Nicola Santoni*

In search for the motivation of markedness through metaphorical processes. Chains and matrices with a reasonable degree of universality

Abstract
After Greenberg's studies on implicational universals, dealing with universals of language is dealing with markedness. Interestingly enough, (un-)marked linguistic forms can show their motivation if examined at the conceptual level. On the Cognitive Linguistics ground, Metaphor Theory and Image Schemas are here employed to search for that motivation (if any), and to verify if semantics could be behind forms traditionally considered a mere fact of grammar.

Keywords: Metaphor, Semantics, Universals, Cognitive Linguistics, Prosodic Factors

A partire dagli studi di Greenberg sugli universali implicazionali, affrontare il tema degli universali linguistici significa avere a che fare anche con la marcatezza. È interessante notare che forme linguistiche (non) marcate possono rivelare la propria motivazione, se vengono esaminate al livello concettuale. Con le prospettive offerte dalla linguistica cognitiva, la teoria della metafora e gli schemi di immagini sono qui impiegati per scoprire quella motivazione, se presente, e per verificare se ragioni semantiche siano alla base di forme tradizionalmente considerate puri fatti sintattico-grammaticali.

Parole chiave: Metafora, Semantica, Universali linguistici, Linguistica cognitiva, Fattori prosodici

1. Universals of language and cognitive mechanisms

The articulated set of theories we commonly refer to as Cognitive Linguistics has undoubtedly proven itself an important tool to deal with general and specific semantic mechanisms of language. It often demonstrated that semantic-psychological operations show various degrees of universality, and they are rooted in experiential bases, shared by the vast majority of human beings, that give motivation to linguistic form. Among the most productive

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theories, Metaphor Theory surely stands out in the complex topic dealing with universals of language. The main issue here is if conceptual metaphors (as we know them since the works, at least, of G. Lakoff and M. Johnson) can be assigned a role in the determination of marked and unmarked forms, in spite of a traditional and modular view (nowadays mostly criticized in various aspects by many linguists) which tends to separate levels of analyisis of language, and to treat them as independent components[1].

Markedness has played a central role since the very beginning of the research on universals; after Greenberg, it has become a hard task to refer to them ignoring this key-feature of linguistic forms. Joseph Greenberg, as a well-known fact, took inspiration from the phonological models of Trubetskoy and Jakobson, and adopted the implicational logical form to discuss the behaviour of universals across language types (Greenberg 1963; 1966). We must bear in mind that the general rule states that "Given x in a particular language, we always find y. When nothing further is said, it is understood that the converse, namely 'given y, we always find x', does not hold"[2]. In addition, it has to be underlined that the markedness parameter is explicitly conceived by Greenberg as gradient, relational, non-strictly dichotomic[3], and it acquires great importance in the research programme of Greenberg (1966)[4]. In third place, we know that implicational universals work usually at the same linguistic level and in a one-directional way on the basis of markedness. To give an example,

> It will be found that in generalizing statements regarding sound sequences it is usually the unmarked feature which figures in the *implicatum* of conditional statements. Thus in the statement that the existence of clusters containing at least one glottalized member implies the existence of clusters containing

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[1] See Santoni 2020 for an earlier inquire on this topic.

[2] Greenberg 1963: 73.

[3] For instance, "in regard to the category of number in the noun [...] there is much evidence for a hierarchy singular, plural, dual from the most unmarked to the most marked" (Greenberg 1963: 31). Likewise in this article, each semantic-cognitive domain is not conceived as absolutely marked or unmarked (regardless the relations with other contexts and domains), but always relatively.

[4] "The topic of universals is here approached through the consideration with a single, but [...] rich and complex set of notions, those pertaining to marked and unmarked categories" (Greenberg 1966: 10).

> exclusively non-glottalized members, it is the unmarked feature, non glottalized, which is the implied one[5].

Despite this, there is much more in Greenberg than the simple intuition that relations between marked forms could cross the boundaries of hypothetical modular linguistic levels. Interestingly, "sometimes the marked category in phonology is the expression of a marked category in grammar. Thus certain Amerind languages use the marked feature of glottalization to express the marked grammatical category of the diminutive" (Greenberg 1966: 69).

In this framework, it seems reasonable to ask ourselves if there could be cognitive and semantic motivation behind markedness relations, and maybe if (un-)marked domains could imply motivated (un-)marked correspondent forms, which are more universal, the more universal is the mapping process motivating them. In a cognitive perspective, it has to be recalled that "Grammatical universals are universals concerning the pairing of form and content; they are not universals of form alone (whatever that could mean). [...] Linguistic universals include conceptual universals (e.g., primitive spatial relations, universal conceptual metaphors), universals of cognitive function, and universals of iconicity"[6].

2 Metaphorical chaining. Type [$S_{unm} > T > T1_{unm}$]

If we look at the syntactic level, we remember that "Universal 1" clearly defines the universal basic linear order (BO) as the one in which the role Subject precedes the role Direct Object in the unmarked declarative propositions. It has been suggested by Langacker (1991) that this fact is dued to the image schema of the so-called "Billiard Ball Model" (BBM), on which the "Canonical Event Model" (CEM) is shaped and metaphorized, on the basis of the "Iconicity Principle" of grammar[7]. This would be the starting point experientially motivating the form of BO at a prelinguistic level. In other words, the physical and perceptual experience of force dynamics suggests us that energy transfers (in the most general sense) typically go from an Agent at t_0 to a Patient at t, and it represents

[5] Greenberg 1966: 22.
[6] Lakoff & Johnson 1999: 506.
[7] For details and specific applications, see Serra Borneto 2003 as a good example.

the unmarked default for cognition. It plausibly follows that the order of appearance of semantic roles in the linguistic form constitutes a metaphorical mapping of the prototypical transitive event, which is in turn mapped onto the already mentioned BBM. Some clues about unmarkedness of this image schema come from the fact that it can propagate itself even in syntactic structures which involve other roles or indirect causality relations[8]. That is tantamount to say that what appears in "metaphorical neutralization" on the surface is the default schema[9], as we should expect from a neutralization. We can try to summarize this situation with a simple linear scheme, representing a metaphorical mapping that goes from a source domain to the target domains:

1)
[BBM (S_{unm}) > CEM (T) > Basic order ($T_{1\ unm}$)]

The unmarked Source domain is the basis of the mapping for the transitive event Target, on which the formal result $Target_1$ is mapped, namely the syntax of the unmarked transitive active construction. It can be easily recognized that the mapping structure is a chain of metaphors (chaining process), and that unmarkedness pertaining to Source domain is linearly transferred until it reaches the form of $Target_1$ domain.

2.1 Spatial neutralization and chaining

Similarly, spatial constructions indicating emotional or physical states and conditions[10] provide another example of metaphorical mapping, which motivates the linguistic form resulting in metaphorical neutralization. If we look at Italian, there are two possible and alternative construcions for a number of conditions, like *Essere in ansia/Essere ansioso*, *Essere in depressione/*

[8] It. *Marco ha colpito Paolo/Marco ha visto Paolo/Marco ha provocato la nostra reazione* have identical (morpho-)syntax at the linear and structural level, although in the second case *Marco* has an EXPeriential role, and in the third both causality relation and energy transfer are indirect. Please notice that this simple example taken from Italian could easily hold for most nominative-accusative languages.

[9] Moreover, marked passive constructions are often the mirror-images of transitive unmarked active constructions (Taylor 2003 [1995]: 333-334), if we look at the linear level at least for the mentioned language typology (n. 8).

[10] See Lakoff & Johnson 1980: 30-32 for this metaphor and some examples in English.

Essere depresso, *Essere in tempesta/Essere tempestoso*, which of course can't be considered couples of perfect synonyms. There are also constructions showing no alternative but the spatial-prepositional one, almost totally excluding the predicative synonym-like form with the adjective: *Essere in forma/Ø*, *Essere in gara/Ø*, *Essere in crisi/Ø*, *Essere in pericolo/Ø*, and many others[11]. No matter here what causes the blocking (or when exactly it is caused) in these second cases, all examples regardless share the spatial form [IN___] in neutralization for emotional domains or states metaphorized in space, with slight (yet not irrelevant) semantic consequences if alternatives are given. If we look at Mandarin Chinese, we find very close examples of this phenomenon, which seems to have a high degree of universality. There are cases like

Tā zhèng chǔyú bēishāng zhōng / Tā hěn bēishāng[12]
She now be sadness in / She very sad

and also metaphorical neutralizations lacking the predicative alternative, as in

Guójiā chǔyú wēijī (zhī)zhōng / Ø
State be crisis in / Ø

[11] Sometimes, where lexicon and morphology allow to attempt a substitution of spatial form with an adjective in these cases, the overlap between hypothetical alternatives is impossible. Thus, for example, *Essere in pericolo* (*To be in danger*) means the "passive" condition of a [+ Animated] subject, while *Essere pericoloso* (*To be dangerous*), if referred to [+Animated], means quite the "active" opposite. Almost the same happens with *Essere in crisi* (*To be in crisis*) and *Essere critico* (*To be critical, decisive, crucial*), even referred to [+ Animated]. When it comes to [- Animated], things become more complex to discuss in detail, but it should be pointed out that some degree of synonymy can't be overruled. Take the special case of *life*: *La (sua) vita è in pericolo/La (sua) vita è pericolosa* (*His life is in danger/His life is dangerous*) displays almost the same semantic proximity of the alternatives as in the examples of the kind *Essere in depressione/ Essere depresso* (*To be in a depression/To be depressesd*), in which the difference of construction (metaphorical spatial vs predicative) marks sometimes the opposition "temporary condition vs permanent state".

[12] In Mandarin a positive adjective can harldy stand alone in predicative structures. Thus, the sentence needs what we consider the comparative structure with "*hěn* + adjective" to be well-formed. Otherwise, if spatial metaphorization with "*zhōng*" is involved, there is no need for further elements, since "*bēishāng*" (and adjectives in general) can work equally as a noun, because nouns and adjectives share the same morphology. One could be tempted to discuss if "*hěn*" works as a *copula* in these structures, but this would bring us too far from our discourse.

Spatial construction [__ZHŌNG] appears in neutralization. Here are some more examples from Mandarin:

X [Somebody] chǔyú juéwàng (zhī)zhōng / X hěn juéwàng
(*X be despair in / X very desperate*)
Macerata chǔyú píngjìng (zhī)zhōng / Macerata hěn píngjìng
(*Macerata be quiet in / Macerata very quiet*)
X chǔyú hàipà (/kǒngjù)(zhī) zhōng / X hěn hàipà*
(*X be fear in / X very frightened*)
X chǔyú wēixiǎn zhōng / Ø
(*X be danger in / Ø*)
Guójiā chǔyú jùbiàn zhōng / Ø
(*State be transformation in / Ø*)

The metaphorical chaining structure seems to be the same as 1), and in this case it involves Physical Space and Container domains to map State (or condition):

2)
[Container (S_{unm}) > Space (T) > State/Condition ($T_{1\ unm}$)]

Metaphorical neutralization of states in containers rests upon cognitive metaphors operating with a high degree of universality for Cognitive Linguistics. In this case, the ontological metaphors mainly involved are SPACES ARE CONTAINERS, and STATES/CONDITIONS ARE SPACES, with all the boundaries and spatial characteristics conceptualized on containers[13]. We observe that the unmarkedness of the well-known *Container Schema* (for it is a fundamental and default schema for our cognitive system as human beings to conceptualize many everyday experiences) is transferred to the end of the chaining process, in the unmarked T_1 construction, which neutralizes actual spaces and metaphorical conditions in the spatial (and, in these cases, pre- or postpositional locative) form across languages.

[13] We know from conceptualized experience that we can enter or exit spaces/containers, or we can be trapped inside them. We know that they have limits, and their boundaries divide an internal from an external part; also, we are aware that each container/space has a capacity: if objects inside are too many or too big, they are tightly contained, and freedom of movement is highly reduced for them.

3. Metaphorical matrices. Type [S_{unm} > (T + T_1) > T_{2M}]

At the suprasegmental phonological level, Greenberg (1966: 70) noticed that "Another example of phonological-grammatical connection is the widespread use of the marked category of final rising pitch for the expression of interrogation". This relation between rising pitch and interrogation of the *yes/no* kind leads us to have a deeper look into the three main prosodic factors, namely pitch, prominence, and length. In the perspective here adopted, it seems that the three factors play a complex role if they take part to the semantic motivation orienting markedness of linguistic forms. If that's the case, everything starts from unmarked cognitive extralinguistic domains as well. The metaphorical underlying structure in these circumstances is more complex than the chain, as it's going to be cleared by what follows.

3.1 Pitch variation

The orientational metaphor here involved can be indicated by UNKNOWN IS UP[14] (and KNOWN IS DOWN). To verify the cross-linguistic persistence of this cognitive image, we must go through lexicon and idiomatic expressions (which are rarely perceived as actual metaphors by speakers).

It. *È sotto gli occhi di tutti*[15]
(something known is "under everyone's eyes")
It. *Un discorso terra terra*
(a discourse so simple to understand that is "at the ground level")
Mand. *Chénāi luò dìng*
("Dust has already fallen to the ground", the fact is concluded and the results are known)
Mand. *Jǐnguǎn māma jiěshì le suǒyǒu, wǒ réngrán juéde yúnlǐwùlǐ* [16]
("Even if mom explained everything to me, I'm still between clouds and fog")

[14] See Lakoff & Johnson 2012 [1980]: 39-40; 172. Several English examples of this metaphor can be found in Lakoff & Johnson 1980. For this reason, I dont't largely discuss them in this article, because Metaphor Theory was born mainly in this language, and the founders' influential works in Cognitive Linguistics have already explained them in full detail.

[15] This example is also structured by the metaphor KNOWING IS SEEING, as the last Mandarin one referring to "clouds and fog".

[16] For specific implications of this and other metaphors in Chinese, see Yu 1998; 2009.

Let's consider now the cognitive spatial domain of HEIGHT/VERTICALITY as an unmarked basic domain, through the clues of unmarkedness via neutralization.

(It.) *Quanto sei alto/*basso?*
(It.) *Sono alto/*basso solo un metro e cinquanta*
(It.) *L'altezza/la *bassezza viene calcolata con formule matematiche*
(Eng.) *How tall/*short are you?*
(Eng.) *I'm only 4 ft tall/*short*
(Eng.) *Height/*lowness measurement*
(Eng.) *He's averagely-tall/*short*
(Eng.) *To have greater (or lower) height/*lowness*
(Mand.) *Nǐ duō gāo/*dī?* ("How tall are you?"; gāo = adj. *"tall", dī* = adj. *"short"*)
(Mand.) *Jìsuàn gāo dù/ Ø* ("To measure height"; gāo dù = *"height"*)

As Lakoff & Johnson (2012 [1980]) already observed, the motivation upon which the widespread[17] rising intonation in marked *yes/no* questions rests should be ultimately connected to the above mentioned metaphor. Yet, they tend to exclude this possibility in Chinese and in tone-systems, since these languages make no use of final rising pitch, because they are constrained by pre-assigned tones (*contra*, see e.g. De Dominicis 2013: 337-338). But this could be only a part of the story. An experimental study on Mandarin speakers suggested that even in this language rising intonation could emerge in particular circumstances to mark the *yes/no* questions, even if they have the final particle "*ma"* (traditionally considered bearing the neutral tone) signaling the sentence type.

3.1.1 Case study: Rising intonation as a useful tool in Chinese?

In this experiment[18], ten Mandarin mother-tongue speakers were asked to read the following questions, written in *pinyin.* At first, they were recorded reading these sentences at normal speed, then they were requested to read

[17] As a matter of fact, rising pitch in *yes/no* questions is at disposal of a great number of different languages, but "non si tratta di un universale e non tutte le lingue usano il tono per segnalare l'interrogazione. È il caso, ad esempio, di alcune lingue del gruppo niger-congo (famiglie gur, kwa e kru) e del gruppo nilotico-sahariano (lingue centro-sudanesi e ciadiche del gruppo afro-asiatico) [...], o del dialetto di Bomarzo, una località dell'alta Tuscia, a nord di Viterbo" (De Dominicis 2010: 34).

[18] Data recorded and analyzed between May and September 2019, and here published for the first time.

them again slowly to make a foreigner (average Chinese speaker) understand, and they were recorded again.

1-*Nǐ láizì GuǎngZhōu ma?* ("Do you come from Guangzhou?")
2-*Duì ma?* ("Yes?")
3-*Zhēn de ma?* ("Really?")
4-*Nǐ kàn guò ma?* ("Have you ever seen?")
5-*Nǐ chī guò ma?* ("Did you eat?")
C-*Nǐ duō gāo?* ("How tall are you?")

"C" stands for "Control", because it is the only non-*yes/no* question bearing actually tone 1 in the end ("*gāo*"), the tone of maximum height . Therefore, the comparison was made between the "*ma*" frequencies of the other questions, both at normal speed and hyperarticulation, and C frequencies. Using a recording and editing free software, frequency peaks were all calculated for each sentence-ending, and the average peak at normal speed (AVG_N) was obtained multiplying C by 5 (the number of the *yes/no* questions), then adding for each speaker (Sp.) the other 5 normal speed peaks, and finally dividing the result by 10 for each speaker. This was made to verify if final intonation shows rising pitch in these questions beyond the average, and also if it equals or exceeds the tone 1 frequencies in hyperarticulation for each participant. Of course, for each speaker was equally calculated the average frequency of tone 1 in C (C_{AVG}), adding normal speed frequency (N) to hyperarticulated mode (H), and dividing the result by 2. Before going to the results, it has to be reported that for female (F) voices tone 1 is around 250-290 Hz, while for males (M) the frequency is around 170-210 Hz.

3)

	M	F	F	M	F	F	F	M	M	M
Questions	Sp. 1 N / H (Hz)	Sp. 2 N / H (Hz)	Sp. 3 N / H (Hz)	Sp. 4 N / H (Hz)	Sp. 5 N / H (Hz)	Sp. 6 N / H (Hz)	Sp. 7 N / H (Hz)	Sp. 8 N / H (Hz)	Sp. 9 N / H (Hz)	Sp. 10 N / H (Hz)
1 (*ma*)	209/ **223**	**195/ 208**	238/ 258	**161**/ 141	260/ 258	217/ 234	**226/ 240**	**180/ 203**	156/ 151	138/ 145
2 (*ma*)	**225**/ 199	160/ **188**	206/ 201	139/ 114	245/ 254	205/ 215	220/ **224**	173/ **191**	158/ 157	142/ 120
3 (*ma*)	**230/ 246**	155/ 172	239/ 238	**172**/ 148	226/ 230	215/ 224	**234/ 243**	171/ **205**	153/ 154	148/ 136

4 (*ma*)	181/ 171	152/ 159	191/ 183	113/ 113	224/ 223	198/ 223	186/ 180	153/ 167	131/ 152	110/ 123
5 (*ma*)	196/ 176	149/ 151	210/ 236	147/ 121	215/ 228	210/ 220	193/ 177	147/ 164	146/ 157	146/ 119
C (*gāo*)	225/ 218	172/ 194	258/ 265	169/ 150	263/ 260	257/ 292	227/ 219	169/ 191	170/ 191	166/ 154
C_{AVG} tone 1	221,5	183	261,5	159,5	261,5	274,5	223	180	180,5	160
AVG_N	216,6	167,1	237,4	157,7	248,5	233	219,4	166,9	159,4	151,4

A) The numerous cases highlighted in grey show the increment to a higher frequency for the hyperarticulated mode with some degree of emphasis by the speakers. Also the C question is affected by this general increment, a sign of a widespread use of final rising pitch in H-context.

B) Underlined and in bold are all the peaks which equal or exceed the C_{AVG} of tone 1. This happens in 18 cases (8 N and 10 H) limited to the first 3 questions. In questions 1 and 3 this could be quite predictable, since co-articulation of "*ma*" with a previous tone 1 can favour the phenomenon. But in 2, which displays a significant rise, "*duì*" can't be responsible for this, and the reason has probably to be found in semantic features: 2 is really a prototypical *yes/no* question ("*Yes?*"), a fact that probably clearly emerges in intonation.

C) In 5 cases, just underlined, we have values which equal or exceed at least one of the C peaks, normal or hyperarticulated. Of course, values of C_{AVG} are all superior to one of the C peaks, and were underlined as a reference parameter. Also in these cases, regarding questions 1, 2, and 3 as well, the tone of "*ma*" tends to reach tone 1, but less evidently than in the previous 18 cases.

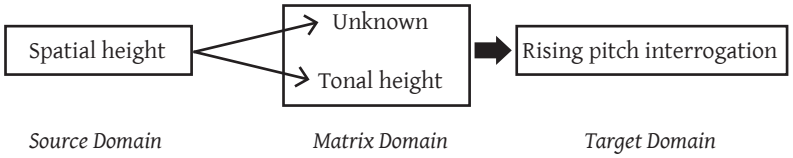
D) We have in total 23 cases in the first 3 questions that tend to tone 1, representing more than 38% in the group 1-3, and 23% relatively to 1-5. In 4 and 5, we have no trace of tone 1, but they follow the tendency of rising pitch in the passage from N to H mode.

It seems quite evident that final rising pitch and tone 1 is at diposal of Mandarin to mark (*yes/no*) questions with a number of occurrencies far from chance. Rather, rising intonation is *also* one of the "tools" Mandarin can put in play in particular circumstances, like emphasis or general hyperarticulation.

3.1.2 Unknown, height, and interrogation

At this point, we need to hypothesize the existence of another ontological metaphor to fully explain the relation between unknown, height/verticality, and the linguistic form of rising pitch in *yes/no* questions. The basis of this metaphor is strictly anatomical and experiential, and scarcely testified by lexical clues. Nonetheless, it seems plausible to state that for our cognitive system TONAL HEIGHT IS SPATIAL HEIGHT[19]. If so, we come to a completely different mapping structure from 1) and 2). The presence of a matrix domain[20] (or "blended space"[21]) plays a key role for the possible motivation of linguistic form in this and the following cases.

4)



From an unmarked *S* two mappings procede towards the target domains we can refer to as *T* and T_1. The new complex domain (the matrix domain) is the core of the subsequent process of mapping which motivates the formal result of the rising pitch question (T_2). The matrix domain represents the space where the two concepts UNKNOWN and TONAL HEIGHT unite (not permanently!) to give birth to a new coherent conceptual domain. If these passages hold,

[19] Theory and practice of singing interestingly divide a "chest voice" from a "head voice" or falsetto. Surely, sharp sounds produced by head voice can be easily sensed putting a hand on our head to feel the vibration, while in chest voice modality we can put one hand on our chest to obtain the same result. That constitutes an experiential base for the metaphor. Moreover, we can refer to the lexical conventionality of this metaphor in the three languages examined, which indicate as "high" (It. "*alto*", Mand. "*gāo*") or "low" the sound frequencies, often conceptualizing them in the domain of VERTICALITY. These metaphors themselves can suggest to the speaker the overlap of the domains, as it happens even with other well-known metaphors (see e.g. ANGER IS HEAT, Lakoff 1987: 383).

[20] In this and other matrices (or matrix domains), the presence of more domains than the ones mentioned is not excluded at all. The main attention here is precisely devoted to that domains which seem to cooperate most to the motivation of linguistic form.

[21] See Fauconnier 1994; Fauconnier & Turner 1996.

it can be noticed that from an unmarked *S*, via matrix ($T + T_1$), we obtain a marked phonological form *T*. In linear representation, this kind of underlying widespread markedness process can be referred to as: [$S_{unm} > (T + T_1) > T_{2M}$].

3.2 Prominence: Intensity variation

In the same fashion, let's start for prominence with an ontological metaphor, namely ARTICULATORY FORCE IS PHYSICAL FORCE, evidently testified by the use we make of phonetic articulatory force, for example, in our everyday quarrels, or to stress the strenght of what we are stating. Even in some expressions the metaphor comes out clearly:

(It.) *Urlare contro qualcuno* ("To yell against someone")
(It.) *Gridare (o urlare) in faccia (o addosso) a qualcuno* ("To shout in the face (or to yell at) someone")
(It.) *Parlare sopra qualcuno* ("To speak over someone")[22]

Clues of lexical neutralization guide us to the unmarkedness of the cognitive domain (PHYSICAL) FORCE, or rather, to be more precise, the domain (SUFFICIENTLY HIGH) PHYSICAL FORCE.

"*Strong/Strength*" in neutralization – "*Weak/Weakness*" not neutralizable
(It.) *È questione di forza/*debolezza* ("It's a matter of strength/*weakness")
(Eng.) *High (or low) strength/*High (or *low) weakness*
(Mand.) *Yǒu duō zhuàng/*ruò?* ("How strong is he?/ How *weak...?"*; zhuàng* = adj. *" strong", ruò* = adj. *"weak"*)

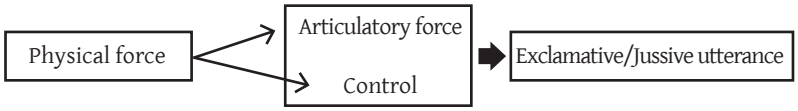
As in the previous case, there is another ontological metaphor to consider in relation to the unmarked starting domain: (+) CONTROL IS (+) FORCE (mainly physical force).

(Eng.) *To force someone to do something*
(It.) *Mi ha spinto a farlo* ("He pushed me to do so")
(It.) *Si è sforzato di trattenere la rabbia* ("He struggled strongly to hold his anger")
(It.) *Non voglio forzare nessuno* ("I don't want to force anyone")

[22] This example taken from Italian represents also the orientational metaphor CONTROL IS UP.

These two metaphors, combining in a matrix, could be the basis for the motivation of the marked form in some linguistic acts, which we can refer to as exclamative, imperative, and jussive. If we look at Italian, these utterances (or sometimes linguistic acts, for the sake of precision) can display also a dedicated marked (morpho-)syntax: The 2nd person singular imperative forms *Va'*, *Di'*, *Fa'*, *Da'* (instead of *Vai*, *Dici*, *Fai*, *Dai*), together with the marked postverbal or zero subject, represent marked specific constructions that show themselves together with the kind of utterances having the phonetic form we are discussing, to convey this particular pragmatic meaning. To synthesize:

5)



Source Domain *Matrix Domain* *Target Domain*

As in 4), the matrix structure could motivate a marked linguistic form T_M starting from an unmarked *S*. The formula is always the one reminded in the § 3 heading.

3.3 Length variation

At first, we deal with the ontological metaphor (+) EXTENSION/DISTANCE IN TIME IS (+) EXTENSION/DISTANCE IN SPACE[23], a sub-mapping of TIME AS SPACE metaphor, which doesn't need to be discussed here, for it is one of the fundamental metaphors that Cognitive Linguistics fully recognizes as firmly grounded. Instead, we procede to verify that the cognitive domain of spatial extension is unmarked.

Neutralizable forms:
(It.) *Esteso/Estensione* ("Extended/Extension")
(It.) *Distante/Distanza* ("Distant/Distance")

[23] Based on the highly universal mapping of TIME onto SPACE. See Lakoff & Johnson 2012 [1980]; 1999, Lakoff 1993, Haspelmath 1997.

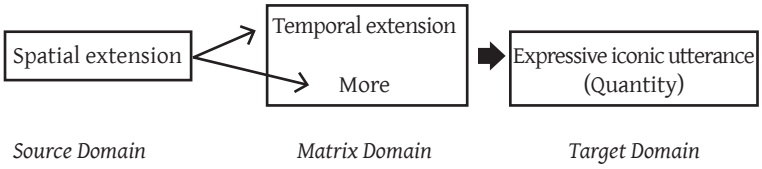
(It.) *Lungo/Lunghezza* ("Long/Length")
(It.) *Ampio/Ampiezza* ("Wide/Width")
(Mand.) *Yǒu duō cháng/* duǎn?* ("How long is it?"*; chàng* = adj. "*long*"*, duǎn* = adj. "*short*")

Then, we consider the linear scale metaphor EXTENDED/DISTANT IS MORE, through some examples.

(Eng.) *This matter is far more complex than I thought*
(Eng.) *Farther/Further*
(Eng.) *Widely + adj.*
(It.) *Superare di gran lunga* ("To largely exceed someone or something")
(It.) *La sa (o la dice) lunga* ("He/It knows/tells largely more than he/it is showing")
(It.) *Ampiamente migliore (o peggiore)* ("Widely better [or worse]")
(Lat.) *Longe* (As "Widely")
(Lat.) *Ergo amplius in arte rhetorica nihil est* [*Rhetorica ad Herennium*, end of Book IV] ("So there's nothing 'wider' [more] left to explain about rhetoric")

Another pragmatic meaning is conveyed by this metaphorical structure. Expressive utterances can partially or entirely extend their duration to be iconic of quantity and size (as in, simplistically, *A biiiiiiiiig tree!*). We must remember that another quite universal and well-known metaphor fundamentally cooperates to that motivation, even if it is kept on the background: MORE FORM IS MORE CONTENT. Anyway, the schematic representation of our interest is as follows.

6)



Nothing is really different from the previous two cases, and this mapping motivates a marked result starting from an unmarked domain *S*. What we can hypothesize at this point is that the presence of matrices in the structures of motivation can have influence on markedness dynamics, in a radical different way from the chain-like structures.

4 *Say 'shibboleth'!* Marked phonetic segments and chaining: Type [$S_M > T > T_{1M}$]

It's not the purpose of this article to investigate the huge issue of the segments' cognitive reality or the cognitive ground of the phoneme[24]. We know from experimental studies by Grimaldi and colleagues (2013) that human brains can access phonetic details if requested by context, and our neuro-cognitive systems can work to categorize segments[25]. In the Cognitive Linguistics framework, phonemes are conceived as radial categories prototype-centered, and they include more or less central/peripheral allophones as members. Phonemes have conceptual/schematic meaning[26], conveyed by the relations allophones constituting the category PHONEME entertain with the prototype.

The biblical episode of the *shibboleth*[27] (Judges 12. 6) reveals itself interesting in this perspective. To cut the story short, at the fords of Jordan the Gileadites recognize the fugitive Ephraimites through a test of pronunciation regarding the word "*shibboleth*". Precisely, the episode deals with a highly marked segment, the [s] belonging to the other linguistic variety spoken by Epharaimites, who can't pronounce (as traditionally accepted)[28] [ʃ] in that word. Conceptualization of this specific segment, and

[24] On which, see Albano Leoni 2009. See also Durand & Laks 2002, and Linell 1979.

[25] As Miglietta-Grimaldi-Calabrese (2013: 288-289) verified, "Two perceptual modes are available for speech perception: a faster phonological (categorical) mode and a slower phonetic (sensory) mode. [...] Our idea is that there is a single neural computation [...] that is 'sensitive' to the contrastive/non contrastive status of the sounds as determined by the listeners' knowledge of the phonological system of their own language [...]. Our results generate the assumption that predictable vowel allophonic alternations (out of context) pattern with phonemic contrasts for auditory perception".

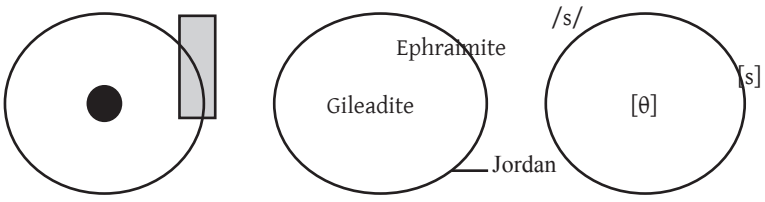
[26] Lakoff 1987: 283: "They [image schemata, including the Container Schema] are concepts that have a directly-understood structures of their own, and they are used metaphorically to structure other complex concepts".

[27] The episode is discussed in the Cognitive Linguistics perspective by Kristiansen (2003), who refers to the allophones [s] and [ʃ], perhaps treating them as parts of a diasystem "Gileadite-Ephraimite".

[28] According to Speiser (1942), the contrast was instead between Ephraimite [s] and Gileadite [θ], because there seems to be no trace of Semitic languages that failed to include both [s] and [ʃ]. The ingenious test put on by the Gileadites proves in itself that they were perfectly aware of the existence of [s] as an allophone, which evokes all the cultural inferences referring to the people of Ephraim. These inferences are tragic for the defeated Ephraimites, who are eventually recognized and killed.

of all the cases of *shibboleth* as a linguistic phenomenon, provides us another example of metaphorical chaining. Two ontological metaphors are involved: A NATURAL CATEGORY IS A CONTAINER[29], and A LANGUAGE IS A NATURAL CATEGORY[30]. In the Gileadites' point of view:

7)



In this mapping, markedness of the peripheral (or external) position of an hypothetical object in relation to the container (therefore, not prototypical) is mapped onto the end of the chaining process, the marked segment [s]. At the intermediate stage, the mapping passes through the peripheral position of the cultural-ethnic element "Ephraimite" in respect to the category which has "Gileadite" as a prototype (for the Gileadites, of course!)[31]. So the result can be expressed by $[S_M > T > T_{1M}]$. If we assume that the perspective can be inverted, what would be transferred to the end of the chain would be the unmarkedness of the same segment instead, as we can easily imagine.

[29] See Lakoff & Johnson 1999: 380.

[30] One of the most intuitive ontological metaphors, since almost every speaker treats his language(s) as a category, whose elements are (e.g.) English, or they are not members of the category ENGLISH, *et tertium non datur* for many speakers. There are also elements of uncertain status, which speakers peripherally include in their languages, and maybe tend to avoid (in formal contexts, for example).

[31] There is no mistery that every culture considers itself as the ethnic prototype, and, therefore, every speaker belonging to that category sees himself as prototypical in some degree (at least, comparing himself to 'foreigners'). Language plays a fundamental role in this categorization, as Cicero reminds us when he refers to a "*Vox Romani generis urbisque propria*" (Cic., *De or.* 3. 12), or when Chinese call their language (including varieties and dialects) "*Hànyǔ*" (the language of "*Hàn*" dynasty), evidently idealizing their cultural unity under the same category through an as well idealized language.

5. Chains and matrices. A possible role in the motivation of form and markedness

After this brief inquiry, it would be hard to draw definitive conclusions. We can nonetheless make some observations on what presented. First, different metaphorical/schematic structures differently motivate linguistic surface forms and the relative (un-)markedness. Then, since markedness is an important parameter in the discourse on (implicational) universals, trying to understand how it works could be a contribution to understand how universals work. We have also to remember that many directly-emerging cognitive metaphors have a high degree of universality themselves. Thirdly, we can observe that makedness itself could be sensitive to the underlying metaphorical structure motivating it: Matrices seem to provoke the shift from an unmarked domain to a marked linguistic form in certain cases, while chains seem to transfer their (un-)markedness to the formal linguistic result. Lastly, metaphors involved in the matrices mentioned can be of different kinds (orientational, linear scale, ontological), but one of them at least is of the ontological type, none of them (predictably) is a conventional metaphor. What seems to emerge quite clearly is that motivation via cognitive metaphors and schemata contributes to give meaning to apparently non-semantic structures, reducing the gap between grammar and semantics. And the distance seems to be smaller than we usually think.

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