

POINTING WITH SOUNDS: ICONICITY AND DEICTIC LOCALISATION

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Iconicity or sound symbolism is a problem that has interested linguists for a long time.¹ It is obvious that it is especially interesting where it appears systematically, i.e. in the grammar of a language, because when it affects only isolated lexical items, it may have occurred by chance. In the following, I will look at deictic localisation, esp. local adverbs, where we can detect an iconic principle in a great number of languages. The data on which I have based my argumentation is presented in an overview table following the article.² Having formulated the iconic principle in an adequate way, I shall present some ideas on its functional motivation in the framework of grammaticalization theory.

¹ Suter (1991) traces the issue back to Plato's *Kratylos*, for early structuralist approaches cf. Sapir (1929), Jakobson (1965).

² It consists mainly of replies to my query on deictic iconicity in the electronic mailing list "Linguist", supplied by the following persons: David Adger (Gaelic); Arto Anttila (Finnish); Evan Antworth (Tagalog); Jon Aske (Basque); Melissa Axelrod (Koyukon-Athabaskan); Dom Berducci (Japanese); Joseph Bigirumwami (Kirundi); Frank Brandon (Portuguese, Swahili); Aaron Broadwell (Santa Ana del Valle Zapotec); Claudia Casadio (Italian); Ellen Contini-Morava (Swahili); Helen Coutso-georgopoulos (Modern Greek); Mike Darnell; Alan Dench (Panyjima, Martuthunira, and other Australian languages); Matthew Dryer; Gorka Elordieta (Basque); George Fowler (Hungarian); Mike Gasser (Wolof, Amharic); Jacques Guy (Tolomako, Sakao); Martin Haspelmath; Marti Hearst (Spanish); Ignacio Hualde (Basque); George Huttar (Ndjuka); Randy LaPolla; Harriet Manelis Klein (Colville, Salish); Stavros Macrakis (Modern Greek, Turkish); Grant Malcolm (Dutch); Stephen Matthews (Hungarian, Cantonese, Mandarin); Min (Chinese); Leslie Morgan (Italian); Eric Pederson (Tamil, Dravidic); Bert Peeters (French, Dutch, Gallo-Romance, Latin); David Powers (Maringi); John Rea (Sassarese Sardinian); Jim Scobbie (Scottish English); Herb Stahlke (Swahili, Kpelle, Yatye, Ewe); Joyce Tang (Mandarin); Michele Weinberg (Castilian); Caroline Wiltshire (Tamil). Thanks to all of them. More data can be found in Woodworth (1991), though unfortunately not error-free, and in Taylor (1976: 324). For additional bibliographical references and comments, I wish to thank Günter Radden (Hamburg) and Balthasar Bickel (Zürich, Nijmegen).

Tab. 1:

Deixis 1	proximal	here
Deixis 2	medial	(t)here (with you)
Deixis 3	distal	there, yonder
(Deixis 4	obvial	over there)

To imitate the different levels of deictic distance in English, the local adverbs of Scottish English (and of other regional varieties of British English) are used, i.e. 'here', 'there', 'yonder' (and the demonstratives 'this', 'that', 'yon', accordingly), although the translation of medial deixis (esp. in the fourfold system) can better be rendered by 'here (with you)'.

Italian (at least the standard variety based on Tuscan) shows all four levels:

(5)	1	2	3	4
ITAL	qui	qua	lì	là

Note that the fourfold distinction is an innovation with respect to the threefold Latin (and Romance) system (cf. below). The best translation into English would be:

(5)	1: qui 'here'
	2: qua 'here' (with you)
	3: lì 'there'
	4: là 'over there'

Basque has a threefold system (I add the conventional English translation):

(6)	1	2	3
BASQ	hemen	hor	han
	here	there	yonder

German has a twofold system, resembling that of standard English:

(7)	1	3
GER	hier	dort
	here	there

In all these cases the local adverb is in some way etymologically related to the demonstrative, although it is independent at the synchronic level.

A case that is interesting in this respect is presented by Wolof, a West-African (Niger-Kongo) language: Here the local adverbs are just a special case of the demonstratives with the local (class) prefix *f*-:

(8) (i) fas w-ii fas w-ee
WOLOF horse CL-DCT horse CL-DCT

'this / that horse'

(ii) f-ii 'here' f-ee 'there'
LOC-DCT LOC-DCT

In modern French on the other hand, the local adverbs take over the function of marking different levels of deictic distance together with the demonstrative adjective which - when used alone - has lost this differentiation.

(9) (i) ici 'here' là 'there'
FR
(ii) cette maison-ci cette maison-là

'this / that house'

(iii) ceci 'this' cela > ça 'that'

In Tamil, we have a basically two-way opposition (proximal distal), which is complemented by a deictically neutral form:

(10) (i) inta 'this' anta 'that' enta 'what'
TAMIL
(ii) inge 'here' ange 'there' enge 'where'

Again the local adverbs seem to be a special case of the demonstratives.

1. Principle of Iconicity

All the above examples involve iconicity (sound symbolism). A first approximation of defining the iconicity principle is given here:

Iconicity: A characteristic of the denoted (denotatum) correlates with a characteristic of the denoting (denotans) and these characteristics share some similarity.

This means that deictic distance correlates in some way with certain characteristics of the vowels, and that these characteristics show some similarity with deictic distance.

I shall test some hypotheses about the characteristics of the vowels in the following section:

1.1. First Hypothesis

A common way to state the iconicity principle in the context of deictics would be the following:

Typically, greater or smaller distance from a deictic center (speaker or speaker/hearer) are indicated by more or less open vowels.

One can easily find counter-examples, though:

- (11) (i) (e)dó 'here' (e)kí 'there'
MGR
- (ii) aftós 'this' ekínos 'that'

The counter-example should not surprise us too much. The words involved here are all different and of different origin (*eki* and *ekínos* being related). Although in such cases, iconicity may be found, it would be better to restrict our sample to cases where the forms involved are somehow related.

1.2. Second Hypothesis

The following hypothesis postulates the validity of the iconicity principle for cases where deictics are phonologically related (ideally minimal pairs):

If the forms that indicate deictic distance are phonologically closely related, i.e. if they are (almost) minimal pairs, the degree of vowel closeness is inversely proportional with deictic distance.

German *dies* ('this') and *das* ('that') are good examples just like their English counterparts. English *here* and *there* may be treated as quasi-minimal pairs (correlatives).

Of course, deictics may contain other vowels that fulfill different functions in the deictic element (e.g. agreement). As these vowels do not mark the deictic opposition, they can behave in a 'counter-iconic' way. The Swahili demonstratives consists mainly of agreement vowels:

- (12) (i) h-u-u h-u-o u-le
SWAHILI DEM-CL-CL DEM-CL-DCT CL-DCT
- 'this, that, yon'
- (ii) h-i-i h-i-y-o i-le
DEM-CL-CL DEM-CL-CL-DCT CL-DCT
- 'these, those, yon'

Now what happens if we have to deal with equal vowels that constitute quasi-minimal pairs differing only by their consonants, as it is the case in Latin?

(13)	1		2		3
LAT	<i>ipse</i> ³	'this'	<i>iste</i>	'that'	<i>ille</i>
		'(with me)'		'(with you)'	'yon'
					'(with him/her)'

Again there is less closeness in the case of *ille* (most distant), which contains a liquid (approximant) against stop consonants in *ipse* and *iste*. As labial closure can be seen as the prototype of closeness, we have decreasing closeness paired with increasing deictic distance.

In Santa Ana del Valle Zapotec, an American Indian language,⁴ deictics differ only suprasegmentally:

(14)	(i)	<i>réè</i>	(falling tone) 'here'
ZAPOTEC			
	(ii)	<i>rèé</i>	(rising tone) 'there'

Again this reflects the above version of the iconicity principle: Rising tone indicates greater distance, falling tone lower distance.

Latin and Zapotec seem to be rather special cases, deictic distance being normally correlated to vowel closeness.

But there still are exceptions. Take Finnish as an example:

(15)	(i)	<i>tämä</i> 'this'	<i>nämä</i> 'these'	<i>täällä</i> 'here'
FINN				
	(ii)	<i>tuo</i> 'that'	<i>nuo</i> 'those'	<i>tuolla</i> 'there'

1.3. Third Hypothesis

Taking the Finnish data into consideration, we have to reformulate our hypothesis in the following way:

The functional opposition of more or less deictic distance corresponds to the formal opposition of more vs. less open vowels or front vs. back vowels in (almost) identical context.

³ *ipse* has become a marker of identity ('the same'), whereas *hic* expresses near deictic location.

⁴ For the Zapotec data, I am obliged to Aaron Broadwell. Their interpretation in terms of "tonal iconicity" is his idea.

The problem with this form of the hypothesis is that two parameters are taken into consideration. In her study on deictic iconicity, Woodworth (1991) feels uneasy about the application of more than one parameter at a time. That is why she prefers to treat her data from an acoustic point of view, where she can choose one parameter, namely pitch, i.e. the second formant. I shall say more about the acoustic motivation of iconicity later on.

I do not share Woodworth's uneasiness about two parameters, as long as they are not complementary, i.e. as long as conditions can be formulated under which the hypothesis can be falsified. This can still be done. So an imaginary constellation of say **ti* for distant deixis (e.g. distal) and **to* for near deixis (e.g. proximal) would falsify the hypothesis.⁵

Even if my hypothesis were eventually to be falsified by contradictory evidence, it remains to be a valid *description* for a great many languages. Moreover, its functional validity is supported by diachronic evidence.

2. Diachrony

As we expect, some of the languages in our sample show an increase in iconicity or, at least, the loss of counter-iconic forms.

2.1. Italian and French

In traditional standard Italian (based on Tuscan) we find a threefold demonstrative system (cf. the system of local adverbs under (5) above):

(16) questo 'this' codesto 'that' quello 'yon'

This system still exists in literary style. In spoken standard Italian the system is usually reduced to two levels:

(17) questo 'this (one)' quello 'that (one)'

⁵ For the time being, I am not in the possession of data that clearly contradicts my hypothesis, although I cannot exclude the existence of such data at this stage. Caucasian languages seem to show contradictory evidence. Due to the lack of uncontroversial data, I haven't so far been able to look at these languages in detail.

But this is not the whole story. The system is actually fourfold in the same way as the local adverbs are, since demonstratives are usually reinforced by adding local adverbs in the following way:⁶

- (18) (i) *questo qui / qua* 'this here/there'
 (ii) *quello lì // là* 'that there/yonder'

We see that the medial demonstrative *codesto*, which does not fit into the system, is lost, and an iconically motivated innovation takes place, the result being a fourfold system again.

In modern French, however, only one deictic degree of the Romance demonstratives has survived. A twofold distinction has been reinstalled by using particles grammaticalized from the local adverbs *ici* ('here') et *là* ('there'): *-ci* et *-là* (cf. example (9) above).

2.3. Basque

Basque has a threefold demonstrative system (the forms in brackets is the stem in all cases other than the absolutive, which is irregular):

- (19) (i) 1 2 3
 hau (ho/un-) *hori* (horr-) *hura* (har)
 this that yon

Parallel to the demonstrative system, there are local adverbs as well (the form in bracket is the stem in all local cases other than the inessive, which is irregular with proximal deixis):

- (19) (ii) 1 2 3
 hemen (hun-) *hor* *han*
 here there yonder

The system of stem-vowel alternation is then as follows:

- (19) (iii) 1 2 3
 u/o *o* *a*

The fact that the vowel /o/ marks less distant deixis is used in the plural paradigm of noun inflexion: Here it substitutes /e/ and /a/, which leads to a case syncretism:

- (20) (i) *bi-ak* / *bi-ek* 'the two, both (of them)'
 2-ABS.PL 2-ERG.PL

⁶ unless they are used anaphorically only (or rather, cataphorically), as for example when introducing relative clause: ... *quello che...* ('that which')

- (ii) *bi-ok* 'the two, both of us/you'
2-ABS/ERG.PL

The form *biok* means either something like 'the (closer) two' or 'the two, both here', so one of the two is the speaker or the hearer (it may be both). Welmers (1974: 285) reports a similar phenomenon in Kpelle (Mande, Niger-Kongo).

The deictic /o/ is probably an innovation in Basque, since it is typical of some dialects only (esp. Biscayan and Guipuzcoan, from where it got into standard Basque). It is very popular in terms of address:

- (21) (i) *lagun maite-ak* '(the) dear friends'
friends dear-ABS.PL
(ii) *lagun maite-ok* 'dear friends!'
friends dear-ABS/ERG.PL

In contemporary Basque it has spread over the plural conjugation:

- (22) (i) *euskaldun-en* 'of the Basques'
Basque-GEN.PL
(ii) *euskaldun-on* 'of us Basques'
Basque-GEN.PL

Occasionally, it can be found in the singular as well. The following is from a Biscayan text:

- (23) (i) *larre-an* 'on the alp'
alp-IN.SG
(ii) *larre-on (bisc.)* 'on the alp'
alp-IN.SG

2.2. Ndjuka

Creoles are an interesting case in this discussion. The following data from Ndjuka, a Surinam Creole,⁷ seems to be counter-iconic on first sight. It goes back to the English etymons directly:

- (24) (i) 1 2 3
ya (< here) de (< there) anda (< yonder)
here there yonder'

But, in the modern language, the counter-iconic *de* is usually substituted by a descriptive formation within the language system:

⁷ The Ndjuka data was provided by George Huttar.

- (24) (ii) ape 'there': a (loc. preposition) + pe 'where?' (< place)

This intralinguistically created form consists of a local preposition (*a*) and the grammaticalized word for 'place', meaning *where* when used alone.

We see that it is again a counter-iconic medial form that it substituted.

3. Functional motivation

Undoubtedly, the iconicity principle plays an important role in the languages of the world. That is why we have to look for its functional motivation.

Woodworth (1991) chooses an acoustic approach for merely practical reasons. She does not give a functional motivation. Suter (1991: 225) proposes an interesting explanation from an acoustic point of view again, stating that the deictic sign imitates the acoustic component of the perception of movement: Acoustically, the sound of an insect that flies towards us rises in pitch, as it comes nearer, and falls again, when it flies away.

Although I do not want to dismiss this Suter's interesting acoustic motivation, I want to approach the problem in the context of grammaticalization theory, where the speaker's articulatory action plays an important role:

If we trace local adverbs and demonstratives back on a chain of channel of grammaticalization, we do not find lexical items from which they may have developed, as in the case of e.g. adpositions that have developed out of lexical items such as 'back(-side)' (> 'behind') in many languages. Note that the words such adpositions have developed from are relational, but not necessarily in relation to the speech-act situation and its participants, as deictics are. This is an important difference between adpositional localisation and the like, better labeled 'Spatial Orientation', and deictic localisation.⁸ Local adverbs and demonstratives are the grammaticalization of pointing gesture.⁹

Ungrammaticalized pointing takes place in space, but as soon as you want to oppose two pointing directions, they should not be too close to one another. So, when different

⁸ That is why I am reluctant to see deictic localisation as an extreme case of a general dimension of "Spatial Orientation" or "Localisation" in the sense of the Cologne model of Language universals and typology (the "UNITYP-model", cf. Seiler 1991).

⁹ Interestingly, Himmelmann (1992: 13), in a Bühlerian tradition, takes pointing and gesture as the general starting point of grammar.

pointing directions are opposed, a first step of grammaticalization is undertaken (still outside of sound language, but further developed in sign language), by dividing real world space into a limited number of (abstract) pointing sectors.

This system has to be transposed into a language based on sound, which is deficient where pointing is concerned. The problem that the community of speakers have to solve is how to remedy this deficiency.

The pointing functors (mainly, local adverbs and demonstratives), although related, have to be opposed to one another by the means of sound. There is iconicity involved at this stage, since a constellation of relationship and difference that pertains outside spoken language (pointing and different directions) is transposed into a language based on sound. It implies that the sound forms used are related (my [quasi-] minimal-pair condition). A straight-forward possibility of opposition is a consonant cluster with vowel alternance.¹⁰ The opposite strategy of vowel maintenance and consonant alternation (as practiced in Latin) is less straight-forward, as consonants can be opposed in multiple ways. Vowel alternance allows for only a restricted set of oppositions. This is not really a problem, as the number of oppositions decreases with increasing grammaticalization.

The articulators in the mouth remedy the problem of signing spatial distance by different degrees of distance between themselves, i.e. between the tongue (dorsum) and the post-alveolar region of the palatum. For more proximal deixis the distance of the articulators is very small, resulting in high / front vowels, for more distal deixis it is greater, resulting in low / back vowels.

Those in favor of an acoustic approach may object that my articulatory approach neglects the fact that the hearer cannot see the pointing gesture of the tongue, she or he can only hear different vowel sounds. This is not really an argument against my reasoning, since different sounds are kinesthetically related to the correspondent position of the articulators. That is what makes acoustic correlations as those found by Woodworth (1991) possible. Undoubtedly, acoustic facts, such as those presented by Suter (1991), reinforce the hearer's decoding of the iconic relation.

Finally, a word on iconicity in general seems to be in order: So far, it has become evident that Saussure's arbitrary (or Peirce's symbolic) relation between form and content

¹⁰ This strategy was generalized as a basic grammatical principle in languages of the afro-asiatic group.

does not hold for all parts of language. Sapir (1929) and Jakobson (1965) show that some lexical items show iconicity phenomena, although these seem to be exceptions, so that the lexicon can be said to be symbolically organized.

But what about grammar? The answer depends on the different grammaticalization channels. Those phenomena that have grammaticalized from lexical words stand in symbolic relation to the content they express (in quite the same way as lexical words). Those grammatical phenomena that have grammaticalized from discourse (such as deictics, topic and focus markers, grammaticalized word order) show a predominantly iconic relationship between form and expression. This implies a new way of dividing grammar into an iconic "syntax" (ritualized discourse) and a symbolic "morphology" (ritualized lexicon).

Abbreviations

ABS	absolutive
ADV	adverb
ANAPH	anaphora
ART	article
BASQ	Basque
DCT	deictic
DEM	demonstrative
ERG	ergative
FINN	Finnish
FR	French
GER	German
H	high (tone)
IN	inessive
ITAL	Italian
L	low (tone)
LOC	locative
MGR	Modern Greek
PL	plural
PR	pronoun
RUSS	Russian
SG	singular

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Appendix:

		proximal	medial	distal	obvial
Akan	DEM	yi		nU	
Amharic	DEM	yIh/yIcc(i) M / F		ya/yacc(i) M / F	
	ADV	Izzih		Izziya	
Basque	DEM	hau/hon-	hori/horr-	hura/har-	
	ADV	hemen (hun-)	hor	han	
Bemba	DEM	CL-nó CL-yú CL-yóò CL-yó (1) (1) (1/2) (2)		CL-lyà (3)	
Cantonese	DEM	ni (H)		go (H)	
Castilian	DEM	este/a/os/as	ese/a/os/as	aquel/aquella...	
	ADV	aquí acà	ahí	allí allà	
Colville	Particle	ixi? proximative		axa? obviative	
Dutch	DEM	dit/deze N /M, F, PL		dat/die N /M, F, PL	
	ADV	hier		daar	
Efik	DEM	ɛ̀mì	órò	ókò	
English	DEM	this/these		that/those	
	ADV	here		there	
Finnish	DEM	tämä/nämä SG PL		tuo/nuo SG PL	
	ADV	täällä		tuolla	
French	Suffix	-ci		-la	
	ADV	ici		là	
Hausa	DEM	nàn		càn	
	ANAPH	nán		cán	
Hungarian	DEM	ez		az	
	Prefix	i-		o-	
Italian (Tuscan)	DEM	questo	codesto	quello	
	ADV	qui	qua	lì là	
Japanese	DEM	kore	sore	are	
	ADV	koko	soko	asoko	
Kirundi	DEM	PR-e	PR-o	PR-a	

Koyukon -Athabaskan	DEM Prefix	gonh do-	eeyet no-	nəghənh aa-	yoo-
Kpelle	DEM	ngi		ti	
Latin	DEM	ipse/hic	iste	ille	
Mandarin	DEM ADV	zhe zher		na (H>L) nar	
Maringi	DEM	inye	dunye	anye	
Martuthunira	ADV	nhii/yila		ngunhu/ngula	
Modern Greek	DEM ADV	aft- (e)dho		ekin- (e)ki	
Ndjuka	DEM/ADV	ya	de/apē	anda	
Panyjima	ADV	nyiya	panha/pala	ngunha/ngula	
Portuguese	DEM ADV	este aquí	esse aí	aquele alí	(aco) lá
Santa Ana del Valle Zapotec	ADV	rèè		rèé	
Sardinian (Sassarese)	DEM	kulthu	kussu	kullu	
Scot. English	DEM ADV	this/these here	that/those there	yon yonder	
Scot. Gaelic	DEM	sinn	seo	siad	
Swahili	DEM	h-CL-CL	h-CL-CL-o ANAPH	CL-le	
Tagalog	DEM ADV	ito dito	iyan diyan	iyon do?on	
Tamil	Prefix DEM ADV	i- inta inge		a- anta ange	
Tolomako	DEM/ADV	ka(ho)	tuha	keni	
Turkish	DEM	bu	shu	o	
Wolof	ART DEM ADV	CL-i CL-ii/-ile fi/fii/file		CL-a CL-ee/-ale fa/fee/fale	
Yatye	DEM	na		mɛ	