### Classification of nominal compounds containing mimetics: a Construction Morphology perspective

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### 1. Introduction

Data: <u>Nominal Compounds containing Mimetics (NCMs)</u>

(1) a.	hokahoka-gohan	b.	bata-ashi	c.	mune-kyun
	MIM(warm)-rice		MIM(fluttering)-leg		heart-MIM(wrung)
	'warm delicious-looking rice'		'flutter kick (of swimming)'		'feeling emotional'

-Kageyama and Saito (2016):

• Identify combinatory patterns (e.g. Mimetic + Native Japanese: *garagara-hebi* 'rattle snake') -Yang (2013): Semantic classification

Major category	# of token	Sub-category	Example (Mimetic in italics):
Nature	3	Weather	karakara-tenki 'dry-weather'
(11/215=5.1%)	7	Water/liquid	shitoshito-ame 'drizzling-rain'
	1	Earth/fire	toro-bi 'simmering flame'
Human	44	Manner	burabura-aruki strolling-walk
(111/215=51.6%)	25	Emotion/sensation	(1c)
	22	Characteristics	baribari-kisha 'bright and eager news reporter'
	20	Physique/figure	(1b)
Object	27	Movement/change	bikkuri-bako 'jack-in-he-box'
(93/215=43.3%)	56	Shape/condition	(1a)
	7	Sound/instrument/money	chinchin-densha 'surface car'
	3	degree	doka-yuki 'heavy snow fall'
Total:	215		

Goal:

-To examine how mimetics participate in word-formation of nominal compounds.

-To argue that NCMs are part of the inheritance hierarchy for nominal compounds, building on Booij (2010: 7); the top node of the hierarchy diverges according to the head position, and the next lower nodes diverge into the categories 'attributive-appositive' and 'subordinate', adapted from Scalise and Bisetto's (2009) classification.

### Organization:

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### 2. Preliminary

### 2.1 Lexical categories in Japanese

		0	Non-mimetic	Mimetic
(2)	a.	noun (N):	Ame <sub>(N)</sub> da. rain COP	ponpon 'tummy in child language'
	b.	verb (V):	'It is rain.' <i>nomu</i> 'drink', <i>suru</i> 'do'	<i>dókidoki suru</i> (mimetic+ <i>suru</i> 'do') (Reduplicated: accented) <i>yukkuri suru</i> 'relax'
	c.	adjective (A)	Ookii <sub>(ADJ)</sub> . big 'It's big.'	N/A
	d.	adjectival noun (AN)	Yuuga <sub>(AN)</sub> da. elegant COP 'It is elegant.'	<i>Betobeto da.</i> (Reduplicated: unaccented) sticky COP 'It is sticky.'
	e.	verbal noun (VN)	Sookin <sub>(VN)</sub> suru. sending.money do 'send money'	,
	f.	adverb (Adv)	<i>boozen to</i> 'blankly', <i>gakuzen to</i> 'in terror'	hírahira (to) 'flutteringly' yukkuri (to) 'slowly', kon to 'tap'

#### 2.2 Inheritance hierarchy of nominal compounds

Construction Morphology  $\rightarrow$  a hierarchical lexicon (Booij 2010) = "inheritance tree"; "each node inherits the properties of its dominating nodes" (Booij 2010: 25).

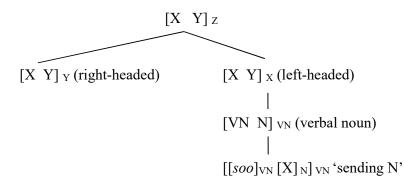


Figure 1: Noun compound schema for Japanese (Booij 2010: 70)

-A preliminary examination of NCMs : right-headed (with some exceptions).

-The right-headed NCMs can be classed into: Scalise and Bisetto's (2009) 'attributive-appositive' and 'subordinate' compounds.

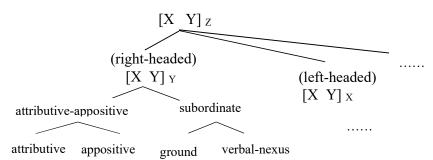


Figure 2: Partial network of nominal compounds in Japanese

# 3. Classification

# 3.1. Attributive compounds: subtype of attributive-appositive type

ä	-	ght-headed] tive-appositive					
high	ributive   h schoo e-eyed	snailmail	(adapte	d from	n Scalise and E	Bisetto (2009: 50)	
(3)	a.	[kinoko <sub>N</sub> - gumo <sub>N</sub> ] <sub>N</sub>	mushroom-	cloud	s 'clouds that	t look like mushro	ooms'
	b.	$[teppoo_{N}-ame_{N}]_{N}$	bullet-rain		ʻrain that m	oves fast like bull	lets of the gun'
(4)	a.	Attributive-type com [ganko <sub>AN</sub> -	pounds: [X <sub>[n</sub> , <i>oyaji</i> <sub>N</sub> ] <sub>N</sub>		(non-MIM)]-Y[head: born-man	א[[א stubborn man'	
	b.	[kansoo <sub>VN</sub> -	$hada_{N}]_{N}$	J <sub>N</sub> dry-skin		'dry skin'	
	c.	[yawa <sub>AN</sub> -	$hada_{N}]_{N}$ sof		skin	'soft skin'	
	d.	[00 <sub>ADJ</sub> -	$otoko_{\rm N}]_{\rm N}$	big-1	man	'giant'	
(5)	a.	[ <i>ganko</i> <sub>AN (NON-MIM)</sub> - stubborn 'stubborn man'	<i>oyaji</i> <sub>N</sub> ] <sub>N</sub> man		<i>ganko</i> stubborn	<i>na</i> COP.ATTR	<i>oyaji</i> man
	b.	[ <i>kansoo</i> <sub>VN (NON-MIM)</sub> - drying 'dry skin'	<i>hada</i> <sub>N</sub> ] skin	N <b>←</b>	<i>kansoo shita</i> drying do.PA	<i>hada</i> sst skin	
	c.	[ <i>yawa</i> <sub>AN (NON-MIM)</sub> - soft 'soft skin'	<i>hada</i> <sub>N</sub> ] skin	N <b>←</b>	<i>yawaraka</i> soft	<i>na</i> COP.ATTR	<i>hada</i> skin
	d.	[ <i>oo</i> <sub>A (NON-MIM</sub> )- big 'giant'	otoko <sub>N</sub> ] <sub>N</sub> € man	-	<i>ookii</i> big	<i>otoko</i> man	
(6)		Attributive-type com					
	a.	[purunpurun <sub>(MIM)</sub> -	zerii <sub>N</sub> ] <sub>N</sub>		ly-jelly	'jiggly jelly'	
	b.	[ <i>tsurutsuru</i> (MIM)-	hada <sub>N</sub> ] <sub>N</sub>		oth-skin	'smooth skin'	
	c.	[botteri <sub>(MIM)</sub> -	$bara_{N}]_{N}$	plun	np-belly	'plump belly'	
(7)	a.	[gachigachi <sub>(MIM)</sub> -	oyaji <sub>N</sub> ]	N	hard-man	'stubborn mar thinking is inf	n (man whose way o lexible)'
	b.	[chirichiri <sub>(MIM)</sub> -	atama <sub>N</sub>	-	frizzy-head	'frizzy-haired	head'
	c.	[ <i>mojamoja</i> (MIM)-	$ude_{N}]_{N}$		shaggy-arm	'shaggy-haired	d arm'

of

(8)	a.	[ <i>tsurutsuru</i> <sub>AN (MIM)</sub> - smooth 'smooth skin'	hada <sub>N</sub> ] <sub>N</sub> ← skin	<i>tsurutusuru</i> MIM	<i>no</i> COP.ATTR	<i>hada</i> skin
cf.	b.	[ <i>yawa</i> <sub>AN (NON-MIM</sub> )- soft 'soft skin'	hada <sub>N</sub> ] <sub>N</sub> ← skin	<i>yawaraka</i> soft (non-MIM)	na COP.ATTR	<i>hada</i> skin
(9)	a.	[ <i>botteri</i> <sub>VN (MIM)</sub> - plump 'plump belly'	$bara_{N}]_{N} \leftarrow$ belly	botteri MIM	<i>shita</i> do.PAST	<i>hara</i> belly
cf.	b.	[ <i>kansoo</i> <sub>VN (NON-MIM</sub> )- dry 'dry skin'	hada <sub>N</sub> ] <sub>N</sub> ← skin	<i>kansoo</i> dry (non-MIM)	<i>shita</i> do.PAST	<i>hada</i> skin

(10) Summary on attributive-type NCMs

a. The mimetics that participate in NCMs: AN, and VN

b. The head nouns combined with mimetics: similar to those combined with non-mimetic words, such as a body part and an object with a particular attribute.

Schema for attributive nominal compounds in Japanese:

(11) 
$$\langle [X_i - N_j] N_k \leftrightarrow [SEM_j \text{ with attribute SEM}_i]_{SEMk} \rangle$$
  
(Note: SEM<sub>j</sub> can be metonymically construed.)

(12) 
$$(x_i - hada ('skin')_{N_j}] N_k \leftrightarrow [skin (of someone) with attribute SEM_i]_{SEMk} >$$

(13) 
$$[X_{VNi}-hada_{Nj}]_{Nk} \qquad [X_{ANi}-hada_{Nj}]_{Nk} \qquad \dots \qquad \dots$$
  
(14) 
$$[kansoo_{VNi}-hada_{Nj}]_{Nk} \qquad [X_{AN (NON-MIM)i}-hada_{Nj}]_{Nk} \qquad [X_{AN (MIM)i}-hada_{Nj}]_{Nk} \qquad \dots \qquad \dots$$
  
(14) 
$$[yawa_{ANi}-hada_{Nj}]_{Nk} \qquad [tsurutsuru_{AN (MIM)i}-hada_{Nj}]_{Nk} \qquad [baribari_{AN (MIM)i}-hada_{Nj}]_{Nk} \qquad \dots \qquad \dots$$
  
(15) 
$$(13) \qquad (13) \qquad (13$$

Figure 3: Partial sketch of the hierarchical network of nominal compounds (Attributive type)

(14')	a.	[gachigachi <sub>(MIM)</sub> -	hada $_{\rm N}$ ] $_{\rm N}$	'rough skin'
	b.	[(MIM)-	$hada_{N}]_{N}$	'hard skin'
	MIM=	<i>baribari</i> 'dry and rough'		
		zarazara 'unsmooth'		
		gorigori 'hard'		
		jikujiku 'wet'		
		betabeta 'sticky'		
		mochimochi 'soft'		
		tsurutsuru 'smooth'		
		subesube 'smooth'		
		gitoito 'oily'		
		pukupuku 'plump' etc.		

## 3.2 Subordinate

[Right-headed] subordinate ground verbal-nexus mushroom soup book seller windmill tree eater street seller (adapted from Scalise and Bisetto 2009:50)

## 3.2.1. Subordinate compounds: Ground type

Ground-type compounds:  $[X_{[non-head: (non-MIM)]} - Y_{[head: N]}]_N$ 

(15)	a.	[omocha <sub>N</sub> -	$bako_{\rm N}]_{\rm N}$	toy-box	'toy box'
	b.	[benkyoo <sub>vn</sub> -	$beya_{N}]_{N}$	studying-room	'room to study'
	c.	[naga <sub>A</sub> -	$ame_{N}]_{N}$	long-rain	'rain that lasts for a long time'
	d.	[sokuseki <sub>AN</sub> -	<i>ryoori</i> <sub>N</sub> ] <sub>N</sub>	instant-dish	'instant dish'
	e.	[kaijuu <sub>N</sub> -	$eiga_{N}]_{N}$	monster-movie	'monster movie'

## (16) Ground-type compounds: $[X_{[non-head: (MIM)]}-Y_{[head: N]}]_N$

a.	[ <i>shitoshito</i> (MIM)-	ame $_{\rm N}$ ] $_{\rm N}$	drizzling-rain	'gentle rain'
b.	[hisohiso (MIM)-	$goe_{N}]_{N}$	whisper-voice	'whispered voice'
c.	[ponpon (MIM)-	jooki <sub>N</sub> ] <sub>N</sub>	chug-steamship	'steamship that chugs'
d.	[dotabata (MIM)-	$eiga_{N}]_{N}$	romping.about- movie	'slapstick motion picture'
e.	[gisugisu (MIM)-	<i>shakai</i> <sub>N</sub> ] <sub>N</sub>	edgy-society	'society characterized by friction and discord'
f.	[bikkuri (MIM)-	<i>bako</i> <sub>N</sub> ] <sub>N</sub>	surprise-box	'jack-in-the-box'

(17)	a.	[ <i>shitoshito</i> <sub>ADV (MIM)</sub> - drizzling	ame <sub>N</sub> ] <sub>N</sub> ← rain	<i>shítoshito</i> <sub>ADV</sub> MIM	<i>huru</i> fall	<i>ame</i> rain		
		'drizzling rain'		'rain that falls drizz	ingly'			
	b.	[ <i>hisohiso</i> <sub>ADV (MIM)</sub> - whisper	$goe_{N}]_{N} \leftarrow$ voice	<i>hísohiso</i> <sub>ADV</sub> MIM	<i>hanasu</i> talk	<i>koe</i> voice		
		'whispered voice'		'voice of people talking <i>in a whisper</i> '				
	c.	[ponpon ADV (MIM)-	jooki <sub>N</sub> ] <sub>N</sub> ←	pónpon ADV	susumu	jooki		
		chug	steamship	MIM	proceed	steamship		
		'steam passenger launch	n that chugs'	'the steamship that proceeds chug-chug'				
	d.	[ <i>dotabata</i> ADV (MIM)- romping.about	$eiga_{N}]_{N} \leftarrow$ movie	<i>hito ga dótal</i> people NOM MIM	oata <sub>ADV</sub> ugok mov			
		'slapstick motion picture'		'the movie in which people move <i>romping-about</i> '				

(18)	a.	[ <i>bikkuri</i> <sub>VN (MIM)</sub> - surprise 'jack-in-the-box'	$bako_{N}]_{N} \leftarrow box$	ope		people		<i>bikkuri suru</i> MIM do vhen it is opene	<i>hako</i> box ed'
	b.	[ <i>gisugisu</i> (MIM)- edgy 'society characteri friction and discort	•	÷	<i>hito ga</i> people N 'society i	OM	MIM	<i>isu shi te iru</i> do CONJ BE are edgy'	<i>shakai</i> society
(19)	9) Schema for Ground type compounds in Japanese: $< [X_i - N_j]N_k \leftrightarrow [SEM_j \text{ with some condition SEM}_i]_{SEMk} >$								
(20)			$(\text{`rain'})_{Nj}]N_k \leftrightarrow [k$	rain v	with some	conditio	n SEM	SEMk	
(21)		[N <sub>i</sub> -ame <sub>Nj</sub> ] <sub>Nk</sub>	$[Adv_i - ame_{Nj}]_{Nk}$						
(22)		$ame_{Nj}]_{Nk}$ [Adv <sub>(NOP</sub>	$[N-MIM)_{i}$ - $ame_{Nj}]_{Nk}$	[A	.dv <sub>(MIM) i</sub> - an	$ne_{Nj}]_{Nk}$			
	' '	niwaka <sub>adv(NON-MIM)i</sub> -ame <sub>n</sub> sudden rain' re 4: Partial sketch of th	' <i>drizzling</i> r	ain'	5	' <i>heavy</i> rai	n'		

## 3.2.2. Subordinate compounds: Verbal-nexus type

		Verbal-nexus type of	compounds:	[X[non-head	l: (non-MIM)] <b>-</b> Y[head: V	/N]] VN
(23)	a.	$[yama_N - a]$	ruki <sub>vn</sub> ] <sub>vn</sub>	mountai	in-walking	'mountain walking'
	b.	[yoko <sub>ADV</sub> - b	uri <sub>vn</sub> ] <sub>vn</sub>	diagona	lly-falling	'(rain) coming slanting down'
	c.	$[haya_{ADV} - n]$	$e_{\rm VN}]_{\rm VN}$	early-sle	eeping	'going to bed early'
	d.	$[uzu_{N}-$ n	1aki <sub>vn</sub> ] <sub>vn</sub>	whirl-tu	Irning	'whirlpool'
	e.	$[Ori_{N}-$	$ume_{VN}]_{VN}$	box-pac	king	'packing (food) into a box'
	f.	$[mizu_{N-} n]$	$ure_{\rm VN}$ ] <sub>VN</sub>	water-g	etting.wet	'get wet (splashing) water'
(24)		Verbal-nexus type of	compounds:	[X[non-head	l: (MIM=MANNER)]-Y[he	ead: VN]] VN
	a.	[yochiyochi (MIM)-		<i>uki</i> <sub>VN</sub> ] <sub>VN</sub> toddling-walking		
	b.	[zaazaa (MIM)-	buri <sub>vn</sub> ]	vn po	ouring-falling	'raining <i>heavily</i> '
	c.	[goro (MIM)-	$ne_{\rm VN}]_{\rm VN}$	fl	opping-sleeping	'flopping down'
(25)	a.	[ <i>yochiyochi</i> <sub>ADV (MIM)</sub> toddling 'walking <i>toddle-toa</i>	walki	vn] vn ng	<i>yóchiyochi</i> <sub>AD</sub> MIM 'walk <i>toddle</i> ·	walk
	b.	[ <i>zaazaa</i> <sub>ADV (MIM</sub> )- pouring 'raining <i>heavily</i> '		n] vn g	<i>záazaa <sub>ADV</sub></i> MIM 'rain <i>heavily</i> '	<i>huru</i> fall
	c.	[goro ADV (MIM)- flopping ' <i>flopping</i> down'	<i>ne</i> <sub>VN</sub> ] sleep		<i>gorot to</i> <sub>ADV</sub> MIM QUOT 'flop down'	neru sleep

(26)		Verbal-nexus type compounds: $[X_{[non-head: (MIM=RESULTATIVE STATE)]} - Y_{[head: VN]}]_{VN}$					
	a.	[дуиидуии- (мім)-	<i>zume</i> $_{\rm VN}$ ] $_{\rm VN}$	being.squeezed- being.packed	'being jam-pack	ed'	
	b.	[guruguru (MIM)-	<i>maki</i> <sub>vn</sub> ] <sub>vn</sub>	going.round-wrap	'being coiled up	,	
	c.	[bisho (MIM)-	<i>nure</i> $_{\rm VN}$ ] $_{\rm VN}$	being.soaked- getting.wet	'being complete		
(27)	a.	[ <i>gyuugyuu</i> AN (MIM)- being.squeezed 'being jam-packed'	<i>zume</i> <sub>vN</sub> ] <sub>vN</sub> € being.packe		1		
	b.	[ <i>guruguru</i> AN (MIM)- going.round 'being coiled up'	maki <sub>vn</sub> ] <sub>vn</sub> € wrapping	- guruguru ni MIM COP. 'coil up some			
	c.	[ <i>bisho</i> AN (MIM)- being.soaked- 'being completely s	<i>nure</i> <sub>vN</sub> ] <sub>vN</sub> ← getting.wet oaked'	- bishobisho ni MIM COP. 'get soaking v	ADV get wet		
(28)		Verbal-nexus type compounds: $[X_{[non-head: N]}-Y_{[head: MIM]}]$					
	a.	[mune <sub>N</sub> - kyun	VN(MIM)] VN	chest-squeeze	'feeling emotior (as if your chest squeeze)'	· ·	
	b.	$[kabe_{N}- don_{V}]$	N(MIM)] VN	wall-banging	'(a man) banging his hand onto a wall while closing in on a female'		
	c.	[neko <sub>N</sub> - banbo	$an v_{N(MIM)}]v_N$	cat-banging	'knock knock ca banging (to save	/	
		( http://www2.nissan.co.jp/SOCIAL/CAMP/NEKOBANBAN/, cf. Naya and Ikarashi 2016)					
(29)	a.		$v_{N(MIM)}]_{VN} \leftarrow$ squeezing) ed with emotion'	<i>mune ga</i> chest NOM 'one's heart fee squeeze'	<i>kyun to</i> MIM QUOTE els <i>painful</i> as if son	<i>suru</i> do neone gives it a	
	b.		$_{N(MIM)}]_{VN}$ $\leftarrow$ banging)	<i>kabe o</i> wall ACC	<i>don to</i> MIM QUOTE	<i>suru</i> do	
	'(a man) banging (his hand) onto a wall 'bang on a wall' (while closing in on a female)'				,		
	c.		an <sub>vN(MIM)</sub> ] <sub>vN</sub> ← banging) (hood) banging (to	o save) cats]'			
	÷	-	<i>u tameni sł</i> for ca	<i>hatai o</i> ) ar.body ACC	<i>bánban</i> MIM QUOTE	<i>suru</i> do	

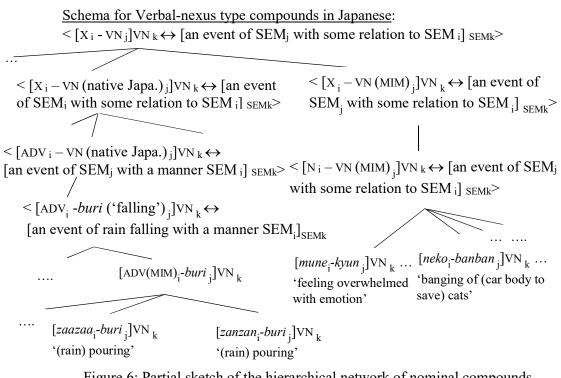


Figure 6: Partial sketch of the hierarchical network of nominal compounds (Verbal-nexus type compounds)

### 4. Concluding remarks

-Proposal of an inheritance hierarchy for nominal compounds, incorporating categories discussed in Scalise and Bisetto (2009)

-Construction Morphology representational system proves useful to indicate where NCMs appear in the word network.

-Mimetics can enrich lexical varieties of nominal compounds, and are integral part of nominal compound word formation.

-Need for a typological study

		Japhug (Rgyalrong, Sino-Tibetan) (Jaque 2013: 282)			
(30)	а	jasmx- <i>zdoszdos</i>	thumb-IDEO (small and active) 'bird sp.'		
		Gbaya (Niger-Congo) (Noss 1985: 247)			
	b.	<i>kpu-kpút-</i> yi	'bubbling water'		

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