}$	abuso, $abuse_{\Delta}$	p-tunog, wait-for Δto -sound
putol, $cut_{\Delta}down$	p-labò, $make_{\Delta}dimmer$	gahasà, $rape_{\Delta}$	p-tawag, <i>wait-for</i> _{\(\Delta\)} to-call
buwál, $fell_{\Delta}$	p-dilím, $make_{\Delta}darker$	iyót, $fuck_{\Delta}$	p tawag, wan-jor gio-can
lansag, $overthrow_{\Delta}$	p-diffit, <i>make</i> ∆ <i>darker</i> p-bagal, <i>make</i> ∆ <i>slower</i>	halay, $molest_{\Delta}$	FETCH
tabás, <i>mow</i> ∆down	p-bagai, make stower	lapastangan, $maltreat_{\Delta}$	121011

dale, $kill_{\Delta}$ powersaw, $chainsaw_{\Delta}down$ p-bagsák, $collapse_{\Delta}$ p-tumbá, $fell_{\Delta}$

REDUCE

CRACK

bayó, *pound*∧*heavily* dikdik, *pound* $_{\Delta}$ *lightly* giling, $grind_{\Lambda}$ durog, $crumble_{\Lambda}$ kaskás, *shave* $_{\Delta}$ (ice) kayod, $grate_{\Lambda}$ pino, refine $_{\Lambda}$ pulbós, pulverize basag, crack, bungkál, till DIVIDE hatì, $divide_{\Lambda}$ biák, *crack*∧*in-two* baak, *split*∆*in-two* punit, tear_∧in-two balì, $break_{\Delta}(length)$ in-two patid, cut_{Λ} into-lengths putol, cut_{Λ} in-two lagarì, *saw*∧in-two gupít, $snip_{\Lambda}$ in-two sibák, *chop*∧ tadtád, $mince_{\Delta}$ tilád, *slice*∧*end-to-end* gayat, slice $_{\Lambda}$ tablá, slice_∆into-*planks* p^dalawá, *divide*_∧*into-two* p^tatló, $divide_{\wedge}into-three$ p^apat, $divide_{\Lambda}into$ -four SORT salà, *strain* $_{\Lambda}$ himáy, debone $_{\Lambda}$ p^bukód, $separate_{\Lambda\Lambda}(kinds)$ p^ibá, differentiate_{$\Lambda\Lambda$} p^hiwaláy, distingish_{\lambda\lambda} $p^{h}ibá$, $sort_{\Lambda}$ p^bukód, *sort*∧ $p^{\wedge}hiwa$ láy, $sort_{\Delta}$ DISSOLVE tunaw, dissolve_{Λ} lusaw, $melt_{\Lambda}$

bulók, *compost*∆

p-babà, $make_{\Delta}(pitch) lower$ p-liit, $make_{\Delta}(flame) smaller$ p-babâ, $make_{\Delta} descend$ WITHHOLD ipit, $withhold_{\Delta}$ tipíd, $stint_{\Delta}$ p-tagál, $make_{\Delta}(supply) last$ p^kasya, $make_{\Delta} suffice$ p^hustó, $make_{\Delta} suffice$

EXCLUDE

ELIMINATE

alís, eliminate, tanggál, eliminate∧ pili, exclude_∧ hirang, $exclude_{\Lambda}$ cesante, $terminate_{\Lambda}(worker)$ sipà, $kick_{\Lambda}$ (member)out p-talsík, $fire_{\Delta}(worker)$ p-alís, *send*_∧packing **REMOVE** alís, remove_{Λ} tanggál, $remove_{\Delta}$ tagtág, loosen tastás, unstitch $_{\Lambda}$ tukláp, $peel_{\Delta}off$ kalás, detach∧ kutkót, *scrape*∧off hubád, *take*_{\(\rangle\)}(clothes)off hubô, $take_{\Lambda}(pants)$ off saíd, remove∧all limás, $bail_{\Lambda}$ (water)out hukay, dig_{Λ} (earth)out hawan, $clear_{\Lambda}$ (weeds)out **SUBTRACT** bawas, *subtract* ∆away gupít, $snip_{\Delta}$ away lagarì, *saw*∧away putol, cut_{Δ} away tabas, *trim*_∧away dukit, *gouge*_∆away ukit, *carve*∆away paét, *chisel* ∧away katám, *plane*∧away liha, $sand_{\Lambda}$ away kikil, *file* $_{\Delta}$ away operá, remove_{\(\lambda\)} by *surgery*

amputate, amputate_{Δ}

salbahe, $savage_{\Delta}$ baboy, $slobber_{\Delta}$ walanghiyâ, $defile_{\Delta}$ hiyâ, $humiliate_{\Delta}$ samantala, $exploit_{\Delta}(weak)$ p-iyák, $make_{\Delta}cry$ -in-shame OPPRESS abá, $humble_{\Delta}$ apí, $bully_{\Delta}$ dustá, $oppress_{\Delta}$ siíl, $repress_{\Delta}$ alipin, $enslave_{\Delta}$ usig, $persecute_{\Delta}$

PREVENT

ARREST

aresto. $arrest_{\Lambda}$ dakíp, nab_{Λ} huli, nab_{Λ} bihag, take *captive* **CONFINE** harang, $block_{\Lambda}$ ipit, constrict $_{\Lambda}$ antala, $delay_{\Lambda}$ detená, detain DISCOURAGE awat, $separate_{\Lambda\Lambda}$ fighters sawáy, reproach∧ diciplina, discipline bará, cut_{Λ} (speaker) off pigil, dissuade_{\wedge} tapid, $trip_{\Lambda}(runner)$ p-tahimik, *silence*∧ p-tigil, make_{\(\right)}desist $p^{\wedge}ingat, warn_{\wedge}$ p^{\wedge} hiwaláy separate_{AA}(foes) p^^layô, break_{ΔΔ}(foes)apart FEND sawatà, $foil_{\Lambda}$

DENY

DISAPPOINT bigô, $disappoint_{\Delta}$ deny, $deny_{\Delta}$ satisfaction busted, reject_{Δ}(suitor)

salág, fend_∆with-*shield*

sanggá, $fend_{\Delta}$

patid, $trip_{\Delta}(foe)$

WITHDRAW hila, $pull_{\wedge}out$ higít, $vank_{\wedge}out$ bunot, $draw_{\Lambda}$ out hangò, $lift_{\Lambda}(pot)$ out-of-fire hugot, $pull_{\wedge}out$ dukot, *fetch*∧*out-of-hole* **HARVEST** ani, $harvest_{\Lambda}$ hukay, $dig_{\Lambda}up$ limás, $dredge_{\Lambda}up$ pitás, $pick_{\Lambda}(fruit)$ by-stem tibâ, $harvest_{\Lambda}(bananas)$ bunot, $uproot_{\Delta}(plant)$ gapas, $reap_{\Lambda}(grain)$ katás, extract_{Δ}(*juice*) gatas, $express_{\Lambda}(milk)$ **DEDUCT** bahagì, take (share-of)piraso, take_{Δ}(*piece*-of) tipák, $chip_{\Delta}$ pilas, $tear_{\Delta}(page)$ from punit, $tear_{\Delta}$ (fragment) from bulos, take $_{\Lambda}(second\text{-}serving)$ hangò, *ladle*∧out bawas, *subtract*_∆from pili, take_{\(\(\lambda\)}(choice-piece) **GATHER** pulot, $pick_{\Lambda}up$ -w-hand dampót, $pick_{\Lambda}up$ -w-fingers dakót, $pick_{\Delta}up$ -w-dustpan ipon, gather_∆up walis, sweep $_{\Lambda}up$ kalaykáy, *rake*∧*up* imis, $clear_{\Lambda}$ (mess)up pala, $spade_{\Lambda}up$

ACQUIRE

GRAB

abót. reach-to-hold $_{\Delta}$ yapós, $clutch_{\Delta}$ sakmál, $grab_{\Delta}by$ -the-teeth kabig, $scoop_{\Delta}back$ tinidór, $fork_{\Delta}$ tusok, $impale_{\Delta}$ sipit, $clamp_{\Delta}$ dakót, $scoop_{\Delta}up$ -w-hands tabò, fetch $_{\Delta}$ with-a-dipcan

RID

CLEAN cepillo, toothbrush $_{\Lambda}$ kuskós, scrub∧ kusót, $handwash_{\Lambda}(fabrics)$ lampaso, mop_{Δ} brush, $brush_{\Delta}$ sabón, $soap_{\Lambda}$ linis, clean, hilod, $scrub_{\Lambda}(skin)w$ -stone tuyô, patdry $_{\Lambda}$ p-putî, *clean*_∆*to-a-white*

p-kintáb, *clean* $_{\Lambda}$ *to-a-shine* CLEAR kalbó, denude∧ hawan, *clear* ₀of limás, $dredge_{\Delta}(pond)$ of patag, *level*_{\(\Delta\)}by-scraping hukay, $dig_{\Lambda}(ground)$ p-lalim, deepen_∧ **DECREASE** gupít, $snip_{\Delta}$ to-shape

lagarì, saw_∧to-size putol, cut_{Δ} to-size pantáy, $cut_{\Delta}even$ ly tabas, $trim_{\Lambda}(cloth)$ to-shape prune, $prune_{\Delta}$ dukit, $gouge_{\Lambda}$

p-iklî, *shorten*∧ p-igsî, shorten_∧ p-liit, $reduce_{\Lambda}(size)$ p-babà, *lower*_A(height)

p-gaán, $lighten_{\Lambda}(weight)$ **DRAIN**

pigâ, wring_∧ pagpág, *shake*_∆(sheet)*clean*

takták, tap_{\(\right)}(container)clean salaksák, $poke_{\Delta}(hole)$ clean saíd, $emptv_{\Lambda}$ (container) of

p-tulò, $drain_{\Delta}$ (container)

RUIN

p-dugô, $bleed_{\Delta}$ p-tiktik, drain_∧

p-tuyo, leave_∆to-dry

DEFORM pipî, squas h_{Λ}

bugaw, *drive*∆away pitík, *flick*∧away hampás, $swat_{\Delta}$ away paspás, *swat*∆away sipà, *kick*∆away p-talsík, $slap_{\Delta}away$ p-alis, *send*_∆*away*

REJECT

DISMISS

EXPEL

bálewalâ, disregard $_{\Lambda}$ boycott, boycott snob, $snob_{\Lambda}$ p-lampás, *let*_∧*pass* m-liít, think-*little*-of_∧ **MOCK** lait, vilify $_{\Lambda}$ puná, deprecate_{Δ} mura, $curse_{\Lambda}$ insulto, $insult_{\Lambda}$ alipustá, $mock_{\Lambda}$

hamak, $mock_{\Lambda}$ m-liít, be*little*∧ **ASSAIL**

batikos, *harangue*_∧ tuligsâ, *assail*∧ ataque, $attack_{\Lambda}$ usig, $impeach_{\Lambda}$ sisi, $accuse_{\Lambda}$ **OPPOSE**

salungát, $dispute_{\Lambda}$ taló, *contradict* $_{\Lambda}$ kontra, $oppose_{\Lambda}$ questión, question $_{\Lambda}$ deny, $denv_{\Lambda}$ k-laban, oppose_{\wedge}

p-iyák, *leave*_∆*in-tears* p^hintáy *let*∧*wait* **DEPRIVE**

kalbó,make,*bald* panot, close- $crop_{\Delta}(pate)$

capón, castrate_A tulì, *circumcise*[∧]

STARVE pagod, tire_{Λ} gutom $_{\Lambda}$ starve $_{\Lambda}$

gipít, put_{Λ}in-a-squeeze sakál, strangle $_{\Lambda}$

p^isá, *put*_∧*in-solitary* **CHEAT**

lugi, deprive $_{\Lambda}$ of-profit harang, $rob_{\Lambda} of$ -profit samantala, *cheat*_∧*of-gain*

TRICK

DAZZLE silaw, $dazzle_{\Lambda}$

bulag, *blind*_{\∆}to-the-truth duling, make, see-double

STUPEFY kulam, bewitch $_{\Lambda}$ gayuma, *charm* $_{\Lambda}$ hypnotize, hypnotize $_{\Lambda}$

lasing, intoxicate, CONFUSE guló, confuse

tarantá, fluster $_{\Lambda}$ litó, *befuddle*∧ ligáw, disorient_∆ hibáng, drive, *crazy*

hilo, make∧dizzy p-ikot, $put_{\Delta}in$ -a-tizzyDECEIVE

ulól, $fool_{\Delta}$ linláng, defraud_∧ loko, $dupe_{\Delta}$ bola, play_∧false

yabang, $bluff_{\Lambda}$ kaliwâ, cheat-on_∆ kunwarì, deceive_{Λ} kuryente, *disinform*∧

utô, sucker $_{\Lambda}$

secreto, keep-secrets-from

sandók, ladle salok, $scoop_{\Delta}$ cuchara, spoon pala, shovel $_{\Lambda}$ **CLAIM**

angkín, $claim_{\Delta} for$ -oneself agaw, $preempt_{\Delta}$ sakop, *claim* $_{\Lambda}$ *among*

sakláw, *claim*_∆*within* samsám, forfeit sarili, $monopolize_{\Lambda}$

bawì, reclaim_∧ kaniyá, claim, *for-his-own*

kamkám, *appropriate*∧ pirata, pirate_{Λ}

nakaw, $steal_{\Lambda}$ dukot, *picpocket*[∧] kupit, $filch_{\Lambda}$ kuha, get_{Δ}

bawì, $recover_{\Lambda}(advance)$ singíl, *exact* for-unpaid-debt

kita, $earn_{\Lambda}$ kuwarta, *profit* tubò, $profit_{\Delta}$ colecta, *collect*_{\(\lambda\)}(fee)

hiling, take as-bonus tawad, take_∆as-*discount* utang, take_∧on-loan vale, take_∆as-advance

tomado, take∧as-advance

kaltas, $deduct_{\Lambda}$ **CAPTURE**

bingwit, $hook_{\Lambda}(fish)w$ -line isdâ, *fish-for* $_{\Lambda}$

sungkit, *pick*∆*with-a-poke* kawit, $hook_{\Lambda}$

huli, $catch_{\Lambda}(prey)$ lambát, *dragnet*∧ silò, lasso sambát, net_{Λ}

BUY

bilí, $buy_{\Lambda}(product)$ kuha, $purchase_{\Lambda}$ angkát, import pakyáw, buy∧*wholesale*

tubós, redeem_∧

pirat, <i>crush</i> ∆ <i>flat</i>		
pikpík, $compress_{\Delta}$	1	
pukpók, <i>hammer</i> ∆into-shape	1	
dukit, $poke_{\Delta}(icing)$		
yupî, $dent_{\Delta}$		
gusót, <i>wrinkle</i> $_{\Delta}$		
lukot, $crumple_{\Delta}$	1	
pilipit, $twist_{\Delta}$		
baluktót, bend _∆ <i>crooked</i>		
kulót, $curl_{\Delta}$	1	
balì, $bend_{\Lambda}$		
BREAK	1	
tagâ, $slash_{\Delta}$		
saksák, $stab_{\Delta}$		
tusok, $pierce_{\Delta}$		
hiwà, $slit_{\Delta}$		
butas, $puncture_{\Delta}$		
barena, $drill_{\Delta}$		
biák, <i>split</i> ∆open		
punit, <i>tear</i> _∆ open		
putol, <i>cut</i> -through _{Δ}		
gupít, <i>snip</i> -through _{Δ}		
patíd, $pull_{\Delta}(\text{string })apart$		
bali, <i>bend</i> ∆ <i>apart</i>		
sirà, <i>break</i> ∆open		
DISARRANGE		
buwag, $dismantle_{\Delta}$		
kalas, $unbind_{\Delta}$		
tastas, $unstitch_{\Delta}$		
sirà, <i>break</i> ∆(order)		
guló, disarrange $_{\Delta}$		
p^{\wedge} hiwaláy, separate _{$\Delta\Delta$} (pair)		
p^{\wedge} layô, $set_{\Delta\Delta}(pair)$ apart		
ALTER		
i bá, <i>alter</i> _∆		
bago, <i>change</i> $_{\Delta}$ around		
baligtád, $reverse_{\Delta}$		
doctór, $doctor_{\Delta}(original)$		
dayà, <i>cheat</i> $_{\Delta}$ (results)		
p^^ibá, <i>make</i> _{ΔΔ} <i>not-match</i>		
p^{\wedge} sala, $put_{\Delta\Delta}out$ -of-synch		

Table 3. The English keywords

-IN

BEGIN							
advance				make			
exe	cute	energize		produce		work	
speak	perform	move	propel	invent	create	form	cook
fulfill	accomplish	push	operate	cause	collect	mature	mix
indicate look		sup	ply	fi	X		
designate	praise	observe	measure	complete	dress	straighten	connect
identify	discuss	explore	study	fill	increase	restore	organize
adopt				add	ress		
fol	low	u	se	aro	use	anin	nate
revive	copy	engage	utilize	greet	touch	rouse	disturb
obey	try	savor	consume	tease	entertain	compel	urge
acc	ept	Wa	ant	benefit		ask	
approve	carry	intend	seek	gift	comfort	call	interview
endure	assume	desire	endeavor	train	serve	persuade	invite
			EN	ND			
	cou	nter		unmake			
abar	ndon	con	trol	erase reduce		uce	
cancel	replace	stop	relieve	delete	destroy	crack	divide
disobey	conclude	withhold	modulate	kill	expend	dissolve	sort
exc	lude	rej	ect	ri	d	ru	in
eliminate	remove	ignore	mock	clean	clear	deform	break
expel	subtract	oppose	assail	drain	decrease	alter	disarray
obtain			offend				
learn meet		attack prevent					
verify	discover	receive	catch	target	punish	arrest	confine
absorb	memorize	await	welcome	oppress	mistreat	fend	discourage
fetch acquire		deny trick		ck			
fet							
fet withdraw	harvest	grab	claim	disappoint	deprive	dazzle	stupefy

BIBLIOGRAPHY

- Begley, Sharon. "Mapping the Brain," Newsweek, 20 April 1992, 44-50.
- Cadiot, Pierre. "The French verb monter as a challenge to the status of spatial reference." Conference paper, *L'espace dans les langues*. Paris, 2003.
- Calvin, William H. 1996. *How Brains Think: Evolving intelligence, then and now.* Seattle: Basic Books
- Chomsky, Noam. 1957. Syntactic Structures. The Hague: Moughton &Co.
- —. 1965. Aspects of the Theory of Syntax. Cambridge: MIT Press.
- —. 1966. *Cartesian Linguistics*. New York: Harper & Row.
- ——. 1975. *Reflections on Language*. New York: Pantheon Books.
- ——. 1980. Rules and Representations. Cambridge: MIT Press.
- Cone, Robert J. 1991. *How the New Technology Works: A Guide to HIgh Technology Concepts*. Phoenix: Oryx Press.
- Constantino, Ernesto. 1965. "The Sentence Patterns of Twenty-Six Philippine Languages," *Lingua* 15:71-124. Amsterdam: North Holland Publishing.
- —. 1970. *The Deep Structure of Philippine Languages*. University of the Philippines, Diliman.
- ——, ed. 1977. *Selected Writings of Cecilio Lopez in Philippine Linguisites*. University of the Philippines, Diliman.
- Culioli, Antoine. 1994. "Continuity and Modality" in *Continuity in linguistic semantics*. C. Fuchs, B. Victorri, edd. Amsterdam: John Benjamins, 21-32.
- —. 1995. Cognition and Representation in Linguistic Theory. Amsterdam: John Benjamins.
- ——. "Subjectivity, Invariance, and the Development of Forms in the Construction of Linguistic Representations" in C. Fuchs, S. Robert 1999, 37-51.
- Damasio, Antonio R. and Hanna. "Brain and Language," *Scientific American*, September 1992, 62-71.
- Davies, Philip J. & Reuben Hersh. 1981. *The Mathematical Experience*. Boston: Houghton Mifflin.
- Fuchs, Catherine. "Diversity in Linguistic Representations" in C. Fuchs, S. Robert, 1999, 3-19.
- —— & Stéphane Robert, edd. 1999. *Language Diversity and Cognitive Representations*. Amsterdam: John Benjamins.
- Fischbach, Gerald D., Carla Shatz, Semir Zeki etal. Special "Mind and Brain" edition. *Scientific American*, September 1992, 24-110.
- Gates, Bill. 1995. The Road Ahead. New York: Viking Penguin.
- Gutin, Jo Ann. "A Brain That Talks," Discover, July, 1992, 82-90.
- Hofstadter, Douglas R. 1979. *Goedel, Escher, Bach: An Eternal Golden Braid.* New York: Basic Books.
- Kutas, Marta & Mireille Besson. "Electrical Signs of Language in the Brain" in C. Fuchs, S. Robert 1999, 59-178.
- Jakobson, Roman. "Implications of Language Universals for Linguistics." Harvard University.
- Langacker, Ronald W. "Constructional Integration, Grammaticization, and Serial Verb Constructions," Proceedings of the First Cognitive Linguistics Conference.
- Lehmann, Winfred P. 1983. Language: an introduction. New York: McGraw-Hill.
- Lemonick, Michael D. "Glimpses of the Brain," *Time*, 17 July 1992, 44-52.
- Lopez, Cecilio. 1937. Preliminary Study of Affixes in Tagalog. Manila: Bureau of Printing.
- —. 1941. A Manual of the Philippine National Language. Manila: Bureau of Printing.

- —. 1962. *Ang Balarila ni Rizal*. Tagalog translation of *Estudios Sobre la Lengua Tagala* by Jose Rizal 1893. Manila: Benipayo Press.
- —. 1981. *A Grammatical Comparison of Malay and Tagalog*. Cecilio Lopez Archives of Philippine Languages. University of the Philippines, Diliman.
- McFarland, Curtis. 1989. *A Frequency Count of Filipino*. Manila: De La Salle University Press. Negroponte, Nicolas. 1996. *Being digital*. New York: Vintage Books.
- Oshea, Tim, John Self, Glan Thomas, edd. 1987. *Intelligent Knowledge-Based Systems*. London: Harper and Row.
- Ozanne-Rivierre, Françoise. "Spatial Orientation in some Austronesian Languages" in C. Fuchs, S. Robert 1999, 73-84.
- Panganiban, Jose Villa, Antonia F. Villanueva, and Antonio D.G. Mariano. 1948. *Balarilang Pinagaán*. Committee on the National Language. Manila: Bureau of Printing.
- Patterson, Dan W. 1990. *Introduction to Artificial Intelligence and Expert Systems*. London: Prentice Hall International.
- Rieber, Voyat. 1983. Dialogues on the Psychology of Language and Thought.
- Robert, Stéphane. "Cognitive Invariants and Linguistic Variablity: From Units to Utterance" in C. Fuchs, S. Robert 1999, 21-35.
- Rothstein, Edward. 1995. *Emblems of Mind: The Inner Life of Music and Mathematics*. New York: Random House.
- Slobin, Dan I. "What makes manner of motion salient?" Conference paper, *L'espace dans les langues*. Paris, 2003.
- Swerdlow, Joel. "Quiet Miracles of the Brain" National Geographic, June 1995, 2-41.
- Talmy, Leonard. "Spatial Structuring in Spoken Language and its Relation to that in Sign Language." Conference paper. Paris: Ecole Normale Superiore, 1991.
- Vandeloise, Claude. "Are there spatial prepositions?" Conference paper, *L'espace dans les langues*. Paris, 2003.
- Young, J. Z. 1978. Programs of the Brain. London: Oxford University Press.

DICTIONARIES

Appleton's Revised Cuyás Dictionary. 1953.

Diksyunaryo-Tesauro Pilipino-Inggles. Jose Villa Panganiban. Lungsod Quezon: Manlapaz Publishing, 1972.

Funk & Wagnall's Standard College Dictionary. 1975.

National Language-English Vocabulary. Institute of National Language. Manila: Bureau of Printing, 1950.

Penguin English Dictionary. G.A. Garmonsway. Middlesex: Penguin Books, 1969.

Roget's International Thesaurus. 1962.

Roget's Theasurus of English Words and Phrases. Robert A. Dutch. Middlesex: Penguin Books, 1973.

Collins Spanish-English Dictionary. B. Sanin Cano, ed. London: Collins Press.

The Shorter Oxford English Dictionary on Historical Principles. Oxford: Oxford University Press, 1973.

Tagalog-English Dictionary. Leo James English. 1986.

Webster's Dictionary of the English Language. New York: Lexicon, 1989.

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