

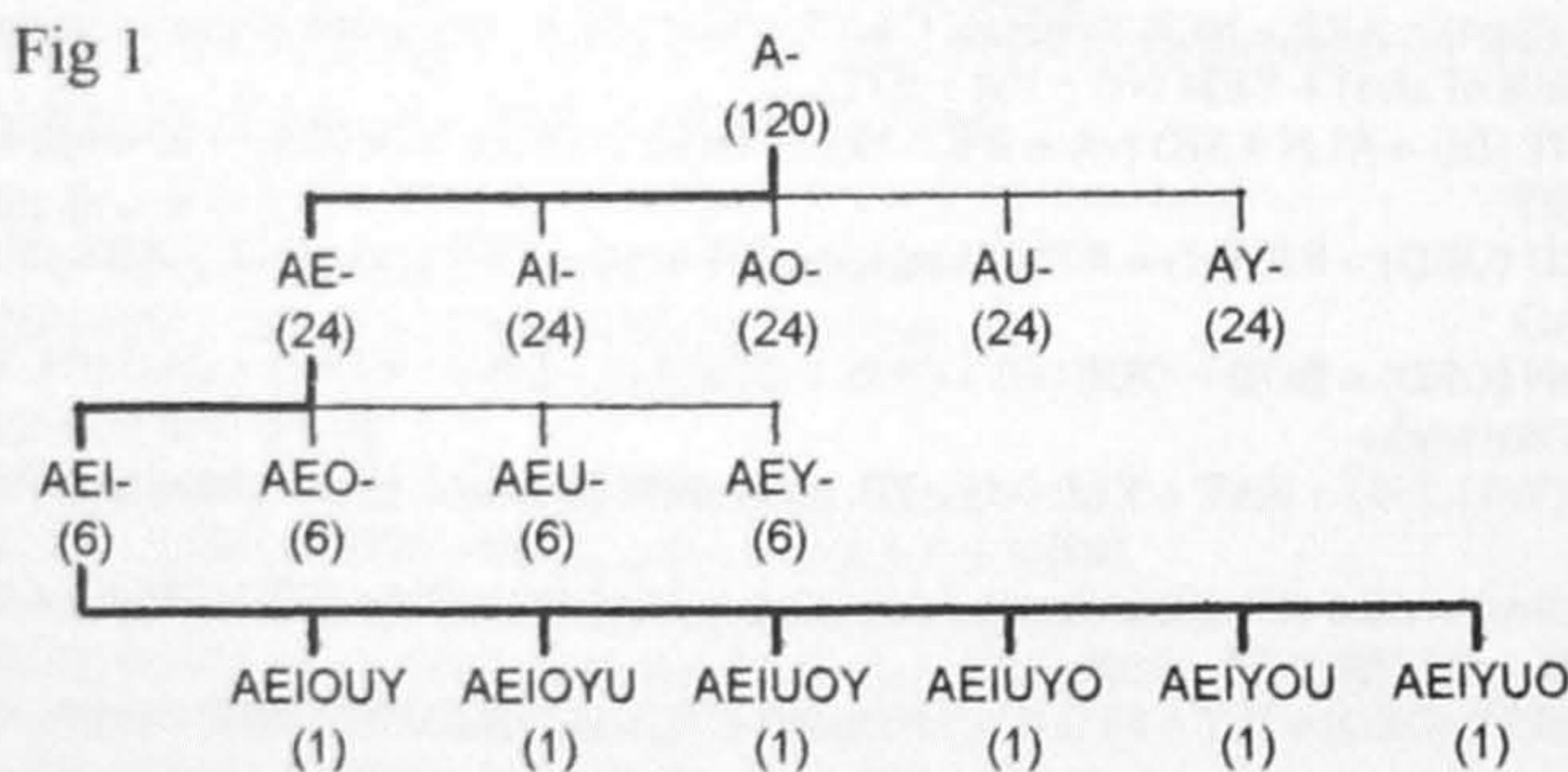
AEIOUY WORDS

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With the 30-year quest for AEIOU words now behind us, I have taken the opportunity to add the letter Y and repeat the exercise for AEIOUY words. Y acts as a vowel in words such as *symbol* and is referred to variously as the sixth vowel, a semi-vowel or a secondary vowel. The world of AEIOUY words, those in which the six vowels A,E,I,O,U and Y each occur just once, takes us into largely unexplored territory. There are 720 permutations of the six vowels A,E,I,O,U and Y, six times as many as for A,E,I,O and U.

Facts and Figures

There are 120 permutations (720/6) beginning with each of the six vowels. Figure 1 analyses the 120 permutations which begin with the letter A.



The letter A is followed by one of the other 5 vowels to make permutations with the 5 initial bigrams AE-,AI-,AO-,AU- and AY-. Hence the total number of different initial bigrams in the 720 permutations is $5 \times 6 = 30$. The number of permutations beginning with each of these 30 initial bigrams is $720/30 = 24$. The bigram AE- is followed by one of the other 4 vowels to make permutations with the 4 initial trigrams AEI-,AEO-,AEU- and AEY-. Hence the total number of different initial trigrams in the 720 permutations is $4 \times 5 \times 6 = 120$. The number of permutations beginning with each of these 120 initial trigrams is $720/120 = 6$.

Question: How many of the 30 initial bigrams are represented in the examples found?
Answer: All 30.

Question: What is the maximum number (out of 24) of permutations beginning with a specific bigram for which examples were found?

Answer: Examples were found for 21 of the 24 beginning EU- and IO-, and for 20 and 19 respectively of those beginning IY- and IU-.

Question: How many of the 120 initial trigrams are represented in the examples found?

Answer: 115. No examples were found for those beginning IYU-, OYI-, YEI-, YIU- or YUI-.

Question: What is the maximum number (out of 6) of permutations beginning with a specific trigram for which no examples were found?

Answer: Examples were found for all 6 of the permutations beginning with each of the 9 trigrams AYO-, EOY-, EUO-, IOU-, OAY-, UYO-, YAO-, YOE- and YOU-.

The 720 Permutations of A,E,I,O,U and Y

Each of the following six pages is devoted to the 120 permutations beginning with one of the six vowels. I list just one example for each AEIOUY permutation wherever possible. In view of the size of the undertaking, I allow capitalised words, and examples other than solid words. The three types of example, in order of preference, are (1) solid words, (2) hyphenated words and hyphenated word strings, (3) *phrases* (italicised). A breakdown of the three types of examples is given at the end of each page.

I do not admit coinages. Thus SUBDERMATOGLYPHIC (Word Ways Feb 1991) is not permitted. A few inferred words are included. For example, it seems reasonable to allow ULTRACYTOCHEMIST, inferred from the OED word ULTRACYTOCHEMISTRY.

In the six lists which follow, examples are given for 403 of the 720 permutations, 56 per cent of them. 350 of these come from just three sources: the Oxford English Dictionary (Second Edition), Nomenclator Zoologicus and Stedman's Medical Dictionary. Figure 2 gives a breakdown of sources.

Fig 2 Initial letter of perm.	OED Zoologicus	Nomenclator M D	Stedman's Sources	Other of 120	Totals out
A	43	16	6	7	72
E	32	23	13	9	77
I	33	17	5	5	60
O	37	11	5	13	66
U	40	7	5	13	65
Y	23	21	13	6	63 ..
Total	208	95	47	53	403 out of 720

With the exception of a few well-known names, the unreferenced examples in the lists are taken from the OED. They embrace head words, variant forms, and text words including citations. Other references are given at the end of this article. All AEIOUY permutations read across the page in alphabetical order.

How long will it take to achieve a complete set of examples? Rally, Word Ways readers--there are 317 gaps waiting to be filled. Where to look? One potentially productive source which I have not mined is the Times Index Gazetteer of the World.

aeiouy	HAREIOUSLY	aeiyou	TAENIOGYRUS	aeiuoy	
aeiuyo		aeiyou	MALEDICCYOUN	aeiyuo	
aoeuy		aoiyou	AMPELOZIZYPHUS(nz)	aeouiy	
aeouyi	SPACE-OCCUPYING	aeoyiu	HAEMOLYTICUM (s)	aeoyui	ACCESSORY FRUIT(long)
aeuioy	PRAEMUNITORY	aeuiyo		aeuoiy	ANEUPLOIDY
aeuoyi	ALEUKOCYTIC (s)	aeuyio	PLATEURYTION (nz)	aeuyoi	
aeysiou	FALSELY PIOUS (bl)	aeyiou		aeyoiu	APTERYLOBIUS (nz)
aeyoui	STATELY-SOUNDING	aeyuio	CHANCERY-SUITOR	aeyuoi	
aieouy	AMBIDEXTROUSLY	aieoyu	ANTISTREPHORRHYNCHUS(nz)	aieuoy	
aieuyo		aieyou	PATIENTLY-WROUGHT	aieyuo	
aioeuy		aioeyu	ANTIPODENCYRTUS (nz)	aiouey	GRANDILOQUENTLY
aiouye	GRACIOUSLYE	aioyeu	AINOPTYELUS (nz)	aioyue	ANTIMONY RUBBER (w2)
aiueoy	RADICULECTOMY(w2)	aiueyo	ADINUENCYONS	aiuoey	PLATINUM CONEY
aiuoye		aiuyeo	CADMIUM-YELLOW	aiuyoe	
aiyeou	PAILYEOUN	aiyeuo		aiyoeu	
aiyoue	TAILLYOURES	aiyueo		aiyuoe	
aoeiuy		aoeyiu		aoeuiy	PHACOEMULSIFY (s)
aoeuyi		aoeyiu	ALLOCERCHYSIUS(nz)	aoeyui	ATTORNEY-CUNNING
aoieuy		aoieyu		aoiuey	ABORTIUELY
aoiuye		aoiyeu	AROPTYELUS (nz)	aoiyue	MAJORITY-RULE
aoueyi	VAPOUR-DENSITY	aoueyi	ABSOLUTELY IT (bl)	aouiey	XANTHOPUCCINELY (s)
aouiye		aouyei		aouyie	
aoyeiu	APODYTERIUM	aoyeui		aoyieu	APOPHYSIGERUS (nz)
aoyiue	FAGOPYRISMUSES (s)	aoyuei		aoywie	ANCHOVY-CULLICE
aueioy		aueiyo		aueoiy	VALUED POLICY
aueoyi	AUREOMYCIN	aueyio		aueyoi	NATURE-SYMBOLISM
auieoy		auieyo		auioey	AUDIOOMETRY
auioye	ALUMINOTYPE (w2)	auiyeo		auiyoe	MATURITY-ONSET
auoeiy		auoeyi		auoiey	AUTOKINESY
auoiye	AUTORITYE	auoyei	AUTOSYNTHESIS (s)	auoyie	TAUTONYMIES (wd)
auyeio		auyeoi		auyieo	ASTBURY-WHIELDON
auyioe	PAUYING-STONE	auyoei		auyoie	FACULTY-OFFICE
ayeiou	ARCHYEPISCOPUS	ayeiuo		ayeoiu	PACHYMETOPIUS (nz)
ayeoui	DAY-DEVOURING	ayeui0	PRAYER-UNION	ayeuo1	
ayieou	AMYLIFEROUS	ayieu0	AKYMICHNEUMON(nz)	ayioeu	AMYNTICODESMUS(nz)
ayiouse	MALYCIOUSE	ayiueo	ANYTHING-BUT-HERO	ayiuoe	
ayoeiu	BRACHYCOELIUM (nz)	ayoeui	DACTYOTEUTHIS (nz)	ayoieu	APHYCOIDEUS (nz)
ayoiae	LARYNGOFISSURE	ayouei	SHANGYOUENSIS	ayouie	TRAYTOURSLICHE
ayueio	PARTY QUESTION	ayueoi		ayuieo	
ayuioe		ayuoei		ayuoie	DASYUROIDES (nz)

Initial bigram	AE-	AI-	AO-	AU-	AY-	Total
Solid words	10	10	8	7	13	48
Hyphenated	3	2	4	5	3	17
Phrases	2	2	1	1	1	7
Totals (out of 24)	15	14	13	13	17	72 (out of 120)

eaiouy	NEFARIOUSLY	eaioyu	HEDRAIOSTYLUS (nz)	eaiuoy	LEADING-BUOY
eaiuyo		eaiyou	TETRADIDYMOUS(dbt)	eaiyuo	
eaoiuy		eaoiyu	STEGANODICTYUM (nz)	eaouiy	MELANCOULILY
eaouyi		eaoyiu	PERAZOYPHIUM (nz)	eaoyui	HEMATOCYTURIC (s)
eauioy	PREAUDIOLOGY	eauiyo		eauoiy	SELF-AUTHORITY
eauysi		eauyio		eauyoi	HEAVY-GOING
eayiou	HEXAGYNIOUS	eayiuo	CLEASBY-VIGFUSSON	eayoiu	CERAMBYCOBIUS (nz)
eayoui	HEARTY-SOUNDING	eayuo		eayuo	
eaouy	DENTIPAROUSLY (s)	eiaoyu	ERISTALOSYRPHUS (nz)	eiauoy	
eiauyo		eiayou	HEMIAZYGOUS (w2)	eiayuo	
eoauy		eioayu	LEPIDOCARYUM (nz)	eiouay	SEMVOLUNTARY (w2)
eiouya		eioyau	LEIOCYAMUS (nz)	eiouya	CLEISTOYUCCA (nz)
eiuaoy	GESTICULATORY	eiuayo	PREFIGURATYON	eiuoay	VENTRICULOGRAPHY
eiuoya	RETICULOMYXA (nz)	eiuyao		eiuyoa	
eiyaou		eiyauo		eiyoau	HEMIGYMNODACUS (nz)
eyoua	EIGHTY-THOUSAND	eyuao		eyuoa	
eoaiuy	PERSONAL INJURY	eoaiyu	NEOPALIPHYLLUM(nz)	eoauiy	
eoauyi		eoayiu	LEPTOCARYDIUM (nz)	eoayui	SECONDARY QUILL
eoiauy		eoiayu	NEOTRIDACTYLUS(nz)	eoiuay	RETROLINGUALLY (s)
eoiuya		eoiyau		eoiyua	
euaiy	ENCOURAGINGLY	eouayi		euaiy	KETONURICALLY (s)
euoya	BELORUSSIYA (tig)	euoyai		euoyia	
eyaiu	ENDOLYMPHATICUS (s)	eyoai	PEROXylauric	eyiau	EOMYIDARUM (nz)
eyiua	NEOGYPIDULA (nz)	eyuai	PTEROYLGUTAMIC	eyuia	HEMOCYTURIA (w2)
euaiy	RHESUS ANTIBODY	euaiyo	THE QUALITY OF	euaoiy	EXCULPATORILY (w2)
euaoiy	NEURAPOPHYSIS	euayio		euayoi	EUKARYOTIC (s)
euiaoy	ELUCIDATORY	euiayo	RENUNCIACYON	euioay	EQUIVOCALLY
euioya	EUDRILOPHYRA (nz)	euiyao		euiyoa	EUSISYROPA (nz)
euoaiy	PSEUDO SANCTITY (w2)	euoayi	NEUROLATHYRISM (s)	euoiay	NEUROTICALLY
euoya	PLEUROSICYA (nz)	euoyai	LEUKOCYTACTIC (s)	euoyia	NEURODYNIA (s)
euyaio	EUHYDRATION (s)	euyaoi	EURYGASTROPSIS (nz)	euyiao	
euyioa	EURYZILORA (nz)	euyoai	EURYSOMATIC (s)	euyoia	EUTHYROIDAL
eyaiou	ESTYMACIOUN	eyaiuo		eyaoiu	TETRYLAMMONIUM (s)
eyaoui	PRESBYACOUSTIC (s)	eyauio	SELL BY AUCTION (bl)	eyauoi	DEFY AUTHORITY (bl)
eyiaou		eyiauo		eyioau	ELYSIOBANCHUS (nz)
eyioua	TWENTY-SIX THOUSAND	eyiuao		eyiuoa	
eyoaiu	ERYTHROLANIUS	eyoaui		eyoiau	
eyoiau		eyouai	GREYHOUND-RACING	eyouia	SEYMOURLA (nz)
eyuaio	REFYGURACION	eyuaoi		eyuiao	
eyuioa		eyuoai	SMECTYNUOMASTIX	eyuoia	VENYUKOVIA (nz)

Initial bigram	EA-	EI-	EO-	EU-	EY-	Total
Solid words	10	12	13	18	9	62
Hyphenated	5	1	--	--	1	7
Phrases	--	--	2	3	3	8
Totals (out of 24)	15	13	15	21	13	77 (out of 120)

iaeouy	INTRAVENOUSLY	iaeoyu	DIAMESOGLYPHUS(nz)iaeuy	iaeuyo		
iaeuyo		iaeyou		iaeuyo		
iaoeuy	CHIASTONEURY (w2)	iaoeyu		iaouey	ILLFAVouredLY	
iaouye	IALOUSYE	iaoyeu	DISAZO-DYESTUFFS	iaoyue	VIBRATORY CURRENT (w2)	
iaueoy		iaueyo		iauoey	ILFAUOREDLY	
iauoye	LINDAUOMYCES (nz)	iauyeo		iauyoe		
iayeou	DICHLAMYDEOUS	iayeuo		iayoeu	DIALYTODERMUS (nz)	
iayoue	VILAYNOUSE	iayueo		iayuo		
ieaouy	BICEPHALOUSLY (s)	ieaoyu	TRICERATORHYNCHUS (nz)ieauoy	ieauoy		
ieauyo		ieayou	I HEAR YOU	ieayuo	GIVE ASYLUM TO (bl)	
ieoauy		ieoayu	DICERO Caryum (nz)	ieouay	INTERGLOBULARLY (s)	
ieouya		ieoyau	SIRENO CYAMUS (nz)	ieoyua		
ieuao		ieuayo		ieuoa	INTERPULMONARY (s)	
ieuoya	DIPLEUROSTYLA (nz)	ieuya		ieuyo	STIREURYTOMA (nz)	
ieyaou	PINENCHYMATOUS	ieyauo		ieyoau	INEMBRYONATUS	
ieyoua	I'LL TELL YOU WHAT	ieyuao		ieyuoa		
ioaeuy	MICROANEURYSM	ioaeyu		ioaeuy	MICROCAUTERY	
ioauye	MICROAUGYLES	ioaye	CRICOPHARYNGEUS (s)	ioayue	INGROSSATYUES	
ioeauy	MICROMETALLURGY	ioeayu	MICRODERMANYSSUS (nz)	ioeuay	BIMOLECULARLY	
ioeuya	STIROMEURYSA (nz)	ioeyau	DISHOBESYSAUNT	ioeyua		
iouaey	BILOCULATELY (s)	iouaye	IOURNAYE	ioueay	MICRONUCLEARLY	
ioueya	IOURNEY-MAN	iouyae	ISOBUTYRATE	iouyea	INOUYELLA	
ioyaeu	MIMOCRYPTPHAEUS (nz)	ioyae	INNOYAUNCE	ioyeau	IOYNTENAUNT	
ioyeua	MICROPYRENULA (nz)	ioyuae	INDOXYLSULFATE(nz)	ioyuea		
iuaeoy		iuaeyo		iuaoey		
iuaoye		iuayeo		iuayoe	IURACYONE	
ueaoy	VITUPERATORY	uea				
ueoya		ueayo				
uoaeay		ueyao				
uoeya		uoaye				
iuoey	SCIUROCHEYLA (nz)	iuoyae				
iuya		iuya				
iuyeoa	STIRRUP YEOMAN	iuyoae	INUYOLATE	iuyo		
iuyo		iuyoae		iuyo		
iyaeou	PHILYDRACEOUS (w2)	iyaeuo		iyaoeu		
iyaoue	DISSYNAGOGUE	iyaeuo		iyauoe		
yeaou		yea		yeoau	DIMYKTEROGRAPTUS(nz)	
yeoua		yea		yeuo		
yoaeu		yoae		yoear	DICTYOPETALUM (nz)	
yoewa	DIZYGOPLEURA (nz)	yoewa	RIGHT-YOU-ARE	yoewa	GIPSY-MOUNTEBANK	
yuaoe		yuaoe		yuaoe		
yuoea		yuoe		yuoea		

Initial bigram	IA-	IE-	IO-	IU-	IY-	Total
Solid words	10	10	20	5	5	50
Hyphenated	1	--	1	1	2	5
Phrases	1	3	--	1	--	5
Totals (out of 24)	12	13	21	7	7	60 (out of 120)

oaeiuy	COTTAGE INDUSTRY	oaeiyu	OCTAEDRYXIUM (nz)	oaeyui	LONGAEUITY
oaeuyi		oaeyiu		oaeyui	
oaieuy	ON ACTIVE DUTY (bl)	oaieu	MORTALITY RETURNS	oaiuey	FLOATING CURRENCY (bl)
oaiuye		oaiyeu	COMPASS SURVEYING	oaiyue	MORTALITY-CURVE
oaueiy		oaueyi		oauey	CONSANGUINELY (s)
oauye	CONSANGUINYTE	oauyei		oauye	
oayeiu	OMMATHYMEUM (nz)	oayeui	CONSTANTLY-RECURRING	oayieu	TO LAY IN THE SUDS
oayiue	ORALLY-DIFFUSED	oayuei	HOARY MULLEIN	oayue	JOHN BARRY HUMPHRIES
oeaiuy	OVERFAITHFULLY (w2)	oeaiyu		oeauiy	OVERMATURITY (w2)
oeauyi	HOMEWARD-HURRYING	oeayiu	MORDELLAPYGIUM (nz)	oeayui	MONETARY UNIT
oeiauy		oeiayu		oeiuay	MOTHERING SUNDAY
oeiuya		oeiyau		oeiyua	
oeuayi	MOLECULARITY	oeuayi		oeuiay	CHOLEURICALLY (s)
oeuiya		oeuyai		oeuyia	LOPHEUTHYMIA (nz)
oeyaiu		oeyau	OBEYSAUNCIS	oeyiau	
oeyiua		oeyuai	MONKEY UP A STICK	oeyua	
oiaeuy		oiaeuy		oiaeuy	SOCIAL-SURVEY
oiauye		oiayeu		oiayue	NOMINATYUE
oieauy		oieayu	PROPRIETARY DRUG (bl)	oieuay	
oieuya		oieyau	COPLEICYATHUS (nz)	oieyua	
oiuaey	CONTINUATELY	oiuaye	CONTRIBUTARYE	oiueay	CONSTITUENTARY
oiueya		oiuyae	SODIUM HYDRATE(w2)	oiuya	
oiyaeu	COTINCHYTRAEUS(nz)	oiyaue		oiyeau	
oiyeua		oiyuae		oiyuea	
ouaeiy		ouaeyi	POURPARLEYING	ouaey	OBJURGATIVELY
ouaiye	COUNSAILYNGES	ouaye	TOURNAYELLIDS (nz)	ouayie	PHOSPHURANYLITE
oueaiy	DOCUMENTARILY	oueayi	OUTWEARYING (ospd)	oueiy	VOLUMETRICALLY
oueiya		oueyai	JOURNEYMANSHIP(ch)	oueyia	COUNTERCYCLICAL
ouiae	CONDUPPLICATELY (s)	ouiaye		ouieay	SOUNDING ECSTASY
ouieya	COLUMBICHEYLA (nz)	ouiyae	COMMUNITY-CARE	ouiyea	COMMUNITY HEALTH
ouyaei		ouyaie	OUTTYRANNIZE	ouyeai	POULTRY-REARING
ouyeia		ouyiae	GORUCHWYLIAETH(nwd)	ouyiea	KOTUYITHECA (nz)
oyaeiu	ORYZAEPHILUS (aig)	oyauei		oyaieu	DORYLAIMELLUS (nz)
oyaiue	POLYANDRIQUE	oyauei		oyaue	CHOLYLTAURINE (dor)
oyeaiu	POLYCEPHALIUM (nz)	oyeaui	POLYNEURALGIC (s)	oyeiau	
oyeiua		oyeuai		oyeuia	OXYGEUSIA
oyiae		oyiaue		oyieau	
oyieua		oyiuae		oyiuea	
oyuaei		oyuaie	OXYGUANINE	oyueai	
oyueia	POLYURESIA	oyuiae	OXYURIASES (s)	oyuiea	OXYURIDEA (dbs)

Initial bigram	OA-	OE-	OI-	OU-	OY-	Total
Solid words	5	7	6	15	11	44
Hyphenated	3	1	1	2	--	7
Phrases	8	3	2	2	--	15
Totals (out of 24)	16	11	9	19	11	66 (out of 120)

uaeioy		uaeiyo		uaeoiy		CURTATE CYCLOID
uaeoyi	SUGAR-DESTROYING(w2)	uaeeyio		uaeyoi		UNGAINSOMELY
uaieoy	UNPRAISEWORTHY	uaieyo		uaieoy		HUMANITY-MONGERS
uaioye	DURANDIOMYCES(nz)	uaiyeo	QUALITY PERSON	uaiyoe		UNAPPOSITELY
uaoeiy		uaoeyi		uaoyie		URANOPHYLLITE
uaoiye		uaoyei		uayieo		URANYLOXIDE
uayeio		uayeoi	SUBARYTENOID (w2)	uayoie		
uayioe		uayoei	ULTRACYTOCHEMIST	uayoia		
ueaioy		ueaiyo		ueaoiy		UNREASONINGLY (w2)
ueaoyi		ueayio		ueayoi		UNEASY-GOING
ueiaoy		ueiayo		ueioay		QUESTIONABLY
ueioya		ueiyao		ueiyoa		
ueoaiy	UNREPROACHINGLY	ueoayi		ueoiaj		SUPERSONICALLY
ueoiya		ueoyai	CUPRESSOCYPARIS	ueoyia		URETHRODYNIA (s)
ueyaio	TURKEY APRICOT	ueyaoi		ueyiao		
ueyioa	SURVEYING-COMPASS	ueyoai	SURVEYOR'S CHAIN	ueyoia		TURVEYDROPIAN
uiaeoy	SURVIVAL-THEORY	uiaeyo		uiaoej		MUSICAL-COMEDY
uiaoye	SUPPLICATORYE	uiayeo		uiayoe		
uieaoj	GUILD-MERCATORY	uieayo	QUIETACYON	uieoay		SQUIREOCRACY (w2)
uieoya		uieyao	TURBINE DYNAMO	uieyoa		USTILENTYLOMA (nz)
uioaey	MULTILOBATELY (s)	uioaye	CUSHION-LAYER	uioeay		UNDISCOVERABLY
uioeya		uioyae	HUNTING-VOYAGE	uioyea		ULRICHOTRYPELLA(nz)
uiyaeo		uiyaoe	SULFINPYRAZONE (s)	uiyeao		
uiyeoa	PUDDING-PYE-WOMAN	uiyoae	SULPHICHTHYOLATE(w2)	uiyoea		PURITY OF HEART (bl)
uoaeiy		uoaeji	SULPHOCARBETHYLIC	uoaeij		UNCONSTRAINEDLY
uoaiye		uoayei	PULMONARY VEIN (s)	uoayie		ZUGODACTYLITES (nz)
uoearj	UNCONCEALINGLY (w2)	uoeyai		uoeyaj		UNCOMMERCIALY (w2)
uoeyia		uoeyai		uoeyia		BUNOWEHIA (nz)
uoiaey	SUBORDINATELY	uoiae	QUOIT-PLAYER	uoieay		UNNOTICEABLY
uoieya		uoiyae		uoiyea		
uoyaei		uoyaie	BUOYANCIES (s)	uoyeai		
uoyeia	SCUTOTYRRELLIA(nz)	uoyiae	UNCOPYRIGHTABLE	uoyiea		BUBOMYIELLA
uyaeio		uyaesi		uyaies		
uyaioe	FULLY-FASHIONED	uyaesi		uyaies		
uyeaoj		uyeaoi		uyaies		UNLYCANTHROPIZE
uyeioa	ULYSSES SIMPSON GRANT	uyeaoi		uyaies		
uyiaeoj		uyiaoe		uyaies		GUYENOTIA (nz)
uyieoa		uyioae		uyaies		
uyoaei	BUTYRO-ACETIC	uyoaei	UGLYOGRAPHIZE	uyoear		PUTTY IN ONE'S HANDS(bl)
uyoeia	UNHYPOTHETICAL (w2)	uyoiae	UNHYPNOTIZABLE (w2)	uyoear		SHRUBBY HORSETAIL
				uyoies		SUBHYOIDEAN (w2)

Initial bigram	UA-	UE-	UI-	UO-	UY-	Total
Solid words	8	7	9	12	6	42
Hyphenated	2	2	6	1	2	13
Phrases	2	2	2	1	3	10
Totals (out of 24)	12	11	17	14	11	65 (out of 120)

yaeiou	<i>MY CAKE IS DOUGH</i>	yaeiou		yaeoiu	<i>CRYPHAEAOBIUS</i> (nz)
yaeoui	<i>SYLLABLE-COUNTING</i>	yaeuo		yaeuoi	
yiaeou	<i>CRYSTALLIGEROUS</i>	yaieu	<i>LYMANTRICHNEUMON</i> (nz)	yaioeu	<i>HYALICHROEUS</i> (nz)
yaioue		yaiueo		yaiuoe	
yaoei	<i>MYCARDOTHELIUM</i> (nz)	yaoeui	<i>THYSANOTEUTHIS</i> (nz)	yaoieu	<i>HYALOIDEUS</i> (s)
yaoiue	<i>CYANOTIQUE</i>	yaouei	<i>YARMOUTH HERRING</i>	yaouie	<i>YAKOUNITES</i> (nz)
yauieo		yauieo	<i>TRYPAUCHENOPSIS</i> (nz)	yauieo	
yauioe	<i>HYPALBUMINOSES</i> (s)	yauoei		yauoie	<i>SYNTARUCOIDES</i> (nz)
yeaiou	<i>PYRENARIOUS</i> (dbs)	yeaiuo		yeaoiu	<i>MYRMECAPHODIUS</i> (nz)
yeaoui	<i>HYPERACOUSTICS</i> (w2)	yeauio	<i>HYPERABDUCTION</i>	yeauoi	<i>HYPERGRANULOSIS</i> (s)
yeiaou		yeiauo		yeioau	
yeioua		yelua		yelua	
yeoaiu	<i>HYMENOLAIMUS</i> (nz)	yeoau	<i>HYPEROXALURIC</i> (s)	yeoiau	
yeoiua	<i>THYREOLINGUAL</i> (w2)	yeouai		yeouia	<i>BYELORUSSIAN</i>
yeuaio	<i>DYSREGULATION</i> (s)	yeuaoi		yeuao	
yeuioa	<i>HYPERFUNCTIONAL</i>	yeuoai		yeuoia	<i>DYSEPULOTICAL</i>
yiaeou	<i>XYRIDACEOUS</i>	yiaeuo		yiaeou	<i>MYIANOETUS</i> (nz)
yiaoue	<i>MYRIAD-TONGUED</i>	yiaueo		yiaue	
yieaou	<i>HYPSCICEPHALOUS</i> (s)	yieau		yieau	
yieoua		yelua		yelua	
yioaeu	<i>SCYLLIOGALEUS</i> (nz)	yioaue	<i>MYRTIFORM CARUNCLE</i>	yioeau	<i>RHYTILEUCOMA</i> (nz)
yioeua	<i>CYLINDROCELLULAR</i>	yiouae	<i>PYIOUNCRAWE</i>	yiouea	<i>SYRIOPETALUM</i> (nz)
yiuae		yelua		yelua	
yiueoa		yelua		yelua	
yiueoa		yelua		yelua	
yoaeiu	<i>MYCOBACTERIUM</i>	yoaeui	<i>PYROCATECHUIC</i> (w2)	yoaeiu	<i>HYDROBASILEUS</i> (nz)
yoaiue	<i>SYMPTOMATIQUE</i> (s)	yoaeui		yoauie	<i>HYDROCAULINE</i>
yoeaiu	<i>ZYGOSTEPHANISCUS</i> (nz)	yoeau	<i>PYROMETALLURGIST</i>	yoeau	<i>TYPHLOPERIPATUS</i> (nz)
yoeiua	<i>LYMPHORETICULAR</i>	yoeuai	<i>MYONEURALGIC</i> (s)	yoeua	<i>HYPOGEUSIA</i>
yoiae	<i>PHYTODIAETUS</i> (nz)	yoiae	<i>SYMPOSIAQUES</i>	yoieau	
yoieua		yelua	<i>PSYCHOSTIMULATE</i> (s)	yelua	
youaei	<i>YOU NAME IT</i>	youae	<i>PYRROBUTAMINE</i> (s)	youeai	<i>YOUNG-ENGLANDISM</i>
youeia	<i>SYNWOCKLUMERIA</i> (nz)	youiae	<i>CYPROQUINATE</i> (s)	youiea	<i>GYMNOJURINELLA</i> (nz)
yuaeio		yuaeoi		yuaeoi	
yuaioe		yuaiei	<i>YUNNANOLEPIS</i> (nz)	yuaiei	
yueaio		yueaoi		yueaoi	
yueioa		yueoai		yueoia	
yuiaeo		yuiaoe		yuiaoe	
yuiuea		yuiuea		yuiuea	
yuuae		yuae		yuae	
yuoeia	<i>CYRUPOEDIA</i>	yuiae	<i>GLYCURONIDASE</i> (s)	yuoeia	<i>PHYLUM PORIFERA</i> (sponges)

Initial bigram	YA-	YE-	YI-	YO-	YU-	Total
Solid words	12	12	8	18	5	55
Hyphenated	1	--	1	1	--	3
Phrases	2	--	1	1	1	5
Totals (out of 24)	15	12	10	20	6	63 (out of 120)

Most Productive Permutations

My personal word list includes nearly 1600 AEIOUY examples. The total number of examples for each permutation varies widely. The most productive permutations are EUOYIA (69 solid words, mostly animal genera), EUOIAY (33 solid words ending -ally), and UEOIAY (29 solid words also ending -ally).

Longest and Shortest Words

The longest AEIOUY word I found has 20 letters. ANTISTREPHORRHYNCHUS (nz) is an extinct crustacean. The shortest have 8 letters: IALOUSYE, EURYOPIA (s), EYDOUXIA (dfpf), EURYOMIA (nz), EUMYOPIA (nz) and JOYEUXIA (nz).

The AEIOUY Permutation

Those words in which the 6 vowels occur in alphabetical order hold a particular fascination: ABSTEMIOUSLY, ACHEIOLOUSLY, ACHEIROUSLY, AFFECTIOUSLY, ARSENIOUSLY, CAVERNILOQUY, FACETIOUSLY, HAREIOUSLY, MARVEIL(L)OUSLY, PARECIOUSLY, TRAGEDIOUSLY and the hyphenated HALF-SERIOUSLY (w2).

THE YUOIEA Permutation

Single words in which the 6 vowels occur in the reverse order YUOIEA would also be fascinating if any could be found. For a discussion on this subject, the reader is directed to "AEIOU Words in Biology: Part 1" (Word Ways Nov 1993). The only YUOIEA example of which I am aware is the taxonomic phrase *PHYLUM PORIFERA* (sponges).

Vowel-Consonant Patterns

The 6 vowels alternate singly with single consonants in ADELOGYRINUS (nz), ALUMINOTYPE (w2), ARIXYLEBORUS (nz), BILOCULATELY (s), CARINODYNERUS (nz), COPULATIVELY, CORYZAVIRUSES (s), DYSEPULOTICAL, ELUCIDATORY, HEMATOCTYTURIC (s), HYPERAZOTURIC (s), HYPEROXALURIC (s), ISOBUTYRATE, ISOBUTYRATE, MAJORITY RULE, MOLECULARITY, MYTILOCERAMUS (nz), PARIFODYNERUS (nz), PYROMUCAMIDE, RETICULOMYXA (nz), UNIFORATELY (s), URANYLOXIDE, UROGENITARY, VEHICULATORY, VITUPERATORY. The 6 vowels alternate singly with pairs of consonants in INDUCTOTHERMALLY (s). Pairs of vowels alternate with single consonants in EUMYOPIA (nz), EURYOMIA (nz), EURYOPIA (s), EYDOUXIA (dfpf) and IALOUSYE (see also Longest and Shortest Words). Pairs of vowels alternate with pairs of consonants in the phrase TRAIN JOURNEY.

Circular Permutations

Ten of the 720 permutations have circular vowel arrangements. Here are examples for 6 of the 10. For left-right permutations, there is ISOBUTYRATE and MY CAKE IS DOUGH; for right-left permutations, DASYUROIDES (nz) and PLATYBUNOIDES (nz),

GIVE ASYLUM TO (bl), *PROPRIETARY DRUG* (bl), *SUBPOPLITEALLY* (s), *QUODLIBETARY*, *UNCOMPLIMENTARY* and *UNNOTICEABLY*. Can anyone find examples for the 4 remaining circular permutations EIOUYA, OUYAEI, UYAEIO and EAYUOI?

Heterograms

Selecting words with just one of A,E,I,O,U and Y inevitably throws up a relatively high percentage of heterograms, words in which every letter is different. Some 300 of my nearly 1600 AEIOUY examples are heterograms. In this A-Z list, each of the 26 solid word heterograms has a different AEIOUY permutation:

AMBIDEXTROUSLY, BUOYANCIES (s), CAVERNILOQUY (s), DOCUMENTARILY, ELUCIDATORY, FATIOQUENCY, GLYCURONIDASE (s), HAEMOLYTICUS (s), ILLFAVouredLY, JOYEUXIA (nz), KERATINOUSLY (s), LEUCOCYTAXIS (s), MYIANOETUS (nz), NEUROMYIA (nz), OBJURGATIVELY, PYROGUANITE, QUESTIONABLY, RETICULOMYXA (nz), SUBORDINATELY, TRAGEDIOUSLY, UNCOPYRIGHTABLE, VESICULOGRAPHY (s), WEYMOUTHIA (nz), XYRIDACEOUS, YAKOUNITES (nz), ZYGEUPOLIA (nz)

The Letter W

The OED tells us that "From the early ME period 'w' was often substituted for 'u' in vowel digraphs...in modern spelling aw, ew, ow are phonetically equivalent to au, eu, ou...The traditional statement of grammarians that 'W is a vowel as well as a consonant' refers to its use in these digraphs." In view of its vowel association, I looked for AEIOUY words which also contain a single letter W. I found remarkably few solid word examples: BUNOWEYHIA (nz), BYCHOWSKYCREADIUM (nz), GORUCHWYLLAETH (nwd), MOUTHWATERINGLY (bl), OUTWEARYING (ospd), SYNWOCKLUMERIA (nz), UNPRAISEWORTHY, WEYMOUTHIA (nz).

References for Non-OED Words

- aig Agricultural Insects of Ghana compiled by Forsyth, Ghana University Press 1966
- bl Bloomsbury Thesaurus, 1993
- ch Chambers Dictionary
- dbs The Dictionary of the Biological Sciences by Gray, Van Nostrand Reinhold 1967
- dbt Dictionary of Biological Terms by Henderson & Henderson, Oliver & Boyd 1963
- dfpf A Dictionary of the Flowering Plants and Ferns by Willis, CUP 1966
- dor Dorland's Medical Dictionary
- long Longman's Dictionary of the English Language
- nwd The New Welsh Dictionary by Evans & Thomas, Christopher Davies Pubns. 1970
- nz Nomenclator Zoologicus, The Zoological Society of London
- ospd Official Scrabble Players Dictionary
- s Stedman's Medical Dictionary
- tig Times Index Gazetteer of the World, 1965
- wgd The Complete Word Game Dictionary by Pulliam & Carruth, Hudson 1984
- w2 Webster's Second Edition