Appendix 2. Motion semantic grid: All-level analysis of 186 motion ideophones in sixteen different languages.

	IDEOPHONE	TRANSLATION	FIGURE			GROUND		PATH			MOTION		MANNER												CAUSE		EVENT EXTENSION	
			quanta	animacy	physical charact.	type	physical charact.	contour	direction	deixis	move.	stationary	motor pattern	energy	rate	force	regularity	step	leg	instrum.	posture	F-l-behaviour	casual.	sound	causer	reason	phase	aspect
Somali	*baw baw*	hopping lifting the legs from the ground together							up		move.		jump						two									
	daf	rush into or out without noise							in / out		move.		walk		fast									mute				
	fud	come out unexpectedly and noiselessly							out	ven	move.												sudden	mute				
	gaf	come out, off							out	ven	move.																	
	jalaw	fall, drop in a narrow place					shape		down		move.					unrestrain.												
	shuluq	fall, drop into the water or a liquid				liquid			down-in		move.					unrestrain.												
	shulux	fall into or out of something with a soft sound							in / out		move.					unrestrain.								quiet				
	wab	fall down rolling						circle	down		move.		body m.			unrestrain.								sound				
	vulux	pass through with a swishing sound							through		move.				fast													
Chichewa	*čhóli*	small object fall neatly into a deep hole			size		shape		down-in		move.					unrestrain.	regular											
	deseredesere	slow movements of a fat person			size						move.				slow							physical						
	dzandidzandi	walk unsteadily everywhere					place				move.		walk				irregular											
	gubudu	rocks knocking against other rocks rolling downhill or downstream	plural	inanimate		solid / water		circle	down		move.		body m.			unrestrain.												
	khu:vu:	big object falling in water producing a splash			size	water			down-in		move.					unrestrain.								sound				
	kwí:čhí:	stop completely										stationary															stop	accomplish
	msi:	putting an object at the very top of a heap; not tying it but pressing it so that it clings precariously					place		up		move.						irregular				posture							causative
	ndwi:	sit motionless a long time										stationary									sitting							durative
	táŋátaŋa	walk with legs spread apart and feet pointing in different									move.		walk						two		posture							
	tháŋsáthaŋsa	walk on mud				viscous					move.		walk															
	thi thi thi	feet stamping the ground									move.			high		forceful			two									
	zúnaúlízúnaúlí	go round and round						circle		and	move.																	protractive
Siwu	*gadara-gadara*	walk like a drunk									move.		walk				irregular					physical						
	gidigidi	running energetically									move.		run	high														
	kpiɛ	careful step of an antelope		non-human (quadrupedal)							move.					smooth		type										
	pɔ	frog hop									move.		jump						four		crouched	physical						
	yàààà	flowing quietly without obstruction									move.		body m.			smooth	regular							quiet				
	kpɔtɔrɔ-kpɔtɔrɔ	walk like a tortoise									move.		walk									physical						
	tsoààà	splash; a sudden movement o water				liquid			in		move.												sudden					punctual
	nyɛmɛrɛ-nyɛmɛrɛ	small snake wriggling		non-human (no- legs)	size						move.		body m.															
	nỹɔ̃ɔ̃ɔ̃	big snake wriggling		non-human (no- legs)	size						move.		body m.															
	kpã̰ã̰ã̰ã̰	proud upright body posture							up			stationary									erect	attitude						
Upper Necaxa Totonac	*kụnị̃kụnị̃*	caterpillar crawling		non-human (other)							move.		walk						four+			physical						
	laksliwilaksliwi	a four-legged animal limping along on three legs		non-human (quadrupedal)							move.		walk				irregular		three									
	łanałana	person running around in a panic because s/he is late		human							move.		run									attitude				reason		frequentative
	liŋʃiliŋʃi	a heavy animal walking and making the ground shake		non-human	size						move.		walk	high		forceful						physical						resultative
	luŋłuluŋłu	something jumping around		inanimate							move.		jump															frequentative
	slupslup	object falling into water		inanimate		liquid			down-in		move.					unrestrain.												
	tʃaʃtʃaʃ	person moving quickly, person making an energetic motion		human							move.			high														

	IDEOPHONE	TRANSLATION	FIGURE			GROUND		PATH			MOTION		MANNER											CAUSE		EVENT EXTENSION	
			quanta	animacy	physical charact.	type	physical charact.	contour	direction	deixis	move.	stationary	motor pattern	energy	rate	force	regularity	step	leg	instrum.	posture	F-I-behaviour	casual.	sound	causer	reason	phase	aspect
Pastaza Quichua	*aki*	kind of back and forth path of movement							back-forw.		move.																	protractive
	chack	X moves in the manner of X makes impact with something and X is spread outward							out		move.					forceful									causer			resultative
	dzir	frictional movement; X moves in the manner of X slides along							along		move.		body m.			smooth	regular											
	huy	dangling move.									move.					smooth					hanging							
	ki	released objects spilling and configuring into a pile					place		out		move.		body m.															resultative
	ling	the insertion of something into a contained space					place		in		move.																	causative
	lyuw	a curving, back and forth movement						circle	back-forth		move.																	
	polo	movement through a barrier					place		through		move.																	
	sa sa	scattered; expanded or random movement from or within a locus							from		move.					unrestrain.												
	tupung	X moves in the manner of X falls and X moves downward; falling into water with a resonant kerplunk-y kind of a sound				liquid			down		move.					unrestrain.								loud				
Ashéninka Perené	*pakarararara*	falling of ripe fruit from a tree		inanimate			place		down		move.																	
	pitso pitso	a woman walking with gyrating hips		human (adult)							move.		walk									physical						
	sakiririri	a flock of birds flying in one direction	plural	non-human (bipedal)					direction		move.		fly				regular											
	sherororiri	sliding down the tree					place		down		move.		body m.			smooth	regular											
	shetak shetak	walking limping (of polio victims or cripples)		human							move.		walk				irregular					physical						
	shiri shiri	slowly climbing up a tree					place		up		move.		body m.		slow				four									
	shoi shoi	turning/walking around an object						circle			move.		walk															
	tapo tapo	leaping like a frog									move.		jump						four		crouched	physical						
	tek tek tek	running									move.		run															
	terempiri terempiri	moving in a curved trajectory						circle			move.																	
	tsomi tsomi	walking with bouncing breast									move.		walk									physical						
	tyaapaki tyaapaki	walking in a duck-like manner									move.		walk									physical						
Kotan	*burk*	noise of flying up from ground							up		move.		fly											sound				
	cari·l cari·l	with noise of a snakes move., glidingly									move.		body m.			smooth	regular					physical		sound				
	cor cor	noise made in walking over fallen leaf					place				move.		walk											sound				
	daba·r	noise of a body falling in a heap onto ground from a height					place		up-down		move.					unrestrain.								sound				
	diddid	trampling noise									move.		walk			forceful		type						sound				
	goḷbak	noise of a large body falling into water			size	liquid			down		move.					unrestrain.								sound				
	gorgor	swift movement									move.				very fast													
	gurguṛ	noise of water running with a gurgle		inanimate							move.				fast									sound				
	molmol	(small objects, tears, etc.) fall in a shower	plural	inanimate	size				down		move.					unrestrain.												
	nete·n	directly (of move.)							direction		move.																	

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			quanta	animacy	physical charact.	type	physical charact.	contour	direction	deixis	move.	stationary	motor pattern	energy	rate	force	regularity	step	leg	instrum.	posture	F-I-behaviour	casual.	sound	causer	reason	phase	aspect
Bengali	*tiṛi; / tiṛika*	sudden skip									move.		jump										sudden					momentane
	kilkil / kilbil	movement in a swarm (of fish, esp. small ones, worms, etc.)	mass	animate	size						move.											physical						
	gaṭgaṭ / gaṭmaṭ	the sound of walking or marching firmly and arrogantly									move.		walk	high		forceful						attitude						
	jhap	the sound of diving or falling into water or air suddenly; a sudden splashing sound				liquid / gaseous			down		move.					unrestrain.							sudden	sound				
	jhaljhal	the state of hanging loosely										stationary				smooth					hanging							
	ṭoṭo	continuous and frequent wandering without any aim									move.		walk													purpo.		frequentative
	tartar	quick climbing or the quick running of a stream		inanimate					up		move.				fast													
	tharthar	violently trembling or shaking										stationary				forceful	irregular				erect							
	thuṛthuṛ / thurthur	constant trembling or inability to stand steady owing to decrepitude or weakness										stationary				unrestrain.	irregular				erect	physical			causer			
	duṛduṛ /duṛdaṛ	noise of heavy and hurried footsteps or of the rustling of cloud									move.		walk		fast			type						sound				
	pilpil	a swarming crowd	mass	animate							move.											physical						
	pyācpyāc	the noise caused by going along or wading through a slimy or miry place				viscous			along	and	move.		walk											sound				
	pharphar	fluttering noise as made by the repeated and rapid movement of a thin article in air		inanimate	size	gaseous					move.				very fast		regular											
	phuṛuk / phuṛut	sudden flying away							away		move.		fly										sudden					
	hanhan	walking or moving at a great speed									move.		walk		very fast													
	hiṛhiṛ 1	rapid and violent dragging along or falling down							along		move.		body m.		very fast	forceful												causative
	hiṛhiṛ 2	rapid and violent dragging along or falling down							down		move.				very fast	unrestrain.												
Japansese	*doya-doya*	the manner in which a large number of people enter or leave a place together noisily	plural	human					in / out		move.		walk									physical		loud				
	ettira-ottira	the manner of walking with an unsteady gait, as if weighed down by something									move.		walk				irregular								cause			
	giku-giku	the state in which ones movements are stiff and awkward										stationary									posture	physical						
	hyoi	the manner of making a single light and nimble movement									move.				fast	smooth												momentane
	hyoro-hyoro	the manner of swaying unsteadily from side to side as one walks with faltering steps									move.		walk				irregular	type										
	nosi-nosi	the manner of walking heavily									move.		walk	low														
	sorori-sorori	the manner of moving slowly									move.				slow													
	ota-ota	the manner of walking, stumbling or acting in a confused way									move.		walk			unrestrain.	irregular					attitude						
	pyon-pyon:	the manner of jumping or hopping repeatedly									move.		jump															frequentative
	sina-sina	the manner of moving gracefully and pliantly									move.					smooth						attitude						
	toko-toko 1	the walking, trotting, etc., with quick, short steps									move.		walk		fast			size										
	toko-toko 2	the manner in which a slow-moving vehicle travels at its maximum speed		inanimate							move.				fast							physical						
	zuka-zuka	the manner of walking into a place rudely or without hesitation							in		move.		walk									attitude						

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Semai	*cidũʔcidẽʔ*	impression of a short, chubby person, tilting from one side to another when walking		human	size						move.		walk				irregular				leaning	physical						
	cmcayɛm	contracted fingers of human or animal, not moving		animate								stationary									posture							
	cmcŋayɛm	contracted legs of insect moving		animate							move.										posture							
	dɣ̃ɜldɣ̃ɜl	the appearance of an object floating down a river and getting stuck here and there		inanimate		liquid			along		move.		obstructed				irregular						sudden				beginning	
	klcwũcklcwɛ̃c	irregular flapping circular movements (e.g. of a tortoises feet struggling to escape)						circle			move.			med.			irregular											
	klknare:l 1	an arrow or knife stiffly vibrating after embedding itself into a piece of wood		inanimate		solid			in			stationary				forceful												intentional
	klknare:l 2	it can also describe the walk of a tall, skinny old man		human (old)	size-shape						move.		walk									physical						
	laʔor	impression of someone strolling in a carefree manner, eager to make contact with people		human							move.		walk									purpose				reason		
	ɲnarã:w	appearance of several people jumping	plural	human							move.		jump										sudden				beginning	
	parparpar 1	noise of appearance of birds in flight, of fish struggling among roots in water	plural	non-human		gaseous					move.		fly										sudden	sound			beginning	
	parparpar 2	noise of appearance of birds in flight, of fish struggling among roots in water	plural	non-human		liquid					move.		swim			forceful							sudden	sound	causer		beginning	
	pɛrpɛrpɛr	small bird or insect in flight		non-human	size	gaseous					move.		fly															
	tustustus	repeated sound of running fast									move.		run											sound				frequentative
Numbami	*galála-adala*	splashing, disrupting surface (as rain or fish feeding)				liquid					move.						irregular											
	gidogído-adala	trembling										stationary					irregular				erect							
	golópu-adala	slipping or dripping through							through		move.		body m.			smooth	regular											accidental
	ká-andala	bouncing back, ricocheting				solid			back		move.		jump															
	kelekále(-adala)	meandering, staggering									move.		obstructed			unrestrain.	irregular											
	kilikála(-adala)	crackling, scurrying, scampering									move.		walk		fast			size										
	kilikili-adala	scampering, scurrying, crackling									move.		run					type				attitude						
	páku-adala	plopping, splashing		inanimate							move.					unrestrain.						physical		sound				
	palapála-adala	flip-flopping, moving restlessly							up-down		move.											attitude		sound				
	pí-andala	bouncing up, springing up, rising up							up		move.		jump		fast								sudden					
	sái-andala	spurting, spraying		inanimate					out		move.				fast	forceful							sudden					
	salála-adala	slipping, sliding									move.		body m.			smooth	regular											
	solólo-adala	plummeting, whistling						straight	down		move.				very fast													
	sulúpu-adala	disappearing									move.												sudden				end	
	taká-adala	stuck fast, planted firmly										stationary				controlled					erect							
	talála-adala	slipping, sliding									move.		body m.			smooth	regular											
	talápu-adala	slipping, sliding									move.		body m.			smooth	regular											

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			quanta	animacy	physical charact.	type	physical charact.	contour	direction	deixis	move.	stationary	motor pattern	energy	rate	force	regularity	step	leg	instrum.	posture	F-I-behaviour	casual.	sound	causer	reason	phase	aspect
	aŋtageŋ	with one leap, taking an enormous leap									move.		jump					size										momentane
	balap	get away with one forceful jump (said of game breaking away)							away		move.		jump			forceful		size										momentane
	bambam	the quicker flapping of wings just before a flying fox…settles on a branch		non-human (other)	other	solid					move.		fly		fast												before	prospective
	duŋduŋ	stamping and tramping on the floor or ground, resounding				solid					move.		walk	high		forceful		type						sound				
Jabem	*gaiŋgauŋ*	splashing, e.g., when walking through water				liquid					move.		walk											sound				
	guluc-guluc(geŋ)	roll about, move about (in the womb); rumble (in the stomach)					place	circle			move.		body m.															
	gwalac-gwalac	splashing, e.g., while walking through water or a loud blow / clap / clatter /slap, as caused by hitting a board or shield with a stick				liquid					move.		walk											loud				
	koŋ tageŋ	noise caused by s.t. heavy falling onto s.t. elastic, e.g., s.t. falling from the upper room of a mens house onto its bottom section			size		place		down		move.					unrestrain.						physical		sound				
	pêlaŋ tageŋ	noise caused by an object hung up on a wall dropping / falling / sliding		inanimate		solid	place		down		move.					unrestrain.					hanging			sound				
	puip tageŋ	gliding, skidding, sliding, slipping off							off		move.		body m.			smooth	regular											
	soloŋ tageŋ	glide, slide, slip									move.		body m.			smooth	regular											
	chan	of hanging or being suspended										stationary									hanging							
	chichichi	of a dog running		non-human (quadrupedal)							move.		run															
	chirr	of a boats fast move.		inanimate							move.				fast													
	churup	of a manta ray landing on the water		non-human (other)		liquid			down		move.																	
	nyom 1	of losing ones footing as ones legs go rubbery, or when deep in water										stationary					irregular		one		posture				causer			
	nyom 2	of going under water, deliberately				liquid			down	and	move.											attitude						
Yir-Yoront	*poooor*	of floating up to surface of water				liquid	place		up		move.																	
	purr	of emerging or appearing or rising ([…] general association with upward							up		move.												sudden					
	puv	of setting off and going away							away		move.																beginning	
	turr	of jumping									move.		jump															
	tharrch	of sudden upward move.							up		move.												sudden					
	thut	of assuming a stable relative										stationary				controlled												
	wurl wurl wurl	of running from water in a panic				liquid			away		move.		run									attitude						
	wuuuu(t)	of tree beginning to fall		non-human (other)					down		move.					unrestrain.											beginning	
	jönt-jönt	move steadily, heavily									move.			low		controlled												
	kohvat-kohvat	move slowly, cumbersome, dragging along									move.			low	slow													
	liipadi-laapadi	move heavily, cumbersome, dragging along									move.			low														
	tinga-tinga	move steadily, heavily with short steps									move.		walk	low		controlled		size										
	tipa-tapa	walk carefully with quick and short steps									move.		walk		fast	smooth		size										
Estonian	*tipp-tibinal*	move with short and quick steps									move.		walk		fast			size										
	tuikadi-tuikadi	move swaying, staggering, waddling									move.		obstructed				irregular											
	vinka-vinka	(for a vehicle) when not heading straight, from one side to the other, zigzagging		inanimate							move.																	
	vuta-vuta	(childs movements) quickly, easily, with short steps		human (child)							move.		walk		fast			size										

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Catalan	*banzim-banzam*	swinging, rocking, especially when walking									move.		walk			smooth	regular											
	catric-catrac	sound of steps when walking or dancing with high-heels or similar shoes									move.		walk							object				sound				
	patrip-patrap / trap-trap	dry and repetitive sound of steps when walking or running with clogs or similar shoes									move.		walk							object				sound				
	pengim-penjam	walk idly, swaying, side to side, without any grace or enthusiasm									move.		walk	low								attitude						
	tras-tras	sound of walking									move.		walk											sound				
	tris-tras	walk with determination towards a specific place					place		towards		move.		walk									attitude						
	xi	sound of a liquid spurting, gushing out forcefully and suddenly		inanimate					out		move.			high		forceful						physical	sudden					
	xip-xap/ patatxip-patatxap / patxip-patxap	splish-splash, splosh; murmur of water splashing when swimming				liquid					move.		swim	high										sound				
	xuc-xuc	sound of a train in rapid move.		inanimate							move.				very fast													
	zim-zam	sound of things that swing such as waves, rocking chairs, and swings		inanimate								stationary	body m.			smooth	regular											
Basque	*abuen-abuen*	about to fall down							down		move.					unrestrain.												prospective
	bristi-brasta	walk hastily									move.		walk		fast													
	faia-faia	go								and	move.																	protactive
	fil fil fil	fall down slowly in circles						circle	down		move.				slow	unrestrain.												
	firin-faran	walk to and fro aimlessly							back-forward		move.		walk									purpose				reason		
	hilinki-halanka	walk with difficulty, trudge									move.		walk			forceful	irregular											
	irrist	slid, slide									move.		body m.			smooth	regular											punctual
	jitipiti-hatapata	crawl		human (child)							move.		walk						four									
	klun-klan	rock		inanimate							move.		body m.			smooth	regular											
	kruk-kruk	walk on snow				solid					move.		walk															
	pilinpi-palanpa	walk purposefully									move.		walk	high								purpose						
	plisti-plasta	splish-splash, wade				liquid					move.		walk															
	pur-pur-pur	exit (crowd)	plural						out		move.																	protactive
	tenk	stop										stationary															stop	punctual
	tipirri-taparra	run with difficulty									move.		run			forceful												
	tuku-tuku	walk little by little to leave unnoticed									move.		walk		medium		regular					purpose		quiet		reason		
	zapa-zapa	walk without stopping									move.		walk	mediu														protractive