

Preamble In File 4.1 (p. 101), the textbook contrasts the distribution of [s] and [ʃ] in English and in Japanese, concluding that they are in contrastive distribution in English, but in complementary distribution in Japanese. In particular, the passage on p. 101 states that in Japanese

1. [s] never precedes [i] and
2. [ʃ] only precedes [i]

In a later class, _____ suggested that 2. is not true, citing sequences like [ʃu] and [ʃa] as possible syllables of Japanese. My reaction was to assume that the book was simply mistaken and introduce Japanese' as a term for the hypothetical language described in the book (i.e. the language that obeys the restrictions on [s] and [ʃ] stated in 1. and 2.).

Afterwards, Maziar mentioned this is Russell Lee-Goldman, another graduate student in the department, who happens to know a lot about Japanese. Russell pointed out that the restriction in 2. holds of parts of the Japanese lexicon, but not all of it, and hence, in a sense, the book and _____ are both right. Our purpose today (and Wednesday) is to understand more about the Japanese lexicon and how it is organized.¹

Lexicon Stratification

- the lexicon is not a homogenous, monolithic construct
- there are sub-groupings that behave differently along various linguistic dimensions, including phonology and morphology
- this state of affairs is called Lexicon Stratification. In geology *stratification* means the “the formation, due natural processes, of strata or layers one above the other; the fact or state of existing in the form of strata, stratified condition” (OED).
- This is particularly clear in Japanese, where the lexicon comprises four strata:

Yamato (yamato-kotoba) the “native” stratum (analogous to Germanic/Anglo-Saxon vocabulary in English), example: [inu] ‘dog’

Sino-Japanese (kan-go) early borrowings from Chinese, constitutes the vast technical and learned vocabulary and appears mostly as compounds consisting of bound roots (analogous to the Latinate/Greek stratum in English), example: [geŋ-go-gaku] ‘linguistics’ (lit.: speak-word-study)

Foreign (gairai-go) recent loans (e.g. from English) taking over from Sino-Japanese as the source of new technical vocabulary, example: [raŋge;ji-raboratori:] ‘language laboratory’

Onomatopoeic/Mimetic (gisei-go/gitai-go) mimetic words “function syntactically as manner adverbs and may refer to just about any aspect (visual, emotional, etc.) of the activity involved, rather than just it’s sound.”² Example: [pera-pera] ‘(speak) fluently’

¹The information below is drawn from two papers by Junko Itô and Armin Mester: “The Structure of the Phonological Lexicon”. In Tsujimura, Natsuko (ed.) *The Handbook of Japanese Linguistics*, Blackwell Publishers, pp. 62-100 (1999), and “Japanese Phonology”, in Goldsmith, John (ed.), *The Handbook of Phonological Theory*, Blackwell Publishers, 817-838 (1994). Kazutaka Kurisu also kindly provided me with the minimal pairs in (1). People in our department, including Sharon Inkelas, have done important work on lexicon stratification in other languages, including Turkish.

²Quote from p. 64 of J. McCawley (1968) *The Phonological Component of a Grammar of Japanese*, Mouton, (1968).

- the stratification of the Japanese lexicon is reflected not only in the phonology (in ways that we will be exploring below and next time) and morphology (for instance, Yamato affixes mostly attach to Yamato roots, Sino-Japanese roots only compound with other Sino-Japanese roots), but also in the writing:
 - HIRAGANA and KANJI are typically used for the Yamato forms
 - KANJI is typically used for the Sino-Japanese vocabulary
 - KATAKANA is used for the Foreign vocabulary
- while stratification is particularly well-developed and clear in Japanese it is by no means particular to that language. Itô and Mester (1999:62) write that “In virtually all languages whose grammars have been explored to any degree of detail, the lexicon shows evidence for some degree of internal stratification.”

Back to [s] and [ʃ] Statements 1. and 2. both hold of the Yamato stratum, thus syllables like *[ʃu] and *[si] are impossible in this stratum. However, and this is the source of _____’s observation, statement 2. does not hold of the Sino-Japanese strata (nor of the Foreign stratum):

- (1) Sino-Japanese
- [sa] ‘difference’
 - [ʃa] ‘company’
 - [su] ‘vinegar’
 - [ʃu] ‘red’

On the other hand, restriction 1. (only [s] before [i]) does hold of all strata of the Japanese lexicon (cf. [ʃiti:] for ‘city’), and if we read the textbook carefully we can see that the passage on p. 101 is compatible with this: “If we know that a Japanese word contains the sound [i], we know that it can be preceded by [ʃ], but not by [s] — the combination [si] does not occur in Japanese.”

Question What can we now say about the distribution of [s] and [ʃ] in Japanese?

- in Yamato [s] and [ʃ] are in _____ distribution
- in Sino-Japanese and in the Foreign stratum [s] and [ʃ] are in _____ distribution

Going beyond [s] and [ʃ] Many many more phonological differences characterize the different strata and we will be exploring these on Wednesday.