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MORPHEME-STRUCTURE CONSTRAINTS. In the phonological component of a generative grammar, M[orpheme-]S[tructure] C[onstraint]s express restrictions on the phonological shape of linguistic forms as they appear in the lexicon—e.g. the obligatory agreement in place of articulation in English morpheme-internal nasal + stop clusters *(tempest, limbo, lentil, candy, junco, finger)*.

In early Generative Phonology [*q.v.*] (Halle 1959), MSCs were conceived of as rules which (i) applied before lexical insertion, and (ii) operated in a purely feature-filling mode. [*See* Markedness, *article on* Markedness in Phonology.] They differed from ordinary feature-changing phonological rules in both respects. Later work revealed problems in regard both to the rule status of MSCs and to their feature-filling function; it was proposed that morpheme structure rules be replaced by static conditions defined over fully specified lexical entries (Stanley 1967). This move necessitated complications in the evaluation metric; and it contributed to the problem that many MSCs duplicate phonological rules in their effects, but are formally unrelated to them (Kenstowicz & Kisseberth 1977). Nasal Assimilation in English is a case in point: besides being a MSC, it is also a phonological rule which operates across morpheme boundaries *(en-able, em-bark, e[ŋ]-capsule)*. The problem of duplication was exacerbated by attempts to

limit the degree of abstractness (Kiparsky 1968) in underlying phonological representations by disallowing morpheme-internal applications of phonological rules. Further problems related to MSCs concern their domain of application, and the derivational level of their enforcement. Certain cases have been argued to require a more inclusive domain, like the 'word', instead of the 'morpheme'; and it has been proposed that at least some constraints hold at the level of surface structure, rather than underlyingly (Shibatani 1973).

A new approach to MSCs emerges in the framework of Lexical Phonology [q.v.] (Kiparsky 1982). The hypothesis that underlying representations are underspecified makes it possible to view MSCs not as independent entities, but rather as a mode of operation (viz. feature-filling) of lexical phonological rules. In this way, the same rules that apply in a feature-filling manner to non-derived forms—where they determine the shape of basic lexical entries, and thus express morpheme structure regularities—continue to apply in a feature-changing manner in derived environments, where they affect the structure of derived lexical forms. This is termed STRUCTURE PRESERVATION.

As prosodic constituent structure, in particular that of SYLLABLES [q.v.], came to be recognized as a central component of phonological representations, it became evident that many proposed constraints on morpheme structure are, in fact, constraints on syllable structure. This holds for the English sequential constraint which allows the initial sequences *br* and *bl*, while disallowing *bn*. Beyond syllabification, constituents like syllables and FEET [see Metrical Phonology] play an important role in defining prosodic size requirements on elements of certain lexical classes (McCarthy & Prince 1990). For example, in many Australian languages, every prosodic word minimally consists of one metrical foot.

Developments within Autosegmental Phonology [q.v.] have led to a deeper understanding of MSCs which restrict the morpheme-internal co-occurrence of certain features, and which result in patterns of morpheme-internal harmony and disharmony. Examples include:

(a) Dissimilation in point of articulation, e.g. the homorganicity constraint on root shape in Semitic languages, where a sequence like **fmt* is impossible as a consonantal root because it contains two labial consonants

(b) Dissimilation in laryngeal features such as aspiration (Grassmann's Law in Sanskrit and Greek) and

voicing (Lyman's Law in Japanese, which disallows the occurrence of more than one voiced obstruent per morpheme, thus ruling out forms like **dago*)

It has been argued (McCarthy 1986, Mester 1986) that such restrictions are reducible to the OBLIGATORY CONTOUR PRINCIPLE, which disallows adjacent identical elements on an autosegmental tier.

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BIBLIOGRAPHY

HALLE, MORRIS. 1959. *The sound pattern of Russian*. The Hague: Mouton.

KENSTOWICZ, MICHAEL J., & CHARLES W. KISSEBERTH. 1977. *Topics in phonological theory*. New York: Academic Press.

KIPARSKY, PAUL. 1968. *How abstract is phonology?* Bloomington: Indiana University Linguistics Club. Reprinted in *Three dimensions of linguistic theory*, edited by Osamu Fujimura, pp. 5–56. Tokyo: TEC, 1973.

KIPARSKY, PAUL. 1982. Lexical morphology and phonology. In *Linguistics in the morning calm*, edited by the Linguistic Society of Korea, pp. 3–91. Seoul: Hanshin.

McCARTHY, JOHN J. 1986. OCP effects: Gemination and antigemination. *Linguistic Inquiry* 17.207–263.

McCARTHY, JOHN J., & ALAN PRINCE. 1990. *Prosodic morphology*. Cambridge, Mass.: MIT Press.

MESTER, R. ARMIN. 1986. *Studies in tier structure*. Amherst, Mass.: University of Massachusetts dissertation. Published, New York: Garland Press, 1988.

SHIBATANI, MASAYOSHI. 1973. The role of surface phonetic constraints in generative phonology. *Language* 49.87–106.

STANLEY, RICHARD. 1967. Redundancy rules in phonology. *Language* 43.393–436.