

MULTIPLE BIGRAMS

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A group of two successive letters is called a bigram. There are 26 different bigrams beginning with each letter of the alphabet making a total of $26 \times 26 = 676$ different bigrams. The word **BIGRAM** itself incorporates the five bigrams **BI**, **IG**, **GR**, **RA** and **AM**, and none of them is repeated. **COCOa**, **DEriDE**, **IONizatION** and **tORpOR**, on the other hand, each contain a pair of identical bigrams and there are thousands of these double bigram words ("Miami Words" in the February 2000 *Word Ways* are a special kind of double bigram word). Somewhat less common are words such as **fINgerprINtING** with a triple bigram set. In turn, there are even fewer words which contain a set of more than three identical bigrams. **INtestINoINtestINal** (DOR) is a quadruple example.

Types of Multiple Bigram Word

Here, I examine those words which contain a set of three or more identical bigrams. These words can be classified into three types according to the grouping of their bigrams:

1. Words in which the bigrams are separated by one or more intervening letters, as in **PHysio-PHilosoPHY**. This is the most common type of multiple bigram word.
2. Words in which the bigrams occur in two or more groups, at least one of which consists of more than one bigram, as in **mANANnAN**, in Celtic myth the son of Llyr the sea god of the Celts.
3. Words in which the bigrams form a single group of letters, as in **KUKUKUs**, a lake in Ontario. Two-thirds of these words appear to be either palindromes and/or tautonyms, a feature which renders **KUKUKUs** and other non-pattern examples all the more interesting.

The total number of multiple bigram words found for each of the different bigrams varied enormously. The bigram **AN** was outstandingly the most prolific. By way of contrast, many of the bigrams produced only a single example. More than two-thirds of the bigrams did not produce any words. Altogether, I found at least one example for 212 of the 676 bigrams.

Examples of all three types (1, 2 and 3 above) were found for 45 of the bigrams:

ak,al,an,ap,ar,at,co,do,el,er,es,et,go,ha,he,hi,ho,ka,ki,ko,ku,la,le,lo,ma,me,mi,na,ne,ni,no,ol,on,oo,pa,ra,re,se,sh,ta,te,ti,to,tu,ur

Examples of two of the three types were found for 57 of the bigrams:

Types 1 and 2: ac,ae,ag,as,be,ca,ch,cu,ea,ed,en,ew,in,io,is,kh,li,ll,ng,oc,od,om,or,sa,sz,un,ut,va,we,yn,za (31)

Types 2 and 3: us,wa (2)

Types 1 and 3: ai,am,bo,di,ee,eh,em,hu,ik,it,ja,ke,op,os,ot,pe,pi,po,pu,ri,ro,ss,ub,ya (24)

ts TSuTSuTSi (Web2)		
tu taTUshTUnTUde (Web2)	moTUTUlaTULa (TIG)	TÜTUTU (MAO)
tw TWeeTWeeTWee***		
ub cUBocUBocUBe**		bUBUBUBUBUBUBu -6**(DJE)
ud		UDUDUDu** (P)
uk		kUKUKUKu** (Web3)
um yUMtickyUMtUM (a song in the show <i>Carnival</i> , 1961)		
un UNmUNdlUNge	UNUNgUN (Web2)	
ur URopURpURin (S)	URuURURoroa (MAO)	rURURURu** (MAO)
us	USUStatUS (NZ)	sUSUSUS** (P)
ut inpUToUTpUT	taUTUTetUTe (MAO)	
va VAiVAsVAta (EDNCM)	VAKaVÄVÄlagi (FIJI)	
ve VERVERVen (HUN)		
vi		oVIVIVlparous
vu	caVUiVUVUtala (FIJI)	
wa	pukoaWAWAhiWAA (HAW)	WAWAWAi (TIG)
we tWEetWEetWEe***	neWEneWEWE** (HAW)	
wh WHaWHeWHaWHe - 4 (MAO)		
wi WIllWiththeWlsp (Web3)		
wo WOwWOwWOw** (P)		
ya YAckYAckYAck*** (LV p176)		
yc glYCylglYCylglYCylglYCine - 4***** (WW97088)		aYAYAYA** (P)
yf grYFfygrYFfygrYFfs**** (FW)		
yl symmethYLeThYLeThYLeTh**** (HCMD)		
yn sYNgYNgYNism (DBS)	wYNwYNYN (NWD)	
yt erYThrocYTolYTic (Web2)		
za ZArZAdZAc (POL)	sZÁZAléksZÁmitás (HUN)	
ze ZEnziZEnziZEnzic****		
zi zenZlzenZlzenZlc****		
zz		ZZZZZZ (P)