

AN AUTOMATIC PALINDROME GENERATOR

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In 1984 Dan Hoey, a US naval mathematician, wrote a computer program which he used to create a 540-word expansion of Leigh Mercer's "Panama" palindrome (PD). It began "A man, a plan, a caret, a ban, a myriad, a sum, a lac..." and ended "...a calamus, a dairyman, a bater, a canal—Panama." (For the full PD, plus additional information, see <http://www2.vo.lu/homepages/phahn/anagrams/panama/htm.>)

Hoey's expansion uses articles and nouns only. Is there a way to generate automatic PDs that include verbs? On June 12 1998 his Muse inspired John E. Connett to write the following:

Ed, I hid a pat,
 I bit a rag,
 I jig a bat,
 I hit a cab,
 I bib a cat,
 I hit a bag,
 I jig a rat,
 I bit a pad—
 I hide!

The automatic palindrome generator (APG) that appears here will produce any number of PDs of this type, and to any length. The results are not especially complex or interesting, but one must begin somewhere...

Take a sheet of paper (preferably lined) and either write the numbers 1 to 17 down the margin, or count off that number of lines and mark the starting and stopping points. Seventeen steps will produce a PD exactly the length of Connett's. (Nine steps are feasible, but will not allow the entire vocabulary to be exploited, owing to the restrictions created by the frames which begin/end the PD. To increase the length beyond 17, always go in increments of four: 21, 25, etc.)

To construct a PD, turn to Table 1. You begin naturally enough, at 0, which is the first of 249 key numbers. Opposite 0 we find the digits 1,2. These control the frame to be used: either "Ed, I / hide!" or "Ed, I / ride!" Select one of the digits at random, say 2. This becomes your first palindromic control number; write it down at position 1 on your sheet of paper. The same figure gives you your next key number; move down to 2, where you see the digits 160-163, meaning 160, 161, 162, 163. As before, choose one of these at random, say 162, and write it down below the first control number (which was 2). Move a good way down Table 1 to key number 162, where once more you make a random selection from the numbers beside it, say 110, and so proceed until you have completed a list of 17 control numbers.

Each of these numbers is keyed to a word pair in Table 2. To generate the PD, simply look up each corresponding word pair and write them down, one below the other. 2, then, gives you "Ed, I / ride!", 162, "rim / I", and so on down for a total of 17 steps. When you are done, the beginning of what you have written should have this form (assuming that you wrote down the numbers 1 to 17 at the start):

1	2	Ed, I / hide!
2	162	rim / I
3	110	a /dam,

The first half of your PD will then be the left-hand word in each pair read from top to bottom; the second half, the right-hand word read from bottom to top. (Thus the unfinished example above reads "Ed, I rim a dam, I hide!"). You may then, if you wish, rewrite the PD in the same layout as that used by Connett.

TABLE 1

0	1, 2	33	115-19	66	145, 146	99	233
1	56-58	34	164-70	67	182-85	100	5-9
2	160-63	35	217-20	68	198-202	101	47-51
3	5-9	36	3, 4	69	217-20	102	141-44
4	160-63	37	10-13	70	10-13	103	206, 207
5	14-19	38	91, 92	71	43-46	104	212-16
6	30-35	39	100-03	72	100-03	105	234-41
7	128-34	40	120-27	73	171-77	106	243-47
8	186-94	41	171-77	74	203-05	107	147-58
9	234-41	42	221-25	75	221-25	108	212-16
10	5-9	43	20-24	76	3, 4	109	36-42
11	20-24	44	82	77	43-46	110	52-54
12	56-58	45	160-63	78	120-27	111	83-86
13	87-90	46	206, 207	79	159	112	95-99
14	36-42	47	128-34	80	171-77	113	182-85
15	52-54	48	186-94	81	221-25	114	231, 232
16	76-81	49	212-16	82	59-69	115	3, 4
17	95-99	50	234-41	83	43-46	116	10-13
18	115-19	51	248	84	91, 92	117	43-46
19	198-202	52	3, 4	85	171-77	118	120-27
20	30-35	53	10-13	86	221-25	119	227-30
21	59-69	54	91, 92	87	30-35	120	20-24
22	109-14	55	234-41	88	186-94	121	93, 94
23	147-58	56	30-35	89	234-41	122	107, 108
24	181	57	186-94	90	243-47	123	160-63
25	43-46	58	243-47	91	20-24	124	178, 179
26	100-03	59	25-29	92	160-63	125	180
27	171-77	60	70-75	93	147-58	126	211
28	221-25	61	76-81	94	186-94	127	226
29	227-30	62	83-86	95	3, 4	128	25-29
30	36-42	63	95-99	96	43-46	129	36-42
31	52-54	64	115-19	97	91, 92	130	70-75
32	70-75	65	135-140	98	120-27	131	135-40

132	164-70	161	59-69	190	83-86	219	203-05
133	198-202	162	109-14	191	135-40	220	221-25
134	209, 210	163	147-58	192	164-70	221	5-9
135	43-46	164	10-13	193	182-85	222	47-51
136	100-03	165	100-03	194	209, 210	223	55
137	120-27	166	120-27	195	120-27	224	87-90
138	171-77	167	171-77	196	203-05	225	104-06
139	221-25	168	203-05	197	227-30	226	147-58
140	227-30	169	221-25	198	3, 4	227	56-58
141	128-34	170	227-30	199	43-46	228	87-90
142	147-58	171	5-9	200	100-03	229	104-06
143	186-94	172	47-51	201	120-27	230	141-44
144	243-47	173	56-58	202	203-05	231	91, 92
145	43-46	174	87-90	203	47-51	232	120-27
146	120-27	175	93, 94	204	104-06	233	47-51
147	36-42	176	141-44	205	107, 108	234	25-29
148	76-81	177	178, 179	206	59-69	235	36-42
149	95-99	178	147-58	207	128-34	236	70-75
150	115-19	179	186-94	208	195-97	237	76-81
151	135-40	180	147-58	209	100-03	238	83-86
152	145, 146	181	76-81	210	171-77	239	135-40
153	164-70	182	43-46	211	147-58	240	164-70
154	182-85	183	91, 92	212	70-75	241	217-20
155	195-97	184	120-27	213	164-70	242	120-27
156	198-202	185	171-77	214	195-97	243	25-29
157	231, 232	186	25-29	215	198-202	244	115-19
158	242	187	36-42	216	217-20	245	135-40
159	20-24	188	70-75	217	10-13	246	164-70
160	14-19	189	76-81	218	43-46	247	195-97
						248	95-99

TABLE 2

1	Ed, I / hide!	17	a / jab,	33	a / lad
2	Ed, I / ride!	18	a / lab,	34	a / pad,
3	I / bib	19	a / tab,	35	a / wad,
4	I / rib	20	did / I	36	cab, / a
5	bib / I	21	dig / I	37	cad, / a
6	bid / I	22	dim / I	38	cam, / a
7	bin / I	23	dip / I	39	can, / a
8	bit / I	24	dis / I	40	cap, / a
9	bill / I	25	bag, / a	41	cat, / a
10	I / bid	26	ban, / a	42	call, / a
11	I / did	27	bat, / a	43	I / dig
12	I / hid	28	ball, / a	44	I / jig
13	I / kid	29	bass, / a	45	I / rig
14	a / cab,	30	a / cad,	46	I / wig
15	a / dab,	31	a / dad,	47	fin / I
16	a / gab,	32	a / fad,	48	fit / I

49	fix / I	99	jazz, / a	149	a / Jap,
50	fill / I	100	I / bin	150	a / lap,
51	fizz / I	101	I / fin	151	a / map,
52	dab, / a	102	I / pin	152	a / nap,
53	dad, / a	103	I / win	153	a / pap,
54	dam, / a	104	mix / I	154	a / rap,
55	gill / I	105	mill / I	155	a / sap,
56	hid / I	106	miss / I	156	a / tap,
57	hit / I	107	nip / I	157	a / yap,
58	hiss / I	108	nix / I	158	a / zap,
59	a / bag,	109	a / cam,	159	I / dis
60	a / fag,	110	a / dam,	160	rib / I
61	a / gag,	111	a / ham,	161	rig / I
62	a / hag,	112	a / jam,	162	rim / I
63	a / Jag,	113	a / ram,	163	rip / I
64	a / lag,	114	a / yam,	164	pad, / a
65	a / mag,	115	lab, / a	165	pan, / a
66	a / nag,	116	lad, / a	166	pap, / a
67	a / rag,	117	lag, / a	167	pat, / a
68	a / tag,	118	lap, / a	168	pax, / a
69	a / wag,	119	lass, / a	169	pall, / a
70	fad, / a	120	I / dip	170	pass, / a
71	fag, / a	121	I / lip	171	I / bit
72	fan, / a	122	I / nip	172	I / fit
73	fat, / a	123	I / rip	173	I / hit
74	fax, / a	124	I / sip	174	I / kit
75	fall, / a	125	I / tip	175	I / lit
76	gab, / a	126	I / yip	176	I / pit
77	gag, / a	127	I / zip	177	I / sit
78	gap, / a	128	a / ban,	178	sip / I
79	gas, / a	129	a / can,	179	sit / I
80	gat, / a	130	a / fan,	180	tip / I
81	gall, / a	131	a / man,	181	a / gas,
82	jig / I	132	a / pan,	182	rag, / a
83	hag, / a	133	a / tan,	183	ram, / a
84	ham, / a	134	a / van,	184	rap, / a
85	hat, / a	135	mag, / a	185	rat, / a
86	hall, / a	136	man, / a	186	a / bat,
87	kid / I	137	map, / a	187	a / cat,
88	kit / I	138	mat, / a	188	a / fat,
89	kill / I	139	mall, / a	189	a / gat,
90	kiss / I	140	mass, / a	190	a / hat,
91	I / dim	141	pin / I	191	a / mat,
92	I / rim	142	pip / I	192	a / pat,
93	lip / I	143	pit / I	193	a / rat,
94	lit / I	144	piss / I	194	a / vat,
95	jab, / a	145	nag, / a	195	sap, / a
96	Jag, / a	146	nap, / a	196	sax, / a
97	jam, / a	147	a / cap,	197	sass, / a
98	Jap, / a	148	a / gap,	198	tab, / a

199	tag, / a	215	a / tax,	232	yap, / a
200	tan, / a	216	a / wax,	233	I / fizz
201	tap, / a	217	wad, / a	234	a / ball,
202	tax, / a	218	wag, / a	235	a / call,
203	I / fix	219	wax, / a	236	a / fall,
204	I / mix	220	wall, / a	237	a / gall,
205	I / nix	221	I / bill	238	a / hall,
206	wig / I	222	I / fill	239	a / mall,
207	win / I	223	I / gill	240	a / pall,
208	a / saw,	224	I / kill	241	a / wall,
209	van, / a	225	I / mill	242	zap, / a
210	vat, / a	226	zip / I	243	a / bass,
211	yip / I	227	I / hiss	244	a / lass,
212	a / fax,	228	I / kiss	245	a / mass,
213	a / pax,	229	I / miss	246	a / pass,
214	a / sax,	230	I / piss	247	a / sass,
		231	yam, / a	248	a / jazz,

Using this coding scheme, John Connett's palindrome is 1-56-34-167-171-8-193-182-44-82-59-27-173-57-187-36-3. Many thousands (millions?) of other palindromes can be created as well.

Ella Minnow Pea

Over sixty years ago the novel *Gadsby* demonstrated that it is entirely possible to write a book with a single letter suppressed. *Ella Minnow Pea* shows how communication becomes increasingly hamstrung as letters are successively removed from the alphabet: Z,Q,J,D,K,... until only L,M,N,O and P (get it?) remain.

This linguistic disaster occurs when the leaders of Nollop, a mythical island nation off the South Carolina coast, interpret the fall of lettered tiles from a centotaph honoring the creator of *The quick brown fox jumps over the lazy dog* as a message from beyond the grave to suppress those letters in all discourse. The prohibition is mercilessly enforced, but the ruling council agrees to rescind it if a grammatical pangram of 32 words or less can be found. The heroine, Ella, reading notes left by her father who has been banished from the island by the language police, stumbles across his departure instructions: *Pack my box with five dozen liquor jugs*. Success!

The first novel by playwright Mark Dunn, this book is available from MacAdam/Cage Publishing (ISBN 0-9673701-6-7) for \$22. A most welcome addition to the tiny corpus of logological fiction!