

24.901 Problem Set 5

The data below is from Hindi (M. Ohala 1983 *Aspects of Hindi Phonology*).

The point of this problem is to illustrate how constraint interaction (as opposed to rules) allows a simpler and more explanatory statement of a process.

(a) There are V-Ø alternations in nouns

	Nom sg	Oblique pl	Agentive	gloss
1	kəmər	kəmr-ō	kəmər-ne	waist
2	ke:sər	ke:sr-ō	ke:sər-ne	saffron
3	səbək	səbk-ō	səbək-ne	lesson
4	ka:rək	ka:rk-ō	ka:rək-ne	case
5	kusum	kusum-ō	kusum-ne	flower
6	pət ^h ik	pət ^h ik-ō	pət ^h ik-ne	wayfarer

(b) Similar V-Ø alternations in verbs

	Bare verb	Past	Infinitive	gloss
7	nikəl	nikl-a	nikəl-na	come out
8	uk ^h ər	uk ^h r -a	uk ^h ər-na	be uprooted
9	pəkər	pəkr-a	pəkər-na	catch

(c) No V-Ø alternations in these nouns:

10	qətl	qətl-ō	qətl-ne	murder
11	swərg	swərg-ō	swərg-ne	heaven
12	kəʃt	kəʃt-ō	kəʃt-ne	trouble

(d) No V-Ø in these verbs:

13	nisəns	nisəns-a	nisəns-na	murder (vb)
14	dərəxt	dərəxt-ō	dərəxt-ne	tree
15	əkʃər	əkʃər-ō	əkʃər-ne	letter

Question 1 What are the URs of the alternating forms in (a)? Is ə part of the UR? Give reasons.

Question 2 State the simplest possible M constraint causing the V-Ø alternations (M₁)

Question 3 Rank M₁ relative to at least two other F constraints (one of which is violated in the alternations) and rank them. Illustrate the effects of the ranking below.

<i>nikla</i> cf. (7)	UR			
a.	nikəla			
b.	nikla			
c.	nikala			

Question 4: Why no alternations in cases like (13): *nisəns*, *nisəns-a*, *nisəns-na*? (Hint: make maximal use of the Afar analysis.) Illustrate (next page)

nisəns-a cf. (13)	UR			
☞a.	nisəns-a			
b.	nisns-a			
c.	nins-a			

Question 5: Why does ə surface in cases like (6) *nikəl* ? Why do both ə surface in *kəmər*?

nikəl cf. (7)	UR			
☞a.	nikəl			
b.	nikl			

kəmər cf. (1)	UR			
☞a.	kəmər			
b.	kmər			
c.	kəmr			
d.	kmr			

Question 5: Is your answer to Questions 4-5 consistent with Hindi forms like *qətl*, *qətlne*? If not, revise the analysis.

qətl cf. (10)	UR			
☞a.	qətl			
b.	qətəl			
c.	qət			

Question 6: Summarize the analysis in a Hasse diagram. Indicate only rankings you have evidence for. Indicate the evidence for each ranking as: C1 >> C2 because /x/→[y] and not *[z].

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