

HALF AND HALF WORDS

A. ROSS ECKLER

Morristown, New Jersey

ERIC IVERSON

Eagan, Minnesota

In the May 2005 Kickshaws, Dave Morice showed how VIOLET is a very unusual word: its letters are half vowels and half consonants, half from the first half of the alphabet and half from the last half, etc. In an attempt to find out how unusual this word is, compared with other English words, we propose the following ten rules for dividing the alphabet into two parts:

- A. vowels versus consonants (counting Y as a consonant)
- B. letters in odd position in alphabet (ACEGIKMOQSUY) versus even position
- C. letters from first half of alphabet (A through M) versus last half
- D. letters typed with the left hand (QWERTASDFGZXCVB) versus the right hand
- E. Roman numeral letters (IVXLCDM) versus all others
- F. letters constructed all with straight lines (AEFHILMNOTVWXY) versus curvy letters
- G. letters with horizontal or vertical symmetry (ABCDEFGHIKLMOTUVWXY) versus all others
- H. letters rhyming with "ee" (BCDEGPTVZ) versus all others
- I. letters with no nodes and two end points (CGIJLMNSUVWZ) versus all others (Group 2 in "Euler Path Words", Nov 2004 Word Ways)
- J. lower-case letters with ascenders or descenders (bdfghijklpqty) versus all others

For words of 2, 4, 6 or 8 letters, a handful can be found which agree with 8 different rules; these are tabulated below. The letter-groups in the table denote the half-splits that occur for that rule.

	A	B	C	D	E	F	G	H	I	J
PA	*	*	*	*		*	*	*		*
PI	*	*	*		*	*	*	*	*	
VOID	VD	VD	VD	VD		VI	VI	VD		VO
OTIC	OI		OT	OI	OT	OC		OI	OT	OC
PIES	PS		PS	PI		PS	PS	PE	PE	PI
ROIL	RL	RL	RO		RO	RO	RL		RO	RO
RIPE	RP	RP	RP	RE		RP	RP	RI		RE
PULE	PL	PL	PU			PU	PL	PE	PE	PL
DUEL	DL	DL		DE	DL	DU		DE	DE	DL
JUTE	JT	JT	JE	JU		JU		JU	JU	JT
DUIT	DT	DT	DI	DT	DI	DU		DT	DT	
COLT		CO	CL	CT	CL	CO		CT	CL	CO
CLAP		CA		CA	CL	CP	CA	CP	CL	CA
VIOLET	VLT	VLT	VOT	VET	VIL			VET	VIL	VOE
VIBRIO	VBR	VBR	VRO	VBR	VII	VII			VII	VRO
UPDIVE	UIE	UIE	UPV	UPI	UPE	UPD			UIV	UVE
TUBULE	TBL	TBL	TUU	TBE		TLE		TBE	TBE	TBL
SPINED		SIE	SPN	SED		SPD	SPN	SIN	SIN	SNE
PAPIER	PPR	PPR	PPR	PPI		PPR	PPR	PPE		PPI
INDUED	IUE	IUE		INU	IDD	INE		INU	INU	IDD

PULSEJET		PLJT	PUST	PULJ		PUSJ	PLSJ	PEET	PEET	PLJT
OUTLIVED	OUIE	OUIE	OUTV	OULI	OUTE			OULI	OTED	OUVE

Note that transposals of certain four-letter words such as PIER, PERI and CLOT are also allowed.

Four 10-letter words obey seven rules: REPLEVYING, PROJECTING, DESPONDING, CATNAPPING. Similarly, two 12-letter words do so: RHAPSODIZING and APPRENTICING.

If more esoteric words are allowed, is it possible that one can be found that satisfies nine or ten of the rules? Since all vowels are odd, AEIOU can only join with BDFHJLNPRTVXZ. Since all vowels are also either vertically or horizontally symmetric, the consonants must be further limited: AEIOU can only join with FJLNPRZ. Checking the 35 combinations of two letters that result, only one, IR, satisfies 9 rules. Similar arguments prove that only the four-letter combination IIRR and the six-letter combination IIRRRR work. There is no way for all ten rules to be simultaneously satisfied, because the final rule is the rhyming-E one.

The ten rules that have been proposed are, of course, arbitrary—others can equally well be analyzed. For example, one can retain rules A through D and add two new ones: right versus left hand on a Dvorak typewriter keyboard, and odd versus even-numbered letters on a telephone dial. Ignoring transposals, a number of words satisfy all six conditions:

do, en, of

dodo, done, dune, food, hero, love, lute, nene, oral, rein, tule, Ural, zein

bolero, dinero, donnee, elevon, eluent, fondue, footle, hereon, hooper, inured, ironed, Lauren,

loaner, loiter, looted, louted, neural, Oliver, rouble, rutil, unreal, venule

doublure, fluorite, forehoof, inferior, Leonardo, Lorraine, novelize, unloader, utilizer