Template

IN CZECH: CONSTANT VOCALIC VOLUME IMPOSED ON A HETEROMORPHIC STRING BY A SPECIFIC MORPHOLOGICAL AND/OR SEMANTIC CONFIGURATION. An example are Czech verbs with iterative meaning (Scheer 2003, 2004a,b). Deriving an iterative from a non-iterative produces both iterative lengthening (sad-i-t – sáz-e-t ‘plant’, skoč-i-t – skák-a-t ‘jump’, changes in vowel quality are irrelevant) and iterative shortening (čít-i-t – -čít’-ova-t ‘feel’, vyš-i-t – -vyš-ova-t ‘elevate’). Iterative lengthening only occurs in classes 3 (thematic vowel -e-) and 5 (thV -a-), while iterative shortening is only found in class 6 (thV -ova-). The thematic element of the lengthening classes 3 and 5 weighs one single mora, while the shortening class 6 has a two-mora thematic element. In this context, the mora (μ) is a descriptive unit that measures vocalic quantity: short vowels and syllabic consonants weigh one mora, long vowels count for two moras. Iterative derivations thus conspire to produce a constant weight of exactly 3µ: short inputs must lengthen when associated to a one-mora thematic element (against long inputs, which show no reaction: máv-nou-t → máv-a-t ‘wave’), while long inputs must shorten when concatenated to a two-mora item (against short inputs, which show no reaction: tlač-i-t → tlač-ova-t ‘press’). Double iterative formations confirm the regularity: sad-i-t, skoč-i-t (no templatic restriction) - sáz-e-t, skák-a-t (template enforces lengthening) - -saz-ova-t, -skák-ova-t (template enforces shortening). That the templatic restriction "iteratives must weigh exactly three morae" depends on the iterative character of the item may be seen by the fact that non-iteratives can freely weigh more (5µ telefonovat ‘telephone’) or less (2µ délat ‘do’) than 3µ. The template for iteratives may thus be represented as [root+thV]3µ.

Templatic restrictions apply to stretches of the linear string which are made of at least two morphemes, one of which is the root: [prefix+root] or [root+suffix]. They may specify a minimal, a maximal or an exact weight for a given form. Only vowels are counted, consonants are irrelevant: they never contribute to templatic weight.

Illustration of the fact that not only morphological, but also semantic properties condition templatic restrictions is provided by cases where morphologically and phonologically distinct suffixes produce the same effect. For example, diminutives realize a 3µ constraint: lengthening of the root is triggered by -(e)k- (-ek, -k-a, -k-a: list - [list-ek]3µ, had - [hád-ek]3µ, čel-o - [čel-k-o]3µ, slov-o - [slov-k-o]3µ, knih-a - [knih-k-a]3µ, duh-a - [douž-k-a]3µ), but also by -ë, which denotes young individuals of living species (had - [hád-Č]3µ, kozel - [kůz-e]3µ, žid - [žid-e]3µ, medved - [medved-e]3µ, hovad-o - [hovad-e]3µ, hus-a - [hous-e]3µ, sov-a - [sov-e]3µ). The only thing that both suffixes have in common is their meaning: they make things "small".

In case a [root+suffix] string realizes a templatic restriction, prefixes may or may not count in. Caha & Scheer (2008) have studied infinitives in detail. As was mentioned, infinitives must weigh at least 2µ: [zná-t]2µ, -zna-l. The l-participle is a diagnostic for underlying vowel length: compare [stá-t]2µ - stá-l (infinitival length is lexical) with [stá-t]2µ se - sta-l se (infinitival length is templatic). In [zná-t]2µ, -[po-zna-t]2µ, the prefix is obviously counted into the string that realizes the template, since the 2µ restriction is satisfied without lengthening of the -a. In [bdí-t]2µ (bděl), however, prefixes have no effect: pro-[bdí-t]2µ. This contrast is paralleled by negation: roots that are sensitive to prefixes are also sensitive to negation ((ne-zna-t]2µ), and roots where prefixes are not counted do not count negation either ((ne-bdí-t]2µ). Whether prefixes and negation count into the template depends on the thematic vowel: infinitives with thV=i, ø (zero) are insensitive to prefixes, while those with thV=a react. The vowel of infinitives with the surface form (C)V-t may either be the stem-((C)CV-o-t as in hřát) or the thematic vowel ((C)O-C-V-t as in brát), and this is relevant the distinction at hand. The identity of infinitives is revealed by two diagnostics. That hřát represents hřá-a-t, but brát instantiates bar-a-t, is shown by allomorph selection in the past passive participle and derived forms such as the deverbal adjective (athematic roots select -t, thematic roots -n: vy-hřa-t-ý vs. za-br-a-n-ý), and the presence of a glide that separates radical and desinential vowels in inflected forms (1st sg hře-j-u), while thematic vowels are deleted (1st sg ber-u, not *ber-e-j-u, †Jakobson’s Law).

Whether templatic alternations are the result of synchronic computation, or rather represent fossilized footprints of grammatical activity of a previous period is a question open to debate that needs to be assessed for every individual pattern. It is obvious that the templatic regularity of some categories is lexicalized today. Indicative of lexicalized patterns are the number (or rather: the proportion) of items that disobey the templatic restriction: the more counter-examples, the more probable that the alternation at hand is not synchronically active. An example where present-day alternations rely on the lexical recording of two distinct forms, rather than on grammatical computation, is the aforementioned feminine a-declension. While nouns such as dráha, hádka, kráva, láška, páska, rána, skála, tráva, žába, bába, blána, brána, čára, dáma, dláha, jáma, kláda, pára, sláma, váha, vláha, vrána shorten when a 2µ case marker is added (blan-ou, blan-ám, blan-ách, blan-ami), other items such as kára, káva, láva, máta, šťava, máry, pása, škvára, tára, váza, žáha, třída, křída, bríza, liha, lícha, liska, mícha, miza, sira, sýva, tiha, třída, třiska, hrůza, půda, chůda, chůva, můra, stvůra, šňura, zrůda, odrůda, coura, šmouha, touha, vzpoura do not show any alternations. Among those nouns that alternate, there is a certain amount of inter-speaker and/or free variation: both krav-ou and kráv-ou, hlín-ám and hlín-ám etc. are encountered. As may be expected when two lexically recorded forms are in competition, token frequency plays a role: frequent items are more likely to obey the templatic restriction. Another indicator of lexicalization are recent loans: items like Čina and Jáva do not alternate. Interestingly, the same is true for first names: Bára, Háta, Jára, Lída, Míla, Mína, Réza, Tóna etc. never lose their long vowel.

As for non-templatic alternations, vowel quality may impact the regularity of templatic alternations. This may also be indicative of the fact that the alternation at hand is not the result
synchronic computation. In spisovná češtně, quantity alternations may or may not involve vowel quality: a-á, e-é, i-i, y-ý are uniform, while č-č, o-ou and u-ú also modify vowel quality (in non-high standard varieties, e-i and i-ej also exist, and are productive). Pairs that also involve a difference in vowel quality have a limited productivity in the language. For example, they are typically the fist ones which stop to alternate in a paradigm, i.e. which develop competing forms where vowel quality is constant, or where no length alternation is observed at all. In the fem. a-declension for example, infrequent items that used to have a quality-sensitive alternation typically become non-alternating. Compare frequent *dīra - děr* with infrequent *vīra - věr / vír* (věr is spis./archaic), frequent *houba - hub* with infrequent *mouka - muk / mouk* (muk is spis./archaic), infrequent *kūra - kor / kūr* (kor is archaic). Bethin (2003:67) observes that hypocoristics in -a with mid stem vowels (e,o) tend not to obey the templatic lengthening that is found elsewhere. Compare *Vladimír* - [Vláďa]₃µ (regular) with *Benedikt* - [Beďa]ᵢ, *Olga* - [Ola]ᵢ. There are also mid vowel items which produce lengthened hypocoristics, but then they have often competing quality-sensitive and quality-neutral forms: *Tůma* - [Tůma]₃µ / [Tóma]₃µ.

Another diagnostic for the non-synchronic status of templatic alternations is semantic drift: there are cases where related forms show the expected templatic length alternations, but do not qualify for the derivation at hand given their meaning. For example, *hledět* "to look" and *hlídat* "to watch, to keep something under surveillance" bear all marks of an iterative-non-iterative pair: lengthening occurs when -a-t is suffixed. Also, it is obvious in which way somebody watches if he looks at something repeatedly. Yet it will be hard to call the semantic relationship between *hledět* and *hlídat* iterative. Along the same lines are *kalít* - *kálet*, *kazít* - *pe-kážet*, *ležet* - *léhat* and *patřít* "to look" (as in *patřít* tvář tvář smrti) - *pátrat*. This pattern makes sense if the forms that look like iteratives are the result of a truly iterative derivation that took place at some earlier stage of the language when their meaning was also truly iterative. Iterative forms were then lexicalized, and therefore could engage into a semantic drift, which produced the modern situation (Scheer 2004b).

Numeric counts that cover large (or near-exhaustive) parts of the Czech lexicon are available for two templatic categories ([(za+root)]₃µ, Scheer 2000:126f, 2001a:43f, and iteratives, Scheer 2003, 2004a,b) and one sub-regularity (the above mentioned (C)CV-t pattern of infinitives, Caha & Scheer 2008). For example, out of 228 non-iterative-iterative pairs, only 19 do not conform to the templatic pattern (8,3%).

When considering the synchronic (in)activity of templatic derivations, it is important to bear in mind that not being synchronically active does not mean that the alternation at hand is diachronic: it just means that it is the result of a synchronic computation that took place at an earlier stage of the language, and that today remaining alternations are managed by some other means, i.e. allomorphy or distinct lexical recordings.

The discovery of templatic regularities in Czech sheds new light on Western Slavic vowel length, which since the 19th century was thought 1) to relate to Common Slavic intonation and length (which itself is based on Eastern Slavic stress and South Slavic intonation/length), and therefore 2) to have a diachronic explanation. However, there is no way to predict Western Slavic length from CS intonation or length: all attempts to create a diachronic pathway (acute and circumflex intonation in Jagiè's 1884 Laws, neo-acute and neo-circumflex intonation created by Lehr-Splawiński's 1917 metatony) have failed. That Western Slavic length has got nothing to do with these parameters was shown by the post-war literature (e.g. Stang 1957:21, Kortlandt 1975, Garde 1976:ix), and especially for Czech by Šaur (1995) and Scheer (2003). Although it is not the case that all alternations in vowel length that are found in Western Slavic are templatic in nature, the templatic perspective offers an explanation for their genesis: they are homemade. That is, Western Slavic length is not a result of a diachronic process that relates some CS ancestor to a Western Slavic reflex.
Rather, the relationship is synchronous and derivational, i.e. between a non-templatic base and a templatic derived form (Scheer 2003). Recall that synchronous in this context may refer to a synchronous derivation that was made a couple of centuries ago: it does not need to refer to present-day grammatical activity.

Templatic constraints in general raise a challenge for interface theories, which need to explain how a morpho-semantically motivated restriction can be transformed into a phonological alternation that counts vocalic quantity (in other languages also consonantal quantity) over a given string (for Czech, see Caha & Scheer 2008). The kind of templaticity that is found in Czech also raises an issue regarding the reason why templatic restrictions exist in the first place: in Czech, a template is never a morpheme, i.e. never distinctive. that is, templatic restrictions are always accompanied by an affixal marker: infinitives for example are marked by the minimum $2\mu$ template, but also by an affix, $-t$. In other languages, this is not the case: in Classical Arabic for example, templates are distinctive (e.g. $katab\-a$ "write 3° sg. masc. pf." - $kaatab\-a$ "id., reciprocal"). A hint regarding the question why Czech bothers to implement templates in the first place may be the fact that they also exist in first language acquisition, including in languages where the adult target does not have any templatic activity (Macken 1992, Velleman & Vihman 2002, Wauquier-Gravelines 2003). Acquisitionists argue that templates help learners to lexicalize strings of sounds: they have the function of landmarks that categorize an otherwise amorphous flow of data. Interestingly, size-invariable child templates are observed before children have acquired morpho-semantic categories. One way to look at templates is thus to consider them as a cognitive strategy for categorization that flags the edges of domains. The association with a morpho-semantic category is then secondary.

Traditionally and cross-linguistically, templates are associated with the Afro-Asiatic family in general, and with Semitic in particular. The classical analysis (originating in the work of Arabic grammarians of the 9th century A.D and adapted to the autosegmental environment by McCarthy 1979) is built on the independence of melodic/segmental (consonants, vowels) and syllabic (x-slots) information, which are stored independently in the lexicon. That is, templatic restrictions are enforced by a lexical item that is made of a fixed number and sequence of consonantal and vocalic positions (the template). For example, the Classical Arabic form $katab\-a$ has four distinct lexical ingredients: 1) the root, made of the three consonants $ktb$, which carry the lexical meaning "to write", 2) the leftmost $-a\-\$, which marks active voice, 3) the rightmost $-a\-\$, which marks verb class membership, 4) the template CVCVC, which identifies the unmarked binyan 1 (unmarked in meaning). The from $kaatab\-a$ where the leftmost $-a\-\$ is long is the result of the same lexical ingredients 1) to 3), except that they are matched with the binyan 3 template CVVCVC that denotes (among other things) reciprocity.

On the basis of the description of templatic phenomena in non-Semitic languages where morphology is concatenative (rather than non-concatenative as in Semitic), Prosodic Morphology (McCarthy 1982, McCarthy & Prince 1990, 1996 and following) has proposed an analysis whereby templatic restrictions are expressed in terms of prosodic constituents (syllable, foot, prosodic word). After the advent of OT, this representational outlook was abandoned by its authors in favour of a view whereby templatic restrictions are the result of computation, and where templates cease to be a lexically, grammatically and cognitively independent object (Generalized Template Theory, McCarthy & Prince 1994, Downing 2006). The debate in this area is not closed, though, and the traditional perspective continues to be entertained (e.g. Prunet et al. 2008).
References


Scheer, Tobias 2001. Čeština ve Warszawě. Course handout, University of Warsaw. WEB.


Scheer, Tobias 2004. O samohláskové délce při derivaci v češtině. Čeština - univerzália a

WEB.


Velleman, Shelley & Marilyn May Vihman 2002. Whole-word phonology and templates:
Trap, bootstrap, or some of each? Language, Speech & Hearing Services in Schools
33: 9-23.

Wauquier-Gravelines, Sophie 2003. Troncation et reduplication. Peut-on parler de gabarits
morphologiques dans le lexique précoce ? Les unités morphologiques. Silexicales 3,
edited by Bernard Fradin, Georgette Dal, Nabil Hathout, Françoise Kerleroux, M.
Roché & Marc Plénat, 220-229. Lille: Université de Lille III.