

考生可以自行選擇使用中文或英文作答

1. When two languages make contact, borrowing words are largely shaped by L1 phonology. In this question set, Hindi borrowings from English (Questions 1-1 ~ 1-5) and Kirgiz borrowings from Russian (Questions 1-6 ~ 1-7) are provided. Study the following data and answer the questions below. For Questions 1-1 ~ 1-6, focus on the segmental combinations and ignore the realizations of phonetic qualities. (30 points)

- 1-1. Describe the linguistic phenomenon in Hindi borrowing words (listed below), and give generalizations. (3 points)

IPA	Gloss
firut	<i>fruit</i>
pəfaɪzəɪ	<i>Pfizer</i>
pɪɪɪz	<i>please</i>

- 1-2. Following the previous question, what would be the potential motivation that causes this linguistic phenomenon? (5 points)

- 1-3. Consider the following Hindi data. Generalize the observed linguistic phenomenon and compare against with the pattern you described in 1-1. (3 points)

IPA	Gloss
ɪspiitʃ	<i>speech</i>
ɪskul	<i>school</i>
ɪskru	<i>screw</i>
ɪsfɪəɪ	<i>sphere</i>

- 1-4. Now, here are more data from Hindi borrowing words. Do your generalizations from 1-1 and 1-3 still hold true? Justify your answer. (5 points)

IPA	Gloss
sɪnek	<i>snake</i>
sɪɪpɪɪ	<i>slipper</i>

- 1-5. What would be the potential motivation that causes the linguistic change in Question 1-4? Explain your answer. (5 points)

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- 1-6. Kirgiz, given its geographical location, borrows words from Russian. Study the following IPA transcriptions and justify if you think the patterns in Kirgiz borrowing words are in line with the patterns you generalized from Question 1-1 to 1-5. (5 points)

Russian	Kirgiz	Gloss
rtut	urtut	<i>mercury</i>
plita	pilita	<i>stovetop</i>
stfot	uustfot	<i>bill</i>
trupka	turupke	<i>pipe</i>
stakan	ustakan	<i>glass cup</i>

- 1-7. Please provide the predicted forms (in IPA) of the following Kirgiz words, try to give the most probable sounds, if possible. (4 points)

Russian	Kirgiz	Gloss
ʃtap		<i>headquarter</i>
ʃleja		<i>breach-brand</i>

2. English rhotics and flaps/taps. (20%)

- 2-1. Please give a narrow transcription for the English word **Saturday**. (6 points)

- 2-2. There are two major types of rhotics in English, tip-up [ɹ̥] and tip-down retroflex [ɹ̥̄] (Figure 2a). A study in 2015 (Derrick et al., 2015) reported that at least four different types of flaps/taps can be identified in English. They are: alveolar tap [ɾ̥], down flap [ɾ̥̄], up flap [ɾ̥̄], and postalveolar tap [ɾ̥̄] (Figure 2b).

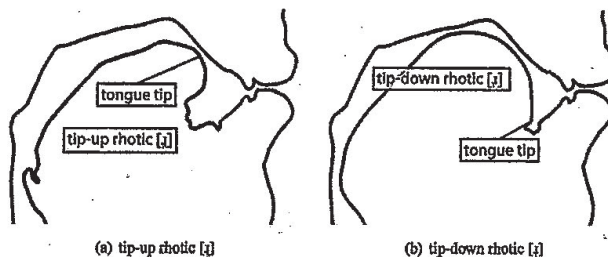


Figure 2a Schematic illustration of English rhotics

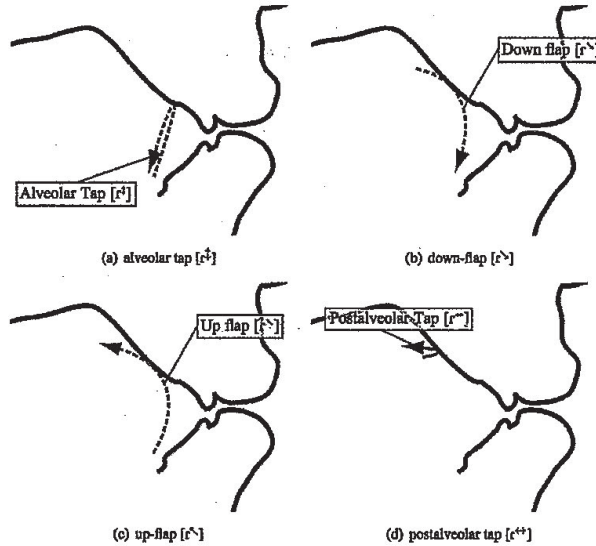


Figure 2b Schematic illustrations of English flaps/taps

The word **Saturday** has a very special sequence: the plosives can be realized as flaps. Given the information provided above, assuming all plosives are realized as flaps, how many possible combinations can be realized for the word **Saturday**? (6 points)

2-3. Following the previous question, among all the possible combinations, which one of them is likely to occur most frequently? Justify your answer. (8 points)

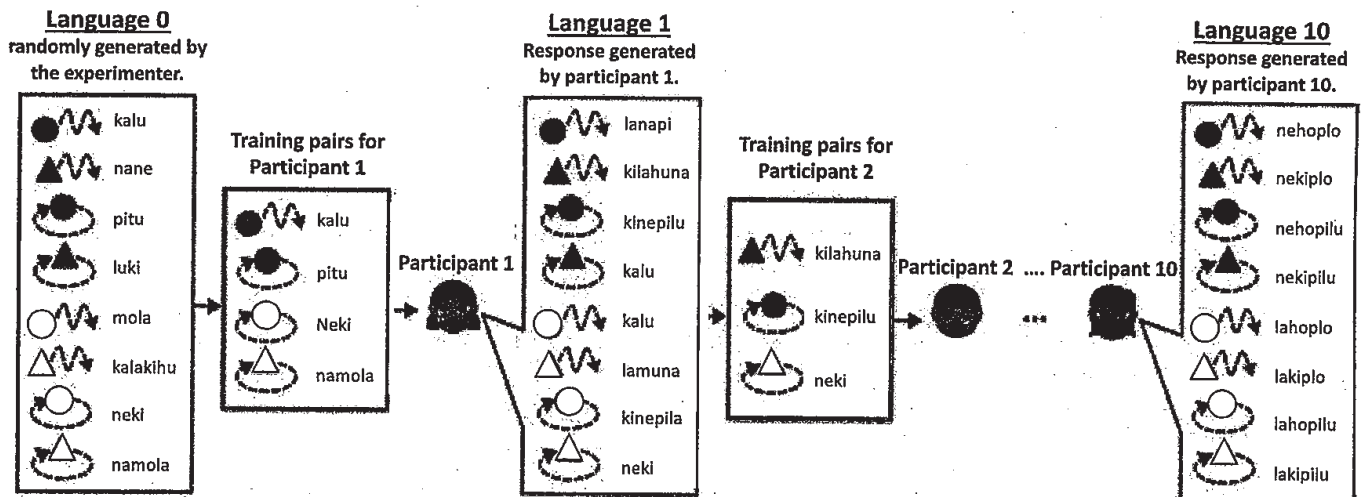
3. In the musical, 'tick, tick...BOOM!', one of the songs started with a sentence like this: 'I feel bad that you feel bad about me feeling bad about you feeling bad about what I said about what you said about me not being able to share a feeling.' Other than being a cute beginning of a successful song, this line of lyrics also illustrates a unique aspect of human language—recursion. In the following, discuss these issues in turn.

3-1. Define and give examples to explain recursion in human language and why it is a unique aspect of human language. (10 points)

3-2. Provide a concrete structural analysis of this line of lyrics to explain how it illustrates recursion in human language. (5 points)

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4. In their PNAS paper in 2008, Kirby, Cornish, and Smith conducted a word learning experiment. Participants were told to learn written labels for visual stimuli in a novel language. During training, participants were presented with string-picture pairs on the computer monitor. During testing, they saw pictures on the monitor and typed the corresponding letter strings they learned. Unbeknownst to the participants, half of the test pictures were not shown in the training phase. In addition, except for the first participant who was trained with randomly made-up 'words', all other participants were trained with the 'words' generated by the participant immediately before them. This procedure (illustrated below) is used to simulate cultural transmission over generations. The results showed that, over generations, people became more correct in typing the names for pictures they saw during training, and the structure of the names started to reflect the structure of meanings.



4-1. Analyze the morphological structure of the names generated by the 10th participant. Be sure to list the parts of the words that refer to color, shape, and movement, and describe what types of morphemes they are and what morphological characteristics cannot be inferred based on this dataset (10 points).

4-2. With these data, Kirby and colleagues argued that language is an adaptive system in its own right and cultural transmission can lead to the appearance of design without a designer. Do you agree with their view? Explain and justify your reasons. (10 points)

5. Icelandic, a member of the Germanic language family, is thought to be in a transition period from a grammar favoring morphological marking as the means of expressing participant roles in a sentence to a grammar that uses word order for the same purpose.

The prescriptive grammar of current Icelandic specifies that dative subject-experiencer verbs (e.g., *mislikað* 'disliked') are obligatorily associated with a dative-before-nominative structure. Therefore, sentence type (a) is grammatical and sentence type (b) is ungrammatical. However, if the diachronic changes in the history of English—the dative or accusative marking of the experiencer arguments was replaced with nominative, are also happening in Icelandic, then it is expected that Icelandic would also undergo a transition to nominative-before-dative eventually.

(a) Ég vantreysti sjómanninum sem hefur mislikað nemandinn á kaffihúsi
I distrust seaman-the-DAT who has disliked student-NOM in coffeehouse-the

* (b) Ég vantreysti sjómanninum sem hefur mislikað nemandanum á kaffihúsi.
I distrust seaman-the-DAT who has disliked student-DAT in coffeehouse-the

(Note: As *sem* is invariant across different cases, it does not become clear until *nemandanum* whether *sem* is nominative or dative, i.e., whether the word order in the relative sentence is dative-before-nominative or nominative-before-dative.)

Bornkessel-Schlesewsky et al. (2020) showed that while native speakers showed an overall preference for sentence type (a), they varied widely with regard to how acceptable they found both types. Some accepted the supposedly ungrammatical type (b) sentences and some tended to reject the supposedly grammatical type (a) sentences. Furthermore, these people's real-time brain responses—responses thought to reflect the demands of online sentence processing but not individuals' conscious assessment of sentence well-formedness, showed no difference between sentence types even though a typical grammaticality brain response was found in a control ungrammatical condition. These results were taken to suggest that changes in language comprehension foreshadow transitions that will subsequently emerge in the informal and ultimately the formal (normative) uses of a particular language.

Do you agree with this interpretation? If not, what alternative interpretations can you offer? Discuss your view about these findings and back up your points using observations from theories on language change. (15 points)