THE ORIGIN OF LANGUAGE

decoding the tagalog grid and its rule of four

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AUTHOR'S PREFACE

thou ill-formed offspring of my feeble brain
- Anne Bradstreet, 1650s

the story of the grid is the trail of a long string of eurekas, come in bits and pieces, and leaps and bounds. when i am lucky i am able to write them up as they come, to return to when there is enough to merit a report, when i sort them into some order, beef sentences up, and then essay to string them up into a credible story.

the grid is a difficult story to tell. it is a big story for one and it is all new for another. what is more, it is a story about language, and one cannot be too careful about the choice of words, to do it justice. the grid turns language into a matrix of semantic categories never before catalogued in such detail. the job is to discover these categories and name them in english in the most credible and accessible terms. so that each choice of english keyword turns into a meditation upon the uniqueness of each grammatical set, its full range of synonyms and its logical relation to its foursomes and immediate neighbors in the grid.

writing about the grid has been like inventing a science from scratch. there is throughout a call for mathematical precision, logical structure, scientific consistency, and 'the right word'.

the complete story of the grid is yet to be told. only four affix sets of sixteen are now gridded. but the general outlines are there, enough, i trust, to make a credible story for the interested to make judgments in favor of it. it is language at work nothing more.

the language of the grid of course is only as good as the data in play. it now derives entirely from my bilingual database of tagalog and english forms. the more multilingual the database the better defined will be the grammatical sets and the generic cum genetic verbs embraced. as with all human information, the less data the more fuzzy the level of understanding. the more data the deeper and more complex the structure of one's knowledge and comprehension.

a thorough gridding of the twelve other affix sets of tagalog is in order if we are to arrive at a complete and definitive picture of the entire thing, what would amount to a kind of language genome for all languages. i see no shortcuts of the digital kind to fasttrack the work. one cannot really guess at what kinds of verbs belong with what affix set. the nuances in verbs are too fine and subtle and, until gridded properly, their true values are too theoretical for programming.

there is nothing for it but hard work, by able and accomplished tagalog speakers prepared to put in the kind of time needed to arrive at solutions. it took me thirty years to arrive at the current grids of the four affix sets—UM, *UM*, IN, *IN*. using now the four as templates, i imagine a concerted effort by separate teams gridding different affix sets producing useful results in much better time. a good place to start is the exercise in *IN* at the very end (p. 13).

l. u. s.
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THE ORIGIN OF LANGUAGE

by luis umali stuart

1

the origin of language in humans has ever been a mystery to all thinkers on the subject over the centuries. it is a major unsolved problem in linguistics. in these latest readings of the tagalog-english grid, we are led to a theory of it, bringing together the evidence of mathematics, biology, and biochemistry in an evolution story of language unexpectedly quantum in its conclusions.

the tagalog grid is a 256x256 digital array of tagalog verbs carefully organized into semantic sets following mathematically significant surface markers in the grammar of tagalog sentences.

the tale of the grid's discovery and the logic that drives it is told in essentially three reports archived at lingbuzz: 'the grid of language' (000996)‡, the 'amazing rule of four' (002823)‡, and 'the perfection of um' (005807)‡.

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the first report (march 2010) tells of the emergence of not one but two 2x2 mathematical permutations in a study of tagalog's verb phrases, in particular in the working habits of its roots and affixes in the construction of sentences.:

q1	inflected affix	simple affix
repeated syllable	present	future
simple root	past	possible

q2	non-volitional	volitional
doer focus	happen	do
object focus	happen to	do to

it is proposed that there are a eight quadrisections altogether in a grid of verbs. a q1q2q3q4 to complete the surface structure of a sentence, and a parallel q5q6q7q8 to distinguish each sentence semantically, on the strength of its particular verb.

it concludes with results with the volitional –in affixed verbs, demonstrating the feasibility of a semantic deconstruction of a 1,783 verb set into a 4x4x4x4 grid of 256 distinct and well-defined grammatical sets, a giant step forward for the grid.

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the second report (february 2016) uses the IN grid as template to flesh out the grids of three other affix sets, first the non-volitional *IN*, and then the UM and *UM*, from the effort would emerge the eight foursomes below of verbal categories as a picture od the eight quadrisections are separately contributing to the unique semantic of each sentence and verb in the language.

	q1	q2	q3	q4	q5	q6	q7	q8
a	present	event	monitor	input	move	commence	perform	activate
b	past	outcome	program	output	change	conclude	execute	enact
c	future	initiative	driver	location	send	start	deliver	transact
d	possible	result	computer	target	work	finish	apply	interact

it ends with the extrapolation from the data of a rule of four, a qθ (q-zero) behind all of q1 to q8, being a source foursome in the very make-up of the human organism, apparently working in unison and entirely responsible for the generation and use of information that we experience as language:

qθ	
SENSES	MOTORS
MEMORY	BRAIN

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the third report (february 2020) digs deeper into the supposed role of qθ in the work of language. it ends with the unveiling of a probable 2x2 permutation of qθ itself, grounding tagalog's grid of verbs squarely in the comfortable lap of human physiology and science:

	autonomic system	voluntary system
in progress	SENSES	MOTORS
in place	MEMORY	BRAIN

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picking it up from ‘perfection’ the immediate task was to re-appraise, and re-work where needed, the surfaced UM, UM, IN, and *IN* grids in consonance with the newly emerged permutation linking language directly to our peripheral and central nervous systems. the result is tables 1-4 (see p. 9), the four grids now keyed to our nervous systems, as it were.

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a greater goal was to derive from the once-perfected grids such meaningful verbal patterns as might reconstruct the 2x2 permutations governing the six quadrisections q3-q8, after the examples of q1 and q2.here is how the effort has added up thus far:

q1	peripheral	central		q5	self	other
motion	present	future		do	move	send
action	past	possible		make	change	work
q2	unconsc..s	conscious		q6	here	there
cause	event	initiative		begin	commence	start
effect	outcome	result		end	conclude	finish
q3	activated	motivated		q7	on	over
agent	monitor	driver		go	perform	deliver
actor	program	computer		come	execute	apply
q4	given	chosen		q8	from	to
component	input	location		bring	activate	transact
product	output	target		get	enact	interact

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q1
the tense
motion or action? peripheral or central?

in the first quadrisection q1 we learn that the role of the tenses in our sentences is only to inform us *where* the information is coming from in the nervous system—from which branch of qθ. trivially, we might say that the senses speak to our consciousness in the present tense, memory in the past tense, our motors in the future tense, and the brain in the possible tense.

q2
the verb
conscious or unconscious? cause or effect?

the same q2 applies whatever the tense is in q1. it tells us that tenses all operate along the same lines, all sorting out and distributing information in the same way. this allows the different branches of the nervous system to communicate with each other, and conflate into the consciousness that we experience and turn into language.

not less intriguing is the iplication that each tense, each quarter of the nervous system, has its own conscious and unconscious parts, and its own causative and effective parts. it implies that peripheral and central are more intricately entwined than current maps of the nervous system might suggest.

q3
the doer
activated or mobilized? agent or actor?

q3 is about the instruments of the nervous system (the ‘doers’ of the actions) in computer parlance, the senses are monitors that receive and transmit, memory is a store of programs on file and for use, the motors are the drivers linking up the different parts, and the brain is the cpu that keeps things under control.

in tagalog the verbal affixes -um-, mag-, mang-, and ma- happen to mark this foursome. um actions are by sensors at work, ma actions by programs at work, mag actions by drivers at work, mang actions by computers at work..

q4
the object
component or product? given or chosen?

in tagalog we use the verbal affixes i-, må-, -an, and -in to mark this foursome. in effect, i- objects are inputs by our sensors, må- objects are outputs of our memories, etc.. as in q3 and the volitional divide in q2, the quadrisection is unmarked in english.

q3 and q4 applies to all the quadrants of q2 and drives the syntactic transformations that shift the focus between doer and object in a sentence, and by their ambiguous use for both volitional and non-volitional verbs tells us a common algorithm deep at work.

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q1 to q8

behind all the eight quadrisections is qθ. for every quadrisection, each semantic category is associated with the corresponding element of qθ. in the table below, e.g., all semantic categories aligned, say, with ‘memory’ may be understood as the eight key elements of a sentence’s meaning that are associated with our organic memories.

	qθ	q1	q2	q3	q4	q5	q6	q7	q8
		TENSE	VERB	DOER	OBJECT	MODE	SETTING	FUNCTION	USE
a	SENSES	present	event	monitor	input	move	commence	perform	activate
b	MEMORY	past	outcome	program	output	change	conclude	execute	enact
c	MOTORS	future	initiative	driver	location	send	start	deliver	transact
d	BRAIN	possible	result	computer	target	work	finish	apply	interact

q1-q4 provide for the four essential elements of syntax in language—being {tense, verb, doer, object}—while q5-q8 account for the four essential elements in the semantics of the action in focus—being its {mode, setting, function, use}

in the way that linguists talk of tense sometimes as the time-aspect of a sentence, by the grid, we are to understand that altogether there are eight aspects to a sentence, four aspects for the surface syntax, and four for the deep semantic that underlies its particular verb. each quadrisection of the grid contributes one aspect of a sentence and it is the eight altogether that generate all the possibilities appearing to us in our mathematical grid of quadrisections.

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despite all that has been unraveled to us of the grid thus far, it is still only a fuzzy picture we have, still only the first glimmerings thrown us by just four of the sixteen affix sets of the language—only 4 megapixels out of 16 so to speak. it should all come clearer as more affix sets are gridded.

but already, there shines through the arrays of english keywords throughout something of the deeper underlying logic of tagalog's language grid and what it may be telling us of the true nature and workings of the language in us and its possible origins.

below, i endeavor to capture something of what i am seeing, to link the bits and pieces into a kind of cosmology of known things, as the grid tells it.

3

> [follows here 'the language of nature'—see ebook here—tracing the tagalog grid and its rule of four backward to its probable origins in the biology of things. here only is a little piece from towards the end, and the closing.]

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i recreate the genetic code [5:390] below. note especially how its set-up is a copy-and-paste of an exact quadrant of the grid of an affix set (see pp. 9-12).

THE GENETIC CODE							
1	2	3				4	5
		U	C	A	G		
5’	U	phenylalanine	serine	tyrosine	cysteine	U	3’
		phenylalanine	serine	tyrosine	cysteine	C	
		leucine	serine	stop	stop	A	
		leucine	serine	stop	tryptophan	G	
	C	leucine	proline	histidine	arginine	U	
		leucine	proline	histidine	arginine	C	
		leucine	proline	glutamine	arginine	A	
		leucine	proline	glutamine	arginine	G	
	A	isoleucine	threonine	asparagine	serine	U	
		isoleucine	threonine	asparagine	serine	C	
		isoleucine	threonine	lysine	arginine	A	
		methionine	threonine	lysine	arginine	G	
	G	valine	alanine	aspartate	glycine	U	
		valine	alanine	aspartate	glycine	C	
		valine	alanine	glutamate	glycine	A	
		valine	alanine	glutamate	glycine	G	

in a stunning surprise, we learn from the table that the genetic code of our cells’ messaging system apparently works on the very same principle of quadrisections as does the grid—even though, for some bio-logical reason, we are seeing only a 4^3 part of the grid’s 4^4, it is essentially the same mathematical creature at work.

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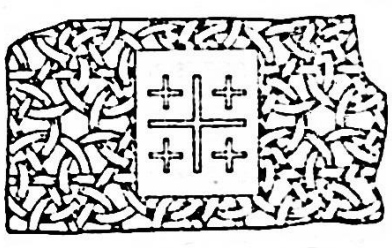
here is an interesting picture of things from something else altogether.



it is from fiction (james michener’s *the source*, 1965), a supposed shard of ‘muslim tracery with superimposed christian panel’. but what i see are two successive 2x2 permutations (q1q2) translating the interwoven memories of the species into language.

one can go on, but i shall end it here, echoing lord russell’s own sentiment:

> I do not pretend that the above theory can be proved. What I contend is that, like the theories of physics, it cannot be disproved, and gives an answer to many problems which older theorists have found puzzling. I do not think that any prudent person will claim more than this for any theory. [russell:27] ■

4
THE *UM*, UM, IN, *IN* GRIDS

find in the next pages the updated grids of the UM, *UM*, and *IN* affix sets. the last is deliberately left incomplete—the green and yellow keywords are missing—for the exercise in gridding that follows (p. 14)

all together the four grids represent an original database of 4,888 tagalog verbs in four affix sets, gridded into 1,096 mathematically-arrayed grammatical sets. all the tables are considerably changed since the earliest sightings, yet the 256 grammatical sets found for each affix set have generally remained constant with many foursomes intact.

in the present state, there are still residual movements only in q8, the last quadrisection —the white rows—where the grammatical sets still sometimes re-arrange and change keywords. it is the fuzzy, turbulent bottom of the pyramid, constantly in flux, never fixed with finality, marking as it does the deepest limits of our perception, cognition, expression, and imagination.

▪

q5q6q7q8 of *UM*							
IT MOVES SELF				*IT SENDS SELF*			
come	**pass**	**initiate**	**terminate**	**join**	**part**	**transit**	**locate**
PROCEED	ELAPSE	ROUSE	SUCCUMB	FOLLOW	DIVERT	PROPEL	STAY
exist	transpire	wave	collapse	imitate	adjust	flow	remain
recur	fleet	rock	tumble	conform	differ	advance	stall
advent	expire	trigger	conk	mix	avoid	fly	lodge
arise	lapse	quicken	flop	coincide	diverge	fall	suspend
APPEAR	DISAPPEAR	OBVERT	REVERT	ATTACH	DETACH	DISPERSE	HOLD
shine	vanish	stretch	contract	align	isolate	scatter	cling
flash	evanesce	stand	tilt	adjoin	withdraw	dangle	catch
dawn	set	open	close	connect	disconnect	overflow	ground
glow	flicker	position	overturn	stick	unstick	drain	clog
SOUND	RASP	UNLEASH	EXPEND	SUPPORT	DISLODGE	TRAVEL	LAND
rumble	snore	rain	pause	shield	lift	wend	touchdown
report	squeak	flood	stop	aid	slip	pass	impact
reverberate	belch	blow	cease	prop	slide	track	dock
resonate	gasp	waft	exhaust	boost	budge	bypass	reach
ENERGIZE	RUPTURE	SURGE	SUBSIDE	ATTRACT	REPEL	EMERGE	SINK
fume	crumble	swell	recede	pull	resist	spring	penetrate
ignite	split	tide	ebb	suck	recoil	spill	pierce
boil	curdle	secrete	stanch	induce	repulse	protrude	embed
smolder	burst	erupt	heal	lure	bounce	surface	submerge
IT CHANGES SELF				*IT WORKS SELF*			
transform	**alter**	**gain**	**lose**	**further**	**counter**	**produce**	**obtain**
DEFINE	DIM	THRIVE	WANE	RECEIVE	IMPEDE	PROVIDE	CONSUME
brighten	darken	endure	age	witness	block	serve	digest
color	fade	strengthen	weaken	behold	bar	fill	absorb
clear	cloudy	prosper	decline	experience	suppress	furnish	deplete
clarify	blur	peak	slacken	feel	arrest	supply	waste
FORM	DEFORM	INCREASE	DECREASE	ACCEPT	REJECT	SIGNIFY	COUNT
straighten	slant	multiply	diminish	abide	violate	render	measure
shape	curl	enlarge	reduce	regard	defy	reference	total
refine	roughen	grow	shrink	like	contradict	represent	contain
improve	worsen	elevate	drop	trust	doubt	mean	bear
MATURE	DEGRADE	EASE	DETERIOR8	DESIRE	WHELM	IMPART	ATTAIN
toughen	soften	temper	swelter	crave	ruin	cast	equal
thicken	dilute	settle	unsettle	require	raze	imprint	reach
flavor	spoil	correct	complicate	lust	impair	taint	catchup
scent	stink	recover	ache	dream	extinguish	influence	overtake
DEVELOP	REGRESS	SUCCEED	FAIL	THINK	FORGET	GENERATE	BENEFIT
enliven	depress	suffice	lack	remember	delete	reproduce	earn
behave	debase	fit	misfit	recognize	scrap	sprout	receive
braven	wary	match	miss	understand	skip	breed	yield
learn	retard	qualify	flunk	conceive	lose	engender	win

Table 1. The *UM* grid

q5q6q7q8 of UM							
I MOVE SELF				I SEND SELF			
express	**oppose**	**exert**	**relieve**	**interact**	**counteract**	**travel**	**situate**
VOICE	CRY	MOVE	REST	ASSOCIATE	DISSOCIATE	LAUNCH	SETTLE
recite	bawl	frisk	rest	attune	desert	wander	stay
utter	yowl	stir	bestill	ally	defect	startout	halt
sing	wail	wake	sleep	participate	withdraw	leap	shelter
speak	whine	pretend	relax	coordinate	dodge	dive	immerse
DECLARE	REFUSE	POSE	REPOSE	LINKUP	UNLINK	VACATE	OCCUPY
agree	deny	extend	kneel	accompany	disengage	descend	climb
consent	decline	stand	sit	join	backoff	unhand	hold
answer	objéct	get-up	recline	mate	escape	alight	mount
decide	complain	stiffen	bend	meet	evade	drop	hang
TELL	CRITICIZE	PROPEL	EXPEL	GIVE	DEPRIVE	TRAVERSE	TRANSFER
relay	fault	drive	discharge	care	abuse	track	close-in
mention	unmask	impel	exhale	contribute	deceive	access	enter
cheer	assail	throw	excrete	assist	delay	navigate	go-to
praise	reproach	thrust	eject	rescue	prevent	detour	sneak
SIGNAL	WARN	APPLY	DISPEL	ENJOIN	AGGRESS	DEPART	ARRIVE
address	growl	play	scratch	invite	fight	evacuate	gather
greet	rebuke	wield	swipe	prompt	hit	exit	come
notify	admonish	press	soothe	ask	attack	disperse	visit
call	caution	force	remedy	woo	shoot	embark	return
I CHANGE SELF				I WORK SELF			
confront	**beware**	**reinforce**	**regulate**	**choose**	**reject**	**devote**	**derive**
EXPOSE	HIDE	ENHANCE	LIMIT	SEE	DISMISS	ENGAGE	PARTAKE
peep	screen	prolong	shorten	watch	rebuff	serve	feed
uncover	cover	intensify	loosen	look	discount	attend	taste
emerge	conceal	maximize	minimize	study	disregard	tend	chew
surface	submerge	upgrade	underplay	inspect	shutoff	mind	sniff
UNFOLD	FOLD	GREATEN	LESSEN	FOLLOW	DISFAVOR	ASSUME	GRAB
openeye	shuteye	frequent	restrict	obey	disobey	use	claim
gape	closeup	enlarge	reduce	honor	sneer	keep	snatch
spread	twist	accelerate	decelerate	accept	refuse	carry	seize
smile	frown	raise	lower	believe	challenge	underwrite	steal
ORIENT	TURN	ARRANGE	REARRANGE	SEEK	ELIMINATE	INVEST	FETCH
face	aboutface	lead	fallback	hunt	destroy	stake	retrieve
faceup	facedown	position	interpose	search	remove	outlay	deduct
look	turnaway	line-up	sidestep	chase	eradicate	venture	draw
point	reverse	adapt	deviate	desire	kill	chance	catch
PREPARE	BEWARE	ASSIGN	RESIGN	PONDER	NULLIFY	CREATE	EXTRACT
ready	cower	head	relinquish	recall	discard	culture	harvest
brace	duck	sit	abscond	identify	erase	reproduce	purchase
await	ward	stand-in	quit	solve	omit	construct	extract
lookout	fend	oversee	surrender	devise	negate	invent	select

Table 2. The UM grid

q5q6q7q8 of IN							
I MOVE IT				I SEND IT			
transmit.	**dismiss.**	**mobilize.**	**dispose-of.**	**address.**	**aggress.**	**involve.**	**confine.**
SAY	VOID	FURTHER	EXPEND	PROVIDE	VICTIMIZE	FOLLOW	COLLECT
speak	retract	fulfill	spend	benefit	deprive	mimic	gather
reveal	annul	complete	deplete	gift	rob	obey	sweep
mention	omit	accomplish	exhaust	serve	maltreat	accompany	fetch
interpret	withhold	achieve	waste	train	oppress	engage	retrieve
DECLARE	REFUSE	PRESERVE	DISREGARD	JOIN	ATTACK	ACCESS	CONVEY
approve	disapprove	practice	violate	couple	hurt	pass	carry
proclaim	snub	repeat	misdo	embrace	hit	enter	clasp
affirm	deny	learn	ignore	approach	punish	tack	tow
confirm	disappoint	revive	forget	meet	fight	rush	rescue
ACCORD	FAULT	INITIATE	END	AROUSE	DISTRESS	CONDUCT	DETAIN
compliment	criticize	start	discontinue	entertain	disturb	command	restrict
favor	mock	trigger	cancel	impress	shock	deploy	capture
grant	oppose	propel	quit	tease	confuse	urge	arrest
gratify	assail	energize	abandon	incite	agitate	prompt	delay
ASK	BANISH	MANAGE	TREAT	LURE	MISLEAD	RELEASE	PREVENT
interview	discharge	manipulate	remedy	invite	daze	allow	disallow
dun	disqualify	handle	mend	call	dupe	free	fend
consult	evict	press	relieve	woo	deceive	unleash	restrain
quiz	depose	force	cure	tempt	trick	unburden	reproach
I CHANGE IT				I WORK IT			
form.	**transform.**	**modify.**	**vary.**	**value.**	**destroy.**	**venture.**	**obtain.**
ORGANIZE	REDUCE	BETTER	RID	SEE	SUNDER	AVAIL	CONSUME
assemble	crumble	bolster	clear	watch	dismantle	try	drink
construct	crush	reinforce	trim	look	collapse	use	swallow
arrange	divide	supplement	empty	examine	disarrange	absorb	eat
combine	dissolve	improve	drain	appraise	disband	savor	chew
FASHION	DEFORM	SUPPLY	REMOVE	ACCEPT	RUIN	RECREATE	SOURCE
shape	distort	furnish	strip	endure	bore	record	derive
fold	crumple	increase	excise	cherish	sever	replicate	deduct
level	deface	fill	pour	assume	break	copy	extract
style	disfigure	soak	detach	believe	demolish	render	select
CONVERT	SEPARATE	MANAGE	REGULATE	WANT	KILL	PURSUE	POSSESS
concoct	sort	calm	suppress	pray	slaughter	chase	claim
mix	part	comfort	shut	demand	slay	target	get
process	filter	nurse	limit	aspire	strangle	hunt	seize
mature	segregate	heal	conserve	await	exterminate	seek	catch
CREATE	MARK	FIX	CHANGE	STUDY	NULL	EXPLOIT	ACQUIRE
compose	distinguish	stretch	exchange	discern	raze	trade	harvest
produce	designate	straighten	replace	determine	explode	invest	stock
plan	sign	restore	adjust	compute	erase	develop	procure
contrive	fill-up	resolve	alter	analyze	neutralize	grow	earn

Table 3. The IN grid

q5q6q7q8 of *IN*							
SELF IS MOVED				OTHER IS SENT			
thrilled	sleepied	pained	edemaed	amused	disturbed	tracked	inhabited
excited	yawned	spasmed	hemorrhoidd	surprised	angered	circled	occupied
shuddered	fainted	fevered	suppurated	stimulated	disappointd	crossed	appropriatd
distressed	convulsed	diseased	bruised	astonished	surfeited	jumped	settled
shivered	dulled	erupted	accreted	swayed	deprived	enveloped	covered
chattered	numbed	ulcerated	deposited	quaked	disabled	shaded	coated
trembled	fatigued	inflamed	drained	waved	sapped	wrapped	filled
worried	cramped	infected	sloughed	fluttered	strangled	damped	packed
coughed	hoarsed	teared	congested	urged	scared	rained	flocked
sneezed	muted	dripped	clogged	incited	shooed	flooded	mobbed
burped	panted	sweated	constricted	persuaded	shamed	whipped	crowded
hiccupped	choked	hemorrhagd	constipated	provoked	remorsed	walloped	rushed
aroused	hungered	attacked	blistered	pulled	disoriented	entered	invaded
piqued	thirsted	irritated	whealed	sucked	confused	penetrated	infiltrated
excited	starved	agitated	swelled	challenged	dizzied	pierced	swarmed
enthused	parched	deranged	contused	tempted	dazed	injected	overrun
SELF IS CHANGED				OTHER IS WORKED			
teethed	blemished	prolonged	aged	witnessed	prevented	fulfilled	swallowed
nailed	discolored	lasted	weakened	perceived	aborted	finished	absorb
haired	dirtied	extended	feebled	experienced	blocked	filled	digest
bearded	grimed	stretched	impaired	felt	fended	completed	consume
skinned	cracked	accelerated	decelerated	respected	violated	generalized	measured
scaled	wrinkled	increased	decreased	honored	reversed	represented	numbered
coated	caked	relieved	constrained	loved	altered	affirmed	contained
callused	scarred	sufficed	pressed	cherished	damaged	established	managed
sprouted	frayed	regulated	sweltered	desired	razed	imitated	encompassd
sapped	rotted	restored	chilled	needed	removed	repeated	seized
extruded	rusted	eased	stressed	hoped	destroyed	followed	snatched
exuded	decomposed	controlled	uncontrolled	dreamt	eradicated	referenced	caught
enthused	disinclined	blessed	denied	conceived	disintegrated	worked	earned
delighted	depressed	contented	deprived	recalled	bursted	made	inherited
encouraged	discouraged	favored	fated	imagined	extinguished	created	derived
aroused	disinterested	triumphed	failed	apprehendd	erased	realized	won

Table 4. The *IN* grid

AN EXERCISE IN GRIDDING

table 4 (p. 13) is deliberately left incomplete for this exercise. find next page my working database for the *IN* affix set, 427 tagalog root words that turn, in my vocabulary, into useful non-volitional verbs when fitted with an *-in* suffix.

read each root with an *-in* attached to obtain the particular tagalog verb indicated. many of the roots are distinguished by diacritical marks; as usual the *malumay* (iambic) form is unmarked.

the interested gridder is invited to attempt to

1. grid the database down to 256 grammatical sets. roots that repeat indicate that in my gridding they re-appear in different grammatical sets of the affix set, each time signifying some other meaning of the verb.

2. see if your grammatical sets will distribute perfectly behind the 256 keywords—the white bars in table 4—of my own results. expert speakers who add to the list may come up with different results, correcting mine and improving table 4.

3. select english keywords—absent in table 4—for each foursome of q7 (the yellow bars) and q6 (the green bars), avoiding if possible keywords already appearing in tables 1-3, unless perfectly indicated.

4. if you speak a third language, meticulously translate your *IN* database into it and discover how similarly or differently a third language might fill up the same grid.

5. using your results as template, do a fifth affix set of the tagalog grid on your own.

the volitional and non-volitional divide is unmarked in tagalog, as in english, and only manifests in q2 from the ambiguity of the affixes' semantic effects.

an interested gridder must be expert enough in the language, rich in the *sprachgefuehl* (the speech-feeling), and naturally sensitive to these two volitons in our sentences and the grammatical differences they generate in tagalog. *IN* is not an easy affix set to grid and will well test if someone is made for the job. ▪

THE *IN* DATABASE

abot
abot
abót
agád
agiw
agnás
ahas
akalà
alala
alala(han)
alangán
alipungá
alíw
almuranas
alóg
alon
alwán
alwán
amag
ambón
amos
anay
anggí
ani
anod
antók
apulá
atake
bagabag
bago
bagtás
bagyó
bahâ
bahíng
balahibo
balakubak
balát
balbás
baligtád
balisâ
baliswsáw
balot
balot
banás
banás
banggâ
bangungot
basag
baybáy
bayó
bintóg
bitag
bitin

buenas
bugaw
bugnót
buhay
buhay
buhók
bukbók
bukol
bulabog
bulag
bulaklák
bulból
bunga
bunggô
bunì
buo
buô
butlíg
butól
buwál
buwisit
buyó
completo
concencia
concreto
consumo
contrata
copia
dagâ
dagím
dagtâ
dahon
dalá
dalá
dalang
dalás
damá
damdám
damó
danas
dayo
dehado
delirio
dibdíb
dighál
digháy
duling
dumog
duwág
gabí
gabók
gahól
galák

galíng
galís
galit
galos
gana
gandá
gapók
garantia
gastá
gatô
gawâ
gaya
gibâ
gigil
gináw
gipit
gising
giyáng
gubat
gulat
guló
gutom
guyam
hagupít
hakà
halimbawà
hambalos
hamóg
hamon
hangin
hanip
hapò
hapò
harang
hatsíng
higop
higop *suck*
hikà
hikab
hila
hila
hilig
hilo
himatáy
himbíng
himulmól
hinalà
hingal
hingalô
hirap
hiyâ
hubád
hulog

hustó
ibá
ibig
ídolo
ikot
iníp
inís
ipit
ipon
irog
isip
istorbo
ití
itít
kabá
kabag
kabig
kailangan
kain
kaladkád
kalawang
kalawang
kalbó
kaliskis
kalyo
kalyo
kamít
kandí
kapós
katawán
katí
katí
kaya *capbl*
kilabot
kilala(n)
kilíg
kita
kukó
kulang
kulangot
kulimlím
kulubót
kupas
kuto
labág
labis
lagas
lagnát
lahát
lamad
lamán *cap*
lamat
lambót

lamíg
lamók
lamuymóy
langaw
langgám
lasáp
lasíng
lason
latâ
laway
libág
libág
libáng
libog
ligaw
ligid
likhâ
limit
lindól
lingkís
lintóg
lipád
lipol
litó
liyo
lubóg
luhà
lulà
lulan
lumot
lungkót
luwág
m^damág
m^hapon
mahál
malas
malát
mana
manás
manghâ
manhíd
multó
muni
mutà
nervios
ngalay
ngambá
ngatál
ngatóg
ngawit
ngiló
ngimay
nginíg

ngipin
ocupá
p^yaman
p~ambá
padpád
pagâ
pagod
palad
paltós
panaginip
panalo
pangarap
panimdím
paniwalà
pantál
paos
pasâ
pasmá
pasok
patáy
patáy
pawis
pekas
peklat
peklat
pera
pigil
pigsâ
problema
pudpód
puksâ
pulikat
pulikat
punô
putlâ
putók
putol
puyat
rayuma
regla
sabík
sabík
sagana
sahod
saíd
saíd
sakál
sakláw
sakop
salà
salág
salantâ
salát

salô
salpók
samâ
sambót
samíd
santó
sapantaha
saráp
sariwaà
seguro
sikíp
sikmurà
silaw
sinat
sindák
singáw
sinók
sipag
sipón
sipsíp
sirà
sorpresa
sugat
sugod
sugpô
sumpóng
sundô
sunód
sunog
sunsón
suot
surot
suweldo
suwerte
suyà
tabáng
tagál
tagihawat
tagláy
tagumpáy
tahimik
takot
talón
tamád
tamasà
tamlày
tamó
tanáw
tandâ
tangáy
tanggál
tanggáp
tanghalì

tao
tapang
tapos
tapos
tarantá
tawíd
tibíi
tingalâ
tiyák
totoó
trancaso
tubò
tuksó
tuláy
tumal
tumbá
tunaw
tunaw
tupád
turók
tusok
tutóng
tutulí
ubó
ubó
ubos
ubos
udyók
ugâ
ugát
uhaw
uhog
ukab
ulán
ulap
ulit
ulop
ulót
umaga
umay
umok
unos
uod
usóg
uyam
wagayway
warì
wasak
yamót
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writing under lockdown and poor signal conditions, i have relied mostly on these sources from my shelves for the technical stuff:

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