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From the Selected Works of Shmuel Bolozky

1992

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On the Derivation of Hebrew Forms with the UU+ut Suffix

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Hebrew Studies 33 (1992), pp 51-69

In a previous paper, Shmuel Bolozky (1986) showed how the canonical pattern CaCCan and Noun+an formation constitute different realizations of the same morpho-semantic noun-formation process. In general, verb-related forms are realized in CaCCan (kablan 'contractor,' related to kibel 'receive,' baxyan 'cry-baby,' related to baxa 'cry,' etc.), regardless of what the specific realization of a related verb stem might be, while nouns and adjectives have +an appended without the stem being restructured in the process (?alxutan 'wireless operator,' related to ?alxut 'wireless,' xalilan 'flutist,' related to xalil 'flute,' etc.). CaCCan constitutes what Semiticists refer to (e.g. Goshen-Gottstein 1964, McCarthy 1981, etc.) as a 'discontinuous' or 'nonconcatenative' word-formation pattern, while adding a suffix to an unaffected noun stem, i.e. N+an, is a manifestation of 'continuous' or 'linear' derivation. The N+an derivational strategy does not necessarily preclude **any** concomitant changes in the base. Thus, the alternations below,ⁱ

(1)	<u>N+an Form</u>	<u>Gloss</u>	<u>Reduced Counterpart</u>
	mizraxan	orientalist	mizrexan
	miSpatan	jurist, jurisprudent	miSpetan
	pinkasan	bookkeeper	pinkesan
	kalkalan	economist	kalkelan

suggest that it is possible to have N+an with some degree of reduction. In fact, since in colloquial Hebrew the reduced alternants are commoner than their "full" counterparts, and in recognition of the naturalness of pre-stress reduction, the Hebrew language academy now considers them normative as well.

Historical discussionsⁱⁱ of the ending +ut treat it together with +it, regarding both as a +(V)t feminine suffix originating from roots with y or w as the third radical: +it realized with root-final y, and +ut with root-final w, as in k^esut 'cover,' d^emut 'image,' e^enut 'suffering, poverty.' By analogy, +ut suffixes were also realized with root-final y: z^enut 'prostitution,' p^edut 'salvation,' r^eut 'following, chasing.' Later, two developments occurred: 1. Reanalysis of the forms, regarding the whole of +ut as an independent suffix, resulting in its addition to words like melex (< /malk/) 'king' to yield malxut 'kingdom.' 2. Influence of Aramaic (and Akkadian), in which this suffix is common (e.g. malxuta 'kingdom'), e.g. Ezek 24:26 haSma'ut 'delivering message,' Dan 11:23 hitHabb^erut 'joining' -- which accounts for its occurrence primarily in the later books. Bauer and Leander (1965, p 505) claim that forms with a long, unreduced a such as galut 'exile,' Hazut 'sight, vision,' baxut 'weeping,' ramut 'pride,' barut 'purity, clarity' were derived from the Aramaic benoni. In general, it appears that most forms with +ut were formed between the medieval and modern periods -- about 93% of nouns ending with +ut in Even-Shoshan's dictionary -- including medieval uphazard creations as well as recent innovations and Academy-introduced ones. On the whole, they tend to belong to the non-colloquial register, which children learn late.

Synchronically, formation of abstract nouns with the +ut suffix is generally viewed as linear derivation. According to Szejder (1929), the suffix +ut tends to attach itself to the inflected stem -- or to allomorphs, according to Rosen (1957).ⁱⁱⁱ It will be shown below, however, that although many nouns with +ut are indeed derived linearly, in principle the situation is not unlike the one observed in nouns with +an: the two strategies, linear and discontinuous, coexist alongside each other.^{iv}

There is little doubt that nouns with +ut for which there exist no sufficient realizations of the same miSkal (a **non**-linear derivation pattern) to justify further grouping, should be derived linearly [Unless specified otherwise, all +ut cases below will constitute abstract nominal counterparts of their related glossed stems]:

(2)	?ezrax 'citizen' > ?ezraxut	?evil 'fool' > ?evilut
	?umlal 'miserable' > ?umlalut	?enoS 'man' > ?enoSut ^v
	?efSar 'possible' > ?efSarut	?adrixal 'architect' > ?adrixalut
	biryon 'violent person' > biryonut	gizbar 'treasurer' > gizbarut
	xaver 'friend' > xaverut	xamakmak 'evasive' > xamakmakut
	tiron 'recruit, novice' > tironut	mamaS 'substance' > mamaSut
	mamzer 'bastard' > mamzerut	masger 'locksmith' > masgerut
	misken 'miserable' > miskenut	maSma 'sense' > maSma?ut
	sandak 'godfather' > sandakut	sandlar 'shoemaker' > sandlarut
	safsar 'broker' > safsarut	'elyon 'superior' > 'elyonut
	'arel 'uncircumcized' > 'arelut	ciyon 'Zion' > ciyonut
	kadmon 'ancient, early' > kadmonut	kundas 'prankster' > kundasut
	ke(y)sar 'emperor' > ke(y)sarut	Sutaf 'partner' > Sutafut

Linear derivation can also be assumed for monosyllabic stems^{vi} with +ut, even though some of these stems share (or appear to share) a miSkal:

(3)	bur 'ignorant' > burut	zol 'cheap' > zolut
	mol 'publisher' > molut	?on 'potency' > ?onut
	ken(e) 'sincere' > kenut	yeS 'there is' > yeSut 'presence'
	rea 'friend' > re'ut	'er 'awake' > 'erut
	'ed 'witness' > 'edut	ma 'what' > mahut 'essence'
	gas 'rough, coarse' > gasut	zar 'foreign' > zarut
	cax 'clear' > caxut	car 'narrow' > carut
	'az 'fierce' > 'azut	zax 'pure' > zakut
	kal 'easy, light' > kalut	xad 'sharp' > xadut
	rax 'soft' > rakut	dal 'poor' > dalut
	dak 'thin' > dakut	lax 'humid' > laxut

The same may be claimed for bisyllabic stem in which the second syllable is open -- usually from roots whose final radical is y (not realized in final position) -- and the vowel is consequently elided before the u of +ut, as in:

(4)	hore 'parent' > horut	kama 'how many' > kamut

naxe 'cripple' > naxut

zehe 'identical' > zehut 'identity'

Linear derivation of +ut nouns may also involve adding +ut to words ending with a common suffix. A suffix with which +ut is very commonly associated is the adjectival +i. The stem to which +i is attached is kept intact. There exist numerous such cases -- 359 of Hebrew origin and a few hundred more of foreign origin, according to Even Shoshan; only a short representative list is provided, by way of illustration:

(5)	yalduti 'childish' > yaldutiyut	?arci 'earthly' > ?arciyut
	xaluci 'pioneering' > xaluciyut	gaSmi 'physical' > gaSmiyut
	ma'asi 'pragmatic' > ma'asiyut	xagigi 'festive' > xagigiyut
	dati 'religious' > datiyut	?iti 'slow' > ?itiyut
	ciburi 'public' > ciburiyut	Situfi 'communal' > Situfiyut
	malxuti 'regal' > malxutiyut	kiconi 'extreme' > kiconiyut
	medini 'political' > mediniyut	katnuni 'petty' > katnuniut
	'armumi 'cunning' > 'armumiyut	sodi 'secret' > sodiyut
	?aviv 'spring' > ?aviviyut	?almoni 'anonymous' > ?almoniyut
	be'ayati 'problematic' > be'ayatiyut	xiloni 'secular' > xiloniyut
	hexleti 'determined' > hexletiyut	zmani 'temporary' > zmaniyut
	yixudi 'unique' > yixudiyut	xofSi 'free' > xofSiyut
	keda'i 'worthwhile' > keda'iyut	le?umi 'national' > le?umiyut
	musari 'moral' > musariyut	yemani 'right-wing' > yemaniyut
	mini 'sexual' > miniyut	mistori 'mysterious' > mistoriyut
	mamaSi 'real' > mamaSiyut	mekori 'original' > mekoriyut
	mikri 'accidental' > mikriyut	merkazi 'central' > merkaziyut
	naSi 'feminine' > naSiyut	'onati 'seasonal' > 'onatiyut
	'amami 'popular' > 'amamiyut	prati 'private' > pratiyut
	pit?omi 'sudden' > pit?omiyut	katnuni 'petty' > katnuniyut
	Sitati 'methodical' > Sitatiyut	ruxani 'spiritual' > ruxaniyut
	Sitxi 'superficial' > Sitxiyut	riSoni 'pioneering' > riSoniyut
	rivxi 'profitable' > rivxiyut	SorSi 'deeply rooted' > SorSiyut
	Samnuni 'oily' > Samnuniyut	tarbuti 'cultured' > tarbutiyut

Occasionally, one finds an +iyut sequence that is derived directly from the stem rather than from an adjective ending with i -- either because the semantic relationship dictates it, or because an appropriate +iy form does not exist:

- (6) nóaX 'comfortable, convenient' > noxiyut (alongside noxut. No *noxi)
 klum 'nothing/anything' > klumiyut (no *klumi)
 xam 'the Hamitic race' > xamiyut (no *xami)
 'odef 'redundant' > 'odfiyut (alongside 'odfut. No *'odfi)
 ??iS 'man, person' > ?iSiyut 'personality' (probably not from the adjective ?iSi 'personal=private')

This raises the interesting possibility that iyut may function as a single, atomic suffix for the purpose of deriving **some** abstract nominalizations.

Even if the stem-suffix i is deleted in the process of deriving the related nominalization with +ut, which tends to happen in nouns ending with +ay/+a?i, +ani and +oni -- the stem is unaffected, as in:

- (7) (a) xakla?i/xaklay^{vii} 'agricultural' > xakla?ut
 'itona?i 'journalistic' > 'itona?ut
 bula?i 'related to stamp collection' > bula?ut
 kana?i 'envious, zealous, fanatic' > kana?ut
 'acma?i 'independent' > 'acma?ut
- (b) bogdani 'treacherous' > bogdanut
 tov'ani 'swampy' > tov'anut
 le?umani 'nationalist' > le?umanut
 'erani 'watchful' > 'eranut
 burgani 'bourgeois' > burganut
- (c) cimxoni 'vegetarian' > cimxonut
 tiv'oni 'naturalist' > tiv'onut
 sitoni 'wholesale' > sitonut
 riboni 'sovereign' > ribonut

Note that in the latter two sub-groups, one could speak of +ani and +oni as atomic suffixes, since there are no free morphemes such as *bogdan, *tov'an, *le?uman, *eran or *burgan, nor *cimxon, *tiv'on or *siton.^{viii} It is not clear whether the reason for the deletion of +i in the affixation process is the very presence of atomic +ani, +oni and +ay/+a?i, which would require marking for undergoing such deletion upon suffixation, or lexical marking of each of these items for a minor deletion rule, reflecting a somewhat higher level of usage ('eraniyut and burganiyut, for instance, are marginally-possible colloquial variants).

Linear derivation may also involve adding +ut to forms, with or without a common suffix, which share a common miSkal encompassing the whole form, as in stems of the CaCCan and CaCaC types in the following two groups, respectively:^{ix}

<p>(8) batlan 'loafer' > batlanut
'aclan 'lazy' > 'aclanut ~ 'aclut
ragzan 'angry' > ragzanut
xaSdan 'suspicious' > xaSdanut
vatran 'lenient' > vatranut
naclan 'exploitive' > naclanut
Staltan 'dominant' > Staltanut
patpetan 'talkative' > patpetanut</p>	<p>kamcan 'miser' > kamcanut
nadvan 'donor' > nadvanut
balSan 'linguist' > balSanut
xakyan 'imitator' > xakyanut
mardan 'rebellious' > mardanut
nakman 'vengeful' > nakmanut
gandran 'dude' > gandrnut
ravrevan 'braggart' > ravrevanut</p>
<p>(9) nagar 'carpenter' > nagarut
tayar 'tourist' > tayarut
zaban 'sales person' > zabanut</p>	<p>xayat 'taylor' > xayatut
xazan 'cantor' > xazanut
nehag 'driver' > nehagut</p>

balaS 'detective' > balaSut
 tabax 'cook' > tabaxut
 ravak 'bachelor' > ravakut

sapar 'barber' > saparut
 navad 'nomad' > navadut
 nayad 'mobile' > nayadut

The same holds for some nouns derived from the present participles of nif'al, pu'al, hif'il and huf'al, respectively, as in the following four illustrations:

(10)	nifkad 'absent' > nifkadut
ne?eman 'faithful' > neemanut
nexmad 'cute' > nexmadut
nimhar 'rash' > nimharut
nisbal 'tolerated' > nisbalut
nirgan 'complaining' > nirganut
nikle 'lowly' > niklut
nirpe 'lazy' > nirput	ne?elax 'dirty' > neelaxut
niv'ar 'ignorant' > niv'arut
nixna 'sumbmissive' > nixna'ut
nimrac 'energetic' > nimracut
nifkad 'absent' > nifkadut
nil'ag 'contemptible' > nil'agut
nivze 'despicable' > nivzut
nixpe 'epileptic' > nixput
(11)	mexuyav 'obliged' > mexuyavut
meguvan 'varied' > meguvanut
mugbal 'restricted' > mugbalut
meyuman 'proficient' > myumanut
me'orav 'involved' > me'oravut
meSumadut 'apostasy'	meyutar 'redundant' > meyutarut
megoxax 'ridiculous' > megoxaxut
me?uxad 'special' > meyxadut
meyutar 'redundant' > meyutarut
mecumcam 'limited' > mecumcamut
meSune 'strange' > meSunut
(12)	mazkir 'secretary' > mazkirut
mevin 'knowledgeable, comprehending; expert' > mevinut
molix 'conducting (electricity etc.)' > molixut
malSin 'informer' > malSinut
macbi 'military leadership' > macbi?ut	madrix 'guide' > madrixut
manhig 'leader' > manhigut
(13)	muda 'aware' > muda'ut
mufra 'disturbed' > mufra'ut
muvhak 'clear; par excellence' > muvhakut
muvan 'comprehended' > muvanut
mucak 'firm' > mucakut
muxSar 'talented' > muxSarut
mufkar 'left to his/her own devices' > mufkarut
mufSat 'abstract' > mufSatut	murkav 'complex' > murkavut
muzar 'strange' > muzarut
muxaS 'felt' > muxaSut
muznax 'neglected' > muznaxut
mu'amad 'candidate' > mu'amadut

or in derivations from other abstract nouns related to hif'il, as in:

- (14) hefker 'licentiousness' > hefkerut heker 'recognition' > hekerut
 hexSer 'certification as meeting certain standards' > hexSerut
 hexreax 'necessity' > hexrexut

and so on. In cases such as (8-14), where linear derivation involves groups sharing a miSkal, it is actually hard to tell whether we are dealing with linear or non-linear derivation. On the one hand, the stems themselves are not restructured internally as a result of suffixation; on the other hand, they do follow particular **non**-linear patterns. In the absence of any evidence to the contrary, however, it makes sense to assume that if the stem is unaffected by suffixation, the process should be regarded as linear, even if it is common to a whole group of words sharing a common miSkal. The same may be argued for benoni type which involve subsequent deletion, particularly since benoni forms are the likeliest to serve as a base for linear derivation:

(15)	soxen 'agent' > soxnut	Soter 'policeman' > Sotrut
	xonex 'trainer' > xonxut	xoveS 'dress wound' > xovSut
	rokeax 'pharmacist' > rokxut	noxeax 'present' > noxexut
	boker 'cattle farmer' > bokrut	borer 'arbitrator' > borerut
	korex 'binder (ag)' > korxut	korem 'vine grower' > kormut
	noter 'guard' > notrut	noxel 'crook' > noxlut
	noked 'shepherd' > nokdut	'oyen 'hostile' > 'oynut
	coref 'jeweler' > corfut	rozen 'noble' > roznut
	roxel 'peddler' > roxlut	
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(16)	meyaled 'obstetrician' > meyaldut	mefaked 'commander' > mefakdut
	mefakeax 'inspector' > mefakxut	

Nominalizations of hitpa'el and nif'al^x, which are quite common, can be regarded as linear derivations from the imperative or the infinitive,^{xi} with subsequent deletion of pre-stress e, as in the following two groups:

(17)	hitnaged 'objected' > hitnagdut	
	hitpa'alut 'marvelling'	hitraxakut 'getting further away'
	hitkansut 'convening'	hitlahavut 'enthusiasm'
	hitlakxut 'conflagration'	hitmotetut 'collapsing'
	hitmardut 'revolting'	hitmakrut 'devotion; addiction'
	hitmarmerut 'dissatisfaction'	hitraSmut 'impression'
	hitnagSut 'clash'	hitnadvut 'volunteering'
	hitnavnut 'decay'	hitnasut 'experiencing'
	hitnaplut 'attack'	hitnaclut 'apology'
	hitnakSut 'assassination'	hit'amlut 'gymnastics'
	hit'askut 'dealing w/s'thing'	hit'anyenut 'getting interested'
	hit'acmut 'becoming stronger'	hit'akSut 'being obstinate'
	hit'arvut 'interference'	hit'ar'erut 'becoming unsettled'
	hitpatrut 'resignation'	hitpaysut 'making peace'
	hitpakxut 'awakening'	hitpalgut 'splitting'
	hitpalsefut 'philosophizing'	hitpankut 'self-indulging'
	hitpaclut 'splitting'	hitpar'ut 'rioting'
	hitparcut 'breakout'	hitparkut 'dissolution'
	hitpaStut 'spreading'	hitpa?arut 'bragging'
	hitpatxut 'development'	hitkadmud 'progress(ing)'

hitkahalut 'crowd gathering'	hitkotetut 'quarreling'
hitkomemut 'revolting'	hitkarerut 'cooling down'
hitkarvut 'approaching'	hitkaStut 'adorning oneself'
hitkaSut 'hardening'	hitkaSrut 'committing oneself'
hitragSut 'excitement'	hitkacrut 'getting shorter'
hitromemut 'rising, elation'	hitroSeSut 'becoming poor'
hitrofefut 'getting loose'	hitrocecut 'running around'
hitrakzut 'concentrating'	hitraxavut 'becoming wide'
hitraxaSut 'occurring'	hitraskut 'crashing'
hitra'amut 'grumbling'	hitrapkut 'embracing'
hitraSlut 'negligence'	

(18) (le)hikana 'surrendered' > hikan'ut

he'anut 'response'	hidabkut 'joining, contagion'
hitaplut 'harrassment'	he'avkut 'struggling'
hidaxafut 'shoving'	hehafxut 'turning (into)'
hivacrut 'creation'	hexalcut 'volunteering'
hexalSut 'weakening'	hitam'ut 'assimilation'
himan'ut 'avoidance'	hitak'ut 'being stuck'
himac?ut 'being there'	hisaxafut 'being swept away'
he'adrut 'absence'	he'almut 'disappearance'
he'arxut 'preparing setup'	hipaskut 'stopping'
hipac'ut 'being wounded'	hicamdut 'staying close'
hikaltut 'absorption'	hikal'ut 'getting into situ.'
hiSa?arut 'staying'	hiSanut 'repetition'
hiSa'anut 'leaning (on)'	hitaklut 'chance meeting'

It appears to us, however, that strong arguments can be made for **not** considering +ut cases with miSkal-based stems as linearly derived. To start with, there is no sufficient reason for categorizing automatic abstract nominalizations in (17) and (18) as linear, while other abstract nominalizations of **all other binyanim** are clearly non-concatenative:

- (19) pa'al: CCiCa, the unmarked pattern (ktiva 'writing'), CCeCa (gneva 'stealing, theft'), CCaCa (de?aga 'worrying, worry'), CCuCa (ge?ula 'salvation'), CiCCa (sin?a 'hate'), miCCaC (mixak 'playing, game')
- hif'il: haCCaCa, the unmarked pattern (hasbara 'explaining, information'), heCCeC (hefker 'licentiousness' -- see above)
- pi'el: CiCeC, the unmarked pattern (sidur 'arranging, arrangement'), CaCaCa (bakaSa 'request')

Furthermore, it should be borne in mind that although linear derivation followed by reduction/elision works, a reduction/elision analysis is not as well motivated for Modern Hebrew (MH) as it might have been for Biblical or Mishnaic Hebrew. One could motivate deletion of e and a for verbs in pre-stress position^{xii} and a in nouns and adjectives two syllables away from the stress^{xiii} at pre-modern stages of the language. But with the breakdown of gemination in MH, the set of word-formation rules underwent complete restructuring, and there

is no natural way of accounting for the distinction between "deletable" and "non-deletable" classes -- which would explain, for instance, the difference between the behavior of a in the two following groups:

- (20)
pakid 'clerk' > pkidut	yadid 'friend' > yedidut
Salíax 'messenger' > Slixut	nazir 'hermit, abstinent' > nezirut
bari 'healthy' > bri?ut	gamiS 'flexible' > gmiSut
dalil 'thin' > dlilut	zahir 'careful' > zehirut
zariz 'agile' > zrizut	yahir 'arrogant' > yehirut
ya'il 'efficient' > yeilut	yariv 'adversary' > yerivut
mahir 'fast' > mehirut	masis 'soluble' > mesisut
marir 'bitter' > merirut	nadiv 'generous' > nedivut
nadir 'rare' > neditut	nazil 'fluid' > nezilut
nasix 'prince' > nesixut	nacig 'representative' > necigut
nasi 'president' > nesi?ut	natin 'subject, citizen' > netinut
samix 'thick' > smixut	paziz 'rash' > pzizut
pa'il 'active' > pe'ilut	camig 'viscous' > cmigut
karir 'cool' > krirut	kaSíax > 'rigid' > kSixut
ragiS 'sensitive' > regiSut	Saxíax 'common' > Sxixut
tadir 'frequent' > tedirut	tamim 'innocent' > tmimut

- (21) tapil 'parasite' (historically tappil) > tapilut
dakik 'very thin' > dakikut	kabir 'huge, mighty' > kabirut
cadik 'righteous' > cadikut	kalil 'very light' > kalilut
Salit 'ruler' > Salitut	takif 'strong' > takifut
SaliS 'adjutant' > SaliSut (no historical gemination here)	

It would make sense to assume that today, speakers reconstruct the difference by distinguishing linear from non-linear derivation: while the tapil > tapilut group is derived linearly, the pakid > pkidim "deletion" type is captured by a non-linear CCiCut pattern, derived in the manner proposed in McCarthy (1981) and elsewhere. There is no current phonetic motivation for deletion of a two syllables away from the stress, emphasized by the fact that in cases like

- (22) (a) Saxen 'neighbor' > Sxenut Salem 'whole' > Slemut
 davek 'attached, devoted' > dvekut
 baSel 'ripe' > bSelut yagea 'tired' > yege'ut
 yater 'redundant' > yeterut tafel 'tasteless' > tfelut
 takef 'valid' > tkefut
- (b) navon 'smart' > nevonut naxon 'correct; ready' > nexonut

one must opt for that unmotivated rule over the more plausible deletion of pre-stress e, which actually does "occur" in

- (23) tipeS 'foolish' > tipSut xereS 'deaf' > xerSut

giben 'hunchback' > gibnut	?ilem 'dumb, mute' > ?ilmut
'ileg 'stammerer' > 'ilgut	'ikeS 'stubborn' > 'ikSut
pikeax 'smart' > pikxut	pikeax 'sober' > pikxut
kereax 'bald' > kerxut	tafel 'tasteless' > tiflut

Furthermore, how can one account for the marginality of supposedly natural derivations like

- (24) kaSer 'valid, Kosher' > kaSrut^{xiv} 'arev 'guarantor' > 'ar(e)vut
 'acel 'lazy' > 'aclut yaxef 'barefooted' > yax(a)fut
 xanef 'hypocrite' > xan(e)fut za'ef 'angry' > za'afut

A similar type of argument can be made for +ut cases related to verb stems with a final y radical that is lost in final position -- the gala 'be on exile' > galut type referred to above. There are a number of cases for which one could assume linear derivation followed by a-deletion, as in:

- (25) zaxa 'win, be fortunate' > zxut tala 'hang' > tlut 'dependency'
 bada 'imagine, fabricate' > bdut dama 'be similar' > dmut 'image'
 zana 'prostitute self' > znut pada 'redeem' > pdut
 kasa 'cover' > ksut ra?a 'see' > re?ut 'seeing, sight'

Although the presence of ex-gutturals can account for some of the above forms **not** undergoing this deletion, there is really no current phonetic reason that will account for the failure of deletion to apply to most of them. Even in a form like ta'ut 'error,' one would have at least expected **reduction** to e to occur, i.e. *te'ut like re?ut 'seeing, sight.' The obvious solution is to simply derive all CCut cases non-linearly.

There are other reasons for characterizing "deletion"-type derivations like these as miSkalim rather than as linear derivations with subsequent reduction. As shown above, a sequence like CCiCut appears to be derived by affixation of +ut and reduction of the a in nouns and adjectives of the CaCiC type. Furthermore, there are verb-related CCiCut cases which may be argued to be derived directly from CCiCa, the automatic nominalization of pa'al,^{xv} as in:

- (26) Safax 'spill' > Sfixa > Sfixut (damim) 'bloodshed'
 gamal 'compensate' > gmila > gmilut (xasadim) 'charity'
 masar 'hand, deliver' > mesira > mesirut (nefeS) 'self-sacrifice'
 maca 'find, locate' > meci?a > meci?ut 'reality'
 paxat 'decrease' > pxita > pxitut
 'acar 'stop' > 'acira > 'acirut 'constipation'

Nevertheless, the fact that adjectival stems of the CaCuC type **also** end up as CCiCut when derived as abstract nouns, as in

- (27) patúax 'open' > ptixut racuf 'successive' > recifut
 xaruc 'diligent' > xaricut kaful 'double' > kfilut
 Safuy 'sane' > Sfuyut cavúa 'hypocritical' > cvi'ut

kavúa 'fixed' > kvi'ut	cafuf 'crowded' > cfifut
batúax 'safe' > b(e)tixut	?aduk 'strictly observant' > ?adikut
bahul 'hurried' > behilut	daxus 'crammed' > dxisut
daxuf 'urgent' > dxifut	dalúax 'dirty, polluted' > dlixut
darux 'ready, tense' > drixut	hagun 'honest' > haginut
xamuc 'sour' > xamicut	zakuf 'erect, upright' > zkifut
xaSuv 'important' > xaSivut	xasuf 'exposed' > xasifut
kanúa 'submissive' > kni'ut	kafuf 'bent, subject' > kfifut
malúax 'salty' > m(e)lixut	matúax 'tense' > metixut
matun 'moderate' > metinut	navuv 'hollow' nevivut
naxut 'inferior' > nexit	nafúax 'swollen' > nefixut
samux 'close' > smixut	'aguna 'forsaken wife' > 'aginut
calul 'clear' > clilut	canúa 'modest' > cni'ut
carud 'hoarse' > cridut	kaSúax 'tough' > kSixut
rahut 'fluent' > rehitut	raduf 'chased; paranoid' > redifut
Sakuf 'transparent' > Skifut	talus 'detached' > tliSut

or in CaCoC stems with CaCuC alternants, as in

- (28) ?arox (~?aruk+) 'long' > ?arixut matok (~metuk+) 'sweet' > metikut
 'agol (~'agul+) 'round' > 'agilut 'akom (~'akum+) 'crookd' > 'akimut
 ratov (~ratuv+) 'wet' > retivut

or without such alternants, as in:

- (29) nafoc 'widespread' > neficut (but also nafic 'explosive' > neficut)

suggests that CCiCut is learned as a canonical pattern.^{xvi} One would also not wish to assume direct phonological derivation from participial stem such as CoCeC, as in:

- (30) boded 'lonely' > bdidut

or muCCaC ones as in:

- (31) muSxat 'corrupt' > Sxitut

There are also realizations of CCiCut that cannot be traced to any particular stem, e.g.

- (32) Srirut 'arbitrariness' (Sarir 'strong' seems unrelated)
 (Star/get) krittut 'divorce' (karat 'chop off' is only remotely related)

The stems that underly CCiCut are quite varied, then [the pakid, patúax, and nafoc types, at least, as well as some other minor ones], and cannot all be derived by phonetically motivated processes. In a complete survey of all CCiCut forms in Even-Shoshan, including all registers, the following picture emerges:

(33)	BASE	TOTAL ^{xvii}	PERCENT
	CaCiC	116	36.3
	CaCuC	134	42.0
	None/Root	39	12.2
	CaCoC	12	3.8
	CCiCa	12	3.8
	Misc.	6	1.9
		---	----
	TOTAL:	319	100.0

Nevertheless, in spite of the wide variation in stems underlying C*Ci*C*ut*, one would still want to capture the native speaker's intuition that all of these sub-groups are related by attributing them to one canonical pattern. Since only about 40% can be derived linearly in a straightforward manner (CaCiC and CCiCa), the obvious solution is to derive at least some of the sub-types non-linearly in a the C*Ci*C*ut* pattern.

Arguments of this type also suggest that an independent non-linear CaCC*i*C*ut* pattern will be required for the following group, in which reduplication is involved (normally suggesting diminution):

- (34) ?adom 'red' ~ ?admumi 'reddish' > ?admimut (~ ?admumiyut)
 ?avir 'air' ~ ?avriri 'airy' > ?avrirut (~ ?avririyut)
 lavan 'white' ~ lavnuni 'whitish' > lavninut (~ lavnuniyut)
 'agum 'sad' ~ 'agmumi 'sort of sad' > 'agmimut (~ 'agmumiyut)
 'akom 'crooked' ~ 'akmumi 'somwht crooked' > 'akmimut (~ 'akmumiyut)
 'arum 'cunning' ~ 'armumi 'crafty, wily' > 'armimut (~ 'armumiyut)
 'arom 'naked' > 'armimut

Again, a number of unmotivated processes would be needed in order to derive all of these forms from their assumed bases. Instead, it would be much simpler to assume a non-linear reduplicative pattern CaCC*i*C*ut*, possibly a variant of the C*Ci*C*ut* miSkal.^{xviii}

Like C*Ci*C*ut*, CaCC*ut* can be shown to be derived in various ways. Although CaCC*ut* sequences can be argued to be linearly derived from alternants of segolate nouns, as in:

- (35) yeled (~yald+) 'child' > yaldut melex (~malk+) 'king' > malxut
 'eved (~'avd+) 'slave' > 'avdut 'ecev (~'acv+) 'sorrow' > 'acvut
 ?efes (~?afs+) 'zero' > ?afsut gever (~gavr+) 'man' > gavrut
 hevel (~havl+) 'vanity' > havlut helem (~halm+) 'beat' > halmut
 'ecem (~'acm+) 'essence' > 'acmut

or, as noted in (24) above, from deletion of a pretonic e (e.g. kaSer > kaSrut), there are other CaCC*ut* realizations which seem to involve unmotivated loss of o, as in:

- (36) gadol 'big' > gadlut 'greatness' yatom 'orphan' > yatmut

'amok 'deep' > 'amkut ?adon 'master' > ?adnut 'authority (lit.)'
 gavóa (< /gavoh/) 'tall' > gavhut raxok 'far' > raxakut

or loss of a (or, alternatively, o > a and loss of e), as in:

- (37) bagar/boger 'become adult' > bagrut
 samax/somex(/musmax) 'rely' > samxut 'authority'
 yanak/yonek 'suck' > yankut 'babyhood'
 kadar/koder 'be dark' > kadrutSote 'fool' > Satyut
 lavan 'white' > lavnut naval 'villain' > navlut
 katan 'small' > katnut kacar 'short' > kacrut
 raxav 'wide' > raxavut 'anan 'cloud' > 'anenut

or e > a and loss of a, as in:

- (38) ?exad 'one' > ?axdut 'unity'

or loss of u, as in:

- (39) baxur 'young man' > baxarut paSut 'simple' > paStut

or even loss of i, as in:

- (40) 'aSir 'rich' > 'aSrut (~ 'aSirut)

Special derivations would also be required for some items referring to religions/cultures realized in the CaCCut pattern:

- (41) nocri 'Christian' > nacrut (~nocriyut) yehudi 'Jewish' > yahadut
 yevani 'Greek, Hellenistic' > yavnut

And in some cases, the historical derivation simply has no relevance today:

- (42) tarbut 'culture' taxarut 'race'

In other words, CaCCut must be related to at least the yeled, kaSer, gadol, bagar/boger, ?exad, baxur, 'aSir, and nocri types, distributed (based on Even-Shoshan) as follows:

(43)	BASE	TOTAL	PERCENT
	None/Root	47	44.8
	Segolates	18	17.1
	Misc.	13	12.4
	CaCaC	12	11.4
	CaCoC	9	8.6

CaCeC	6	5.7
	---	----
TOTAL:	105	100.0

which clearly argues against phonetically motivated derivation of N/Adj+ut and for simple non-linear pattern realization in CaCCut of perhaps three-quarters of the instances concerned.

In addition to CiCCut forms that may be claimed to have been derived linearly from CiCeC forms with subsequent deletion of e, as in tipeS 'fool' > tipSut in (23) above, and from syncope of a final e in adjectives derived from y-final roots, as in:

- (44) nirpe 'lazy' > nirput nikle 'despised, lowly' > niklut
 nivze 'despised' > nivzut nifle 'different' > niflut
 nixpe 'epileptic' > nixput

there are realizations which require reference to alternants of segolate stems, as in:

- (45) sefer (~sifr+) 'book' > sifrut 'literature'
 reSa (~riS'+) 'wickedness' (or < raSa 'wicked'?) > riS'ut
 kesel (~kisl+) 'folly' > kislut pere (~pir?+) 'wild' > pir?ut

Other CiCCut forms would have to be derived by two processes: a > i and a/e > 0, as in:

- (46) Safal 'lowly' > Siflut saxal 'foolish' > sixlut
 tafel 'tasteless' > tiflut 'folly' Samem 'desolate' > Simemut

or by deletion of o (or possibly e > i and a > 0), as in:

- (47) Sikor 'drunk' (or Sexar 'liquor') > Sixrut

So for deriving CiCCut, at least the tipeS, sefer, Safal/tafel and some other minor base-patterns are required, distributed (based on Even-Shoshan) as follows:

(48)

BASE	TOTAL	PERCENT
CiCeC	15	38.5
None/Root	7	18.0
CiCCe	6	15.4
Segolates	5	12.8
CaCaC	2	5.1
CaCeC	2	5.1
CiCCa	2	5.1
	---	----
TOTAL:	39	100.0

Of those, about two thirds could be phonologically motivated to justify linear derivation. The rest must be attributed to non-concatenative miSkalim.

In a similar vein, when deriving zaxa 'win' > zxut in (25) above, unless it is done non-linearly (i.e. from CCut rather than as in gala 'be on exile' > galut plus a-deletion), one would need an additional i-deletion process to derive CCut from pi'el bases, as in

(49) gina 'denounce' > gnut

Another difficulty with derivation by linear phonological processes is that identical sources end up in different sub-patterns, e.g. while gadol 'big' is realized in CaCCut, naxon 'ready, correct' is reduced to nexonut; and while kaSer 'fit, valid, kosher' also ends up in CaCCut, xaver 'friend' is not reduced, resulting in xaverut 'friendship'^{xix} -- possibly owing to the high frequency of this abstract noun, and to analogy with xaverim, the plural of xaver, where e is preserved as well. On the other hand, there are clearly cases that cannot be related to any particular stem -- only to a root, as in

(50)	Stut 'nonsense'	reSut 'permission'	Sxitut 'corruption'
	tarbut 'culture'	pur?anut 'calamity'	'acirut 'constipation'
	xerut 'freedom'		

etc. It appears, then, that although the majority of +ut cases look like mere affixation with possible reduction, there are also good methodological reasons to believe that some groups of stems to which the +ut suffix is appended should actually be derived by applying the abstract root (or any "consonantal melody" extracted from the base, often beyond the traditional root) to specific canonical patterns: CCiCut, CaCCut, CiCCut, CCut -- as well as hitCaCCut, hiCaCCut, CoCCut, meCaCCut, CCECut, neCoCut...

Yet another argument for the need for non-linear derivational patterns related to +ut alongside the (admittedly predominant) linear strategy is the occasional simultaneous coexistence of linear and non-linear variants related to the same base, as in:

(51)	FORM	GLOSS	LINEAR	NON-LIN	GLOSS
	?adon	master	?adonut	?adnut	authority
	'arev	guarantor	'arevut	'arvut	guarantee
	yatom	orphan	yetomut	yatmut	being an orphan
	'aSir	rich	'aSirut	'aSrut	riches
	nocri	Christian	nocriyut	nacrut ^{xx}	Christianity
	?em/?ima	mother	imahut	?amhut	motherhood
	?av/?aba	father	?avahut/?avut	?avhut	fatherhood

Below is a summary of the distribution of forms with +an, based on derivation strategy and on periods at which forms were incorporated into the language [Inconsistencies between previous intermediate summaries and these are attributed to a number of factors, including the occasional need for multiple entries for the same item acquiring a different meaning at different periods, etc.]:

(52)	Bibl	%Bibl	Mish	%Mish	Med	%Med	Mod	%Mod	Totl
Base+ut	15	3.1	54	11.4	113	23.8	293	61.7	475
B-an+ut	0		12	3.4	29	8.2	314	88.4	355
B-i+ut	2	0.6	2	0.6	60	16.7	295	82.1	359
B-ay+ut	0		0		3	7.9	35	92.1	38
Misc.	0		2		0		0		2
CCiCut	9	2.7	41	12.5	91	27.7	187	57.0	328
CaCCiCut	1	6.7	2	13.3	7	46.7	5	33.3	15
CaCCut	14	12.6	29	26.1	29	26.1	39	35.1	111
CiCCut	5	12.2	8	19.5	13	31.7	15	36.6	41
hiCaCCut	0		0		22	6.9	299	93.1	321
hitCaCCut	1	0.1	1	0.1	198	20.3	774	79.5	974
Misc.	21	30.9	20	29.4	11	16.2	16	23.5	68
	--	----	--	----	---	----	---	----	---
TOTAL & % OF TOTAL	68	2.2	171	5.5	576	18.7	2272	73.6	3087

A more general comparison of the distribution by strategy and period yields the following summary:

(53)	Bibl	Mish	Med	Mod	Total	%Total
Clear Linear	17	70	205	937	1229	39.8
MiSkalim (in part linear?)	29	80	140	246	495	16.0
hitCaCCut/hiCaCut	1	1	220	1073	1295	42.0
Misc.	21	20	11	16	68	2.2
	--	--	---	----	----	----
TOTAL	68	171	576	2272	3087	100.0

It appears that if hitCaCCut and hiCaCCut are indeed considered miskalim rather than linear derivation plus e-deletion, then at least quantitatively, non-concatenative realization is even more widespread than linear derivation for nouns with +ut.

Since there are independent reasons to believe that discontinuous derivation continues to exist productively alongside with linear formation in both +an-related and +ut-related forms, and since there is no significant communicative distinction associated with choice of derivational device, it can be argued that there is little reason to believe, as is sometimes claimed, that MH is gradually losing the 'Semitic' (non-linear) character of its word-formation component.

FOOTNOTES

i. Ṣ represents the voiceless patatal fricative, 'ṣ'ayin. Unless marked otherwise, stress is word-final.

ii. E.g. Bauer and Leander (1965) pp 505-506, Blau (1972) pp 210-211, Gesenius (1910) pp 241, 281, Konig (1895), pp 204-206.

iii. The inflected stem is typically the one resulting from vowel reduction; other allomorphs are often the segolate base stems.

iv. Whether the derivation is with the +ut suffix added to the base, or it is a pattern imposed on the root, the result is the same -- we always get abstract nouns in the feminine (see Schwarzwald 1985).

v. Note that the related form, ?enoSiyut 'humaneness', is derived from the adjectival variant with i, ?enoSi 'humane.' It is not impossible, however, for some forms in this group to have been derived from an adjectival variant with i, followed by its elision before another vowel, e.g. ?efSari 'possible (adj.)' > ?efSarut.

vi. Some monosyllabic stems in pa'al undergo deletion/reduction when +ut is appended, as in

Sav 'returned' > Svut baz 'despise' > bzut
laz 'gossip' > lezut

vii. The formal distinction between adjectives ending with +a?i and parallel agent nouns ending with +ay, e.g. itona?i 'journalistic' ~ itonay 'journalist,' which is not maintained in informal speech, is irrelevant at this point. The y of +ay is subject to the same elision.

viii. Most do have underlying nouns, though: boged, tovea, le?om, 'er, cemax, teva (and possibly also burg).

ix. Linearly derived N+an stems do not share a miSkal, but the +an suffix is sufficient to trigger a derived form with +ut quite productively, as in:

matiran 'permissive' > matiranut	meheyman 'reliable' > meheymanut
yomran 'pretentious' > yomranut	lulyan 'juggler' > lulyanut
taxsisan 'strategist' > taxsisanut	taharan 'purist' > taharanut
pinkesan 'bookkeeper' > pinkesanut	tvustan 'defeatist' > tvustanut
mikco'an 'professional' > mikco'anut	

x. Formations from pi'el appearing to involve +ut, such as xevra 'society' > xivret > xivrut, ivet (from 'w.y) 'distort' > ivut, probably do not count, since the t concerned has already become a (secondary?) root radical in the underlying verb. Also note, that such nouns are masculine, whereas +ut nouns are always feminine.

xi. In the case of hitpa'el also from the past tense.

xii. Not always -- see m^elumadim 'being taught, pl.'

xiii. And occasionally e, as in memad 'dimension' > m^emadim, but not necessarily -- see teruc 'excuse' > terucim, etc.

xiv. In some Sephardic and oriental traditions, kaSerut is documented as well -- as are 'arevut, xanefut' (Schwarzwald 1985:193). Modern Hebrew kaSir 'fit, qualified' ~ kSirut is clearly distinguished from Mishnaic kaSer ~ kaSrut; the former may have developed independently because the morphological slot CaCeC was already occupied.

xv. Or, alternatively, from the past tense of *pa'al* -- See also Ben-Asher (1973).

xvi. There is actually a way of arguing that these cases can also be derived by mere affixation plus reduction; it can be claimed that the process which changes u to i involves dissimilation, to avoid two consecutive u's. Normally, however, dissimilation is psychological rather than phonetic -- in this case, for instance, there is no phonetic constraint preventing a sequence of two u's; in fact, in fast speech those are quite common, e.g.

- i) teuna 'accident' > tuuna Siurim 'homework' > Suurim

Furthermore, dissimilation tends to be sporadic, e.g. in

- ii) roS 'head' > riSon 'first'tox 'inside' > tixon 'middle',

but

- iii) yom 'day' > yomon 'daily' kof 'monkey' > kofon 'little monkey'

whereas here the change is quite systematic. It would make more sense, then, not to postulate phonetically motivated derivation, but simply state that adjectives of this type opt for the CCiCut canonical pattern because it provides a sequence that would not involve two u's in succession.

xvii. Multiply-analyzed forms are excluded from this table and the following ones. Their inclusion would have raised the number of items in some categories by 2%-3%.

xviii. In the Even-Shoshan dictionary, some of these nouns are regarded as alternants of CaCCuCit, e.g. ?admumit "reddishness" ~ ?admimut.

xix. The form xavrut, heard in neighborhood such as Beney Beraq, is a back-formation from Aramaic Havruta.

xx. nacrut can also be derived from naceret 'Nazareth,' of course.

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