t h e   w i l d   c o l o n i a l   b o y   36

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Number 36!

Actually it is really quite simple: the first seventeen issues of The Wild Colonial Boy were published for SAPS between October 1962 and July 1966. Then between February 1964 and June 1965 I published seventeen issues of a general fanzine called either Satura or The Gryphon, depending on the time of day. Then, in October 1966, I produced a combined issue of the two, and numbered it 35. There was an earlier version of TWCB 36, but that was only a letter of comment to Terry Carr on his fanzine called, er, well, it was a long time ago, and I'm sure you all know the name of Terry Carr's most recent general fanzine. Putting all this aside we come to the point, which is that OMPA seems a suitable place for this title. But don't knock it - TWCB was once mentioned in F&SF's fanzine review column, and that's hard to beat....

I haven't had much contact with British fandom for the last 8 years or so. In fact, I think this has been pretty much the case with most of Australian fandom. Another sobering thought is that I am, I suspect, the only fan in Australia to whom the natural given name to apply to the family name 'Harrison' is 'Bill' (rather than 'Harry').

So much for cheery stuff. I think that my publishing schedule will be six-monthly, rather than quarterly as it was in the hyperactive old days, but that is enough. Then again you might be lucky in that I will publish only annually. Pray.

This issue will be typically untypical. On the first page after this will begin an incredibly boring piece which will be of interest to one person in OMPA if I am lucky. However, it seems to me a useful little piece of work, even if the amount of typing was rather more than the idea was worth. And it goes on for 8 pages. But don't worry: just throw this away.

Then, on what I call page ten, begins an article, as yet unwritten (fortunately), which deals with language and science fiction, partly inspired by David Masson's brief incursion into that field in SPECULATION recently.

After that (and beginning on page 94) we have the jokes.

Hoping you are the same.........

THE 44 NEARREST STARS and other numbers

I have always been interested in the exact way in which the stars are related (cosmically speaking....), but the amount of work involved in working it all out slowed down my initial impulse. A couple of weeks ago, however, I thought I would take a bit of time off and work some things out (aided by the fact that a recently-published list (in THE OBSERVER'S HANDBOOK 1970) provided all the details I needed). We in Australia have perfected a remarkable device known as a 'computer'. It is rather too difficult to describe here, but it is sufficient, I think, to say that it does the add-ups and the take-aways rather quickly. So I messed around a little and then, after a minute's work, out squirted the following pages of figures (and if you think this sort of thing shouldn't count for credit, then you've never had the kind of eyestrain I have at the moment).

Let me tell you about them. First of all consider Table 2 (that's logical); this lists the stars studied in this little exercise, but gives precious little else away. If you want to find out more, see the above-mentioned OBSERVER'S HANDBOOK.

Then we have Table 1, which is the basic table. It lists the distances, in light years, between all the stars in the survey. You can find the distances easily by merely connecting the required vertical and horizontal numbers. Thus the distance between the sun and Barnard's Star is 5.9 light years, and the distance between Sirius and Altair is 24.9 light years. These distances are all accurate to about one decimal place. (This is imposed by the data, not by the calculation.)

On the four pages following Table 2 is the listing of magnitudes, and this is a little more complicated. Reading down a column, you find the magnitude of the 43 other stars as seen from the star whose number appears at the head of a column. Thus the column headed 13. describes these stars as seen from a planet near 61 Cygni.

On the other hand, reading across a row, we find the magnitude of a particular star as seen from the other 43 stars. This is fairly easy to work out, as numbersacross the rows don't vary greatly. As examples, we say that the magnitude of Sirius from Ross 154 is 0.0, whereas the magnitude of Ross 154 from Sirius is 11.9. There's rather more data there than anyone would want to handle.

I'm extending this system in two ways. Firstly, I'm going to dump in a lot more data (roughly the brightest 300 stars seen from earth), which will enable me to look at the neighbourhood a little more carefully. But I won't inflict the results on you (for a start, that would take about 700 pages....). Secondly I'm going to simulate a spaceship heading off in a particular direction, and look back at the sun (and ahead) to see what's there. (Didn't I tell you I was also going to map the sky at each point?) Joe Gibson did something like this in G^2 a long time ago, but I think it would be fun. Any requests?

interstellar distances

Table 1

Star Nos.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
2.	4.3										
3.	5.9	6.4									
4.	7.6	8.1	10.7								
5.	8.1	10.2	10.7	4.00							
6.	8.6	9.5	14.4	8.9	10.8						
7.	8.9	10.6	12.6	15.5	16.1	10.4					
8.	9.4	7.9	5.3	14.7	15.5	16.9	13.3				
9.	10.3	14.2	11.3	16.1	14.1	15.8	10.8	14.6			
10.	10.7	12.8	15.9	15.2	15.8	8.0	5.2	17.6	12.8		
11.	10.8	11.6	10.6	18.3	18.6	16.3	7.4	9.3	10.8	12.6	
12.	10.8	10.2	12.5	3.9	6.5	12.1	18.9	16.0	19.5	18.9	21.2
13.	11.2	14.2	9.2	17.0	15.0	18.7	13.7	12.0	5.5	16.9	10.7
14.	11.2	9.1	11.6	17.1	18.9	14.8	9.6	8.5	16.8	13.8	7.9
15.	11.4	13.0	16.9	8.6	9.6	5.2	14.7	20.4	17.4	11.6	20.5
16.	11.5	14.6	9.5	14.5	11.6	18.7	17.[illegible]	14.0	8.6	19.1	15.6
17.	11.6	15.6	13.1	17.2	15.1	16.3	11.2	16.3	1.8	12.7	11.8
18.	11.7	11.3	12.4	18.7	19.8	15.6	7.2	10.1	14.3	12.2	4.3
19.	11.9	13.5	15.5	18.3	18.8	12.3	3.0	15.9	12.2	5.5	8.7
20.	12.2	13.8	17.7	9.6	10.5	5.6	15.0	21.3	17.9	11.6	21.0
21.	12.5	11.1	11.2	19.0	20.3	17.8	11.1	7.1	16.1	16.1	6.2
22.	12.7	11.9	17.6	15.1	17.6	7.4	10.0	18.0	19.5	8.5	15.9
23.	12.8	16.5	12.6	17.4	14.7	18.8	15.0	16.3	4.3	16.8	14.2
24.	13.1	14.7	19.0	12.4	13.4	5.2	13.5	21.9	18.1	9.2	20.3
25.	13.1	11.0	8.3	14.6	15.5	20.2	19.8	7.6	19.4	23.2	16.8
26.	13.9	16.5	16.2	20.8	20.2	16.5	7.1	17.0	9.2	9.6	8.6
27.	14.2	13.7	14.4	7.9	8.7	16.6	22.8	18.0	21.9	23.1	24.2
28.	14.5	14.2	16.1	21.2	22.5	16.6	7.9	13.9	16.5	12.0	7.3
29.	15.0	17.7	17.3	10.8	7.6	16.0	21.7	22.5	17.3	20.3	24.7
30.	15.1	11.5	12.4	18.1	20.3	20.2	18.4	8.1	22.4	22.2	15.3
31.	15.2	13.2	14.4	21.2	23.0	19.3	12.9	10.1	19.4	17.5	9.1
32.	15.3	11.8	12.3	18.5	20.6	20.7	18.6	7.9	22.3	22.6	15.2
33.	15.4	18.5	18.9	21.1	20.3	15.8	9.1	20.7	10.5	8.6	13.2
34.	15.7	15.3	14.0	11.3	11.1	20.1	24.6	17.4	22.1	25.7	24.6
35.	15.7	18.9	14.1	17.1	13.6	22.0	21.3	18.7	12.0	22.7	20.4
36.	15.8	11.8	17.4	15.3	19.1	15.0	18.7	16.2	25.7	19.8	20.5
37.	15.8	16.6	15.4	23.4	23.5	20.6	10.6	13.4	13.8	15.5	5.1
38.	15.9	17.8	21.4	18.9	19.5	10.5	10.7	23.2	17.4	5.7	18.0
39.	16.1	17.1	19.0	9.0	8.8	14.6	23.1	23.4	22.3	21.4	26.9
40.	16.6	17.3	11.8	22.3	21.4	24.9	18.8	10.5	14.7	23.4	12.4
41.	16.7	16.1	10.8	20.2	19.9	25.0	21.8	9.6	18.7	26.0	16.5
42.	16.8	20.4	17.4	16.1	12.2	20.6	22.4	22.6	14.2	22.2	23.6
43.	16.9	20.5	16.3	22.4	19.9	22.7	16.7	18.9	7.0	19.0	14.8
44.	17.0	21.2	20.2	18.3	15.2	17.7	18.5	24.7	12.1	16.6	22.0

Star Nos.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
13.	19.6										
14.	19.1	16.7									
15.	11.5	20.6	19.7								
16.	16.6	6.1	19.9	19.2							
17.	20.7	7.0	18.1	17.7	9.8						
18.	21.4	14.6	4.7	20.4	19.0	15.2					
19.	21.8	15.6	11.2	16.5	19.4	12.3	8.2				
20.	12.4	21.2	20.3	1.0	19.9	18.0	20.9	16.7			
21.	21.0	14.9	4.2	22.5	18.9	17.4	4.6	12.6	23.1		
22.	17.6	22.2	12.3	12.1	23.8	19.9	13.4	10.8	12.2	16.2	
23.	20.4	5.1	20.2	19.7	6.1	4.8	17.9	16.5	20.1	19.1	23.3
24.	15.4	22.0	19.5	4.4	21.7	18.1	19.7	14.6	3.8	22.5	10.0
25.	14.1	16.1	15.0	22.5	15.4	21.2	17.5	22.7	23.4	14.3	22.5
26.	24.5	12.8	14.7	19.7	17.4	8.8	10.6	6.0	19.9	14.4	16.6
27.	4.6	21.2	22.5	15.4	17.2	23.1	24.8	25.8	16.3	23.9	22.2
28.	24.0	17.7	7.0	21.5	22.3	17.2	3.9	7.4	21.9	7.8	12.9
29.	12.1	18.8	26.2	12.5	14.2	17.7	26.4	24.0	13.0	27.3	23.3
30.	18.2	20.1	10.0	24.1	21.6	24.0	13.9	20.7	24.9	10.0	19.4
31.	23.0	18.6	4.5	24.2	22.5	20.6	6.1	13.9	24.8	3.7	16.2
32.	18.6	19.8	10.3	24.5	21.4	23.9	14.0	20.9	25.4	10.0	20.0
33.	25.0	15.4	18.2	18.2	18.9	9.4	14.7	7.7	18.1	18.8	16.8
34.	8.8	20.2	23.5	19.4	15.8	23.5	25.7	27.6	20.4	24.1	25.5
35.	18.8	10.3	24.8	21.4	5.0	12.8	23.8	23.5	22.1	23.8	27.8
36.	15.0	25.8	13.5	18.3	26.2	26.9	17.8	20.8	19.0	16.9	13.1
37.	26.2	13.8	10.9	24.9	19.4	14.5	6.6	10.5	25.3	8.5	19.1
38.	22.4	22.1	18.7	12.7	24.8	16.9	17.2	9.8	12.3	21.3	10.1
39.	8.4	23.7	25.9	10.7	19.6	22.9	27.4	25.6	11.3	28.0	21.4
40.	23.9	9.7	16.8	27.8	13.2	16.2	15.6	20.6	28.6	13.2	26.6
41.	20.6	13.8	17.7	27.5	14.3	20.4	18.6	24.2	28.4	15.1	27.3
42.	18.0	14.9	27.4	18.5	9.8	14.4	26.6	24.4	19.0	27.4	27.4
43.	25.5	7.4	22.1	24.1	10.8	6.6	18.9	17.5	24.4	20.3	26.1
44.	21.5	16.3	26.5	15.9	14.8	11.1	24.5	19.4	15.9	27.0	23.6

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Star Nos.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.	33.
24.	21.0										
25.	19.9	25.1									
26.	13.2	18.3	23.9								
27.	21.9	19.6	14.3	27.9							
28.	20.5	20.1	21.2	10.7	27.8						
29.	16.6	16.3	22.0	24.4	12.4	28.9					
30.	24.4	25.4	9.0	23.4	20.0	16.8	27.8				
31.	22.6	23.9	16.5	16.5	26.1	7.6	30.2	10.3			
32.	24.2	25.9	8.8	23.4	20.3	16.9	28.0	0.8	10.3		
33.	14.2	16.2	27.1	5.1	28.5	14.3	23.3	27.0	20.7	27.1	
34.	21.4	23.5	12.2	28.9	5.0	29.1	14.3	19.7	26.6	19.8	30.2
35.	8.4	24.2	19.0	21.2	18.5	27.0	13.4	26.0	27.4	25.8	22.0
36.	28.5	19.2	16.9	25.7	18.2	19.1	26.1	12.4	16.3	13.2	27.5
37.	17.0	24.1	20.9	9.1	29.3	7.5	29.3	18.5	10.2	18.3	14.1
38.	21.2	8.8	28.5	13.5	26.7	16.1	22.8	27.3	22.2	27.7	10.6
39/	22.6	15.0	21.9	27.8	9.1	29.7	8.0	26.5	30.2	26.9	26.8
40.	14.5	29.2	13.9	18.5	24.9	19.0	26.5	16.9	16.4	16.2	22.7
41.	18.2	29.8	8.0	23.6	20.5	22.4	25.4	13.5	17.9	29.4	27.4
42.	11.5	21.4	22.8	22.8	17.9	29.3	8.5	29.5	30.8	29.4	22.1
43.	5.4	24.7	23.4	12.6	27.2	21.0	21.8	27.0	23.7	26.7	14.1
44.	11.8	16.7	27.7	17.5	23.5	26.0	12.9	31.8	30.0	31.9	14.8

Star Nos.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.
35.	16.8									
36.	20.9	30.2								
37.	29.4	24.0	24.3							
38.	29.9	27.1	22.9	20.2						
39.	13.2	20.1	21.8	31.8	23.3					
40.	22.6	17.0	26.7	13.9	29.1	30.0				
41.	17.5	17.7	23.9	19.4	31.6	27.5	7.7			
42.	17.6	6.8	31.0	27.5	25.4	16.4	23.0	23.4		
43.	26.4	12.5	32.1	16.0	23.1	27.9	14.7	20.3	16.0	
44.	24.8	14.4	31.5	25.1	18.1	19.4	26.0	28.5	10.5	14.7

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Table 2

Star Number /	Star Identification	Star Number /	Star Identification
1.	The Sun	23.	Krueger 60
2.	Alpha Centauri	24.	Ross 614
3.	Barnard's Star	25.	BD-12° 4523
4.	Wolf 359	26.	van Maanen's Star
5.	Lalande 21185	27.	Wolf 424
6.	Sirius	28.	CD-37° 15492
7.	Luyten 726-8	29.	Groombridge 1618
8.	Ross 154	30.	CD-46° 11540
9.	Ross 248	31.	CD-49° 13515
10.	Epsilon Eridani	32.	CD-44° 11909
11.	Luyten 789-6	33.	Luyten 1159-16
12.	Ross 128	34.	Lalande 25372
13.	61 Cygni	35.	AOe 17415-6
14.	Epsilon Indi	36.	CC 658
15.	Procyon	37.	BD-15° 6290
16.	Sigma 2398	38.	Omicron^2 Eridani
17.	Groombridge 34	39.	BD+20° 2465
18.	Lacaille 9352	40.	Altair
19.	Tau Ceti	41.	70 Ophiuchi
20.	BD+5° 1668	42.	AC+79° 3888
21.	Lacaille 9352	43.	BD+43° 4305
22.	Kapteyn's Ster	44.	Stein 2051

Items 1,2,3,5,6,7,13,15,16,17,20,23,24,27,35,38,39,41,43,44 are known to be multiple.

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If lost, please return to page two.

Beware: the following four pages are solid figures, no pretty triangles.

stellar magnitudes

Table 3

This table gives the apparent magnitudes of the 44 stars as seen from the vicinity of each of the others. Each column gives the magnitudes as seen from that particular star.

Star Nos.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.		0.1	1.1	1.6	1.8	1.9	2.0	2.1	2.3	2.4	2.4
2.	0.1		1.0	1.5	2.0	1.8	2.1	1.4	2.7	2.5	2.3
3.	7.5	9.7		10.8	10.8	11.4	11.1	9.2	10.9	11.6	10.8
4.	13.5	13.7	14.3		12.1	13.8	15.1	15.0	15.2	15.1	15.4
5.	7.5	8.0	8.1	5.9		8.1	9.0	8.9	8.7	8.9	9.3
6.	-1.5	-1.3	-0.4	-1.4	-1.0		-1.1	0.0	-0.2	-1.7	-0.1
7.	12.5	12.9	13.2	13.7	13.8	12.8		13.4	12.9	11.3	12.1
8.	10.6	10.2	9.4	11.6	11.7	11.9	11.4		11.5	12.0	10.6
9.	12.2	12.9	12.4	13.2	12.9	13.1	12.3	13.0		12.7	12.3
10.	3.7	4.1	4.5	4.4	4.5	3.0	2.1	4.8	4.1		4.0
11.	12.2	12.4	12.2	13.3	13.4	13.1	11.4	11.9	12.2	12.5	
12.	11.1	11.0	11.4	8.9	1[illegible].0	11.3	12.3	12.0	12.4	12.3	12.6
13.	5.2	5.7	4.8	6.1	5.8	6.3	5.6	5.3	3.6	6.1	5.1
14.	4.7	4.2	4.8	5.6	5.8	5.3	4.3	4.1	5.6	5.1	3.9
15.	0.3	0.6	1.2	-0.3	-0.1	-1.4	0.9	1.6	1.2	0.3	1.6
16.	8.9	9.5	8.5	9.4	9.[illegible]	10.0	9.8	9.4	8.3	10.0	9.6
17.	8.1	8.8	8.4	9.0	8.7	8.9	8.1	8.9	4.1	8.4	8.2
18.	7.4	7.3	7.5	8.4	8.5	8.0	6.3	7.0	7.8	7.5	5.2
19.	3.5	3.8	4.1	4.4	4.5	3.6	[illegible].5	4.1	3.6	1.8	2.8
20.	9.8	10.0	10.6	9.2	9.4	8.1	10.2	11.0	10.6	9.6	10.9
21.	6.7	6.4	6.5	7.6	7.8	7.5	6.5	5.5	7.3	7.3	5.2
22.	8.8	8.6	9.4	9.1	9.4	7.6	8.2	9.5	9.7	7.9	9.2
23.	9.7	10.2	9.6	10.3	10.0	10.5	10.0	10.2	7.3	10.3	9.9
24.	11.3	11.6	12.1	11.2	11.4	9.3	11.4	12.4	12.0	10.6	12.3
25.	10.0	9.6	9.0	10.3	10.4	11.0	10.9	8.8	10.9	11.3	10.5
26.	12.4	12.7	12.7	13.2	13.2	12.7	10.9	13.8	11.5	11.6	11.3
27.	12.6	12.5	12.6	11.3	10.4	12.9	13.6	13.1	13.5	13.6	13.8
28.	8.6	8.5	8.9	9.5	9.6	8.9	7.3	8.5	8.9	8.2	7.1
29.	6.6	7.0	6.9	5.9	5.1	6.7	7.4	7.5	6.9	7.3	7.7
30.	9.4	8.8	9.0	9.8	10.1	10.1	9.8	8.1	10.3	10.3	9.5
31.	8.7	8.4	8.6	9.5	9.6	9.3	8.4	7.9	9.3	9.1	7.6
32.	11.2	10.6	10.7	11.6	11.8	11.8	11.6	9.7	12.0	12.0	11.1
33.	12.3	12.8	12.8	13.0	12.9	12.3	11.1	12.9	11.4	11.0	11.9
34.	8.5	8.5	8.3	7.8	7.8	9.0	9.5	8.7	9.2	9.6	9.5
35.	9.1	9.5	8.9	9.3	8.8	9.8	9.8	9.5	8.5	9.9	9.7
36.	11.0	10.4	11.2	11.0	11.4	10.9	11.4	11.1	12.1	11.5	11.6
37.	10.2	10.3	10.2	11.1	11.1	10.8	9.4	9.9	9.9	10.2	7.8
38.	4.4	4.7	5.1	4.8	4.9	3.5	3.6	5.3	4.6	2.2	4.7
39.	9.4	9.5	9.7	8.1	8.1	9.1	10.2	10.2	10.1	10.0	10.5
40.	0.8	0.9	0.1	1.5	1.4	1.7	1.1	-[illegible].2	0.6	1.6	0.2
41.	4.2	4.2	3.3	4.7	4.6	5.1	4.8	3.0	4.5	5.2	4.2
42.	11.0	11.4	11.0	10.9	10.3	11.4	11.6	11.6	10.6	11.6	11.7
43.	10.1	10.5	10.0	10.7	10.4	10.7	10.0	10.3	8.1	10.3	9.8
44.	11.1	11.6	11.5	11.2	10.8	11.2	11.3	11.9	10.4	11.0	11.6

Star Nos.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
1.	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.7	2.8
2.	2.0	2.7	1.7	2.5	2.0	2.9	2.2	2.6	2.6	2.2	2.3
3.	11.1	10.5	11.0	11.8	10.5	11.2	11.1	11.6	11.9	10.9	11.9
4.	12.1	15.3	15.3	13.8	14.9	15.3	15.5	15.4	14.1	15.5	15.0
5.	7.0	8.8	9.3	7.8	8.3	8.8	9.4	9.3	8.0	9.5	9.2
6.	-0.8	0.2	-0.3	-2.6	0.2	-0.1	-0.2	-0.7	-2.4	0.1	-1.8
7.	14.1	13.4	12.6	13.6	13.9	13.0	12.0	10.2	13.6	13.0	12.7
8.	11.8	11.1	10.4	12.3	11.5	11.8	10.7	11.7	12.4	10.0	12.0
9.	13.6	10.8	13.3	13.3	11.8	8.4	12.9	12.6	13.4	13.2	13.6
10.	4.9	4.7	4.2	3.8	4.9	4.1	4.0	2.2	3.9	4.6	3.2
11.	13.7	12.2	11.5	13.6	13.0	12.4	10.2	11.7	13.6	11.0	13.0
12.		12.4	12.3	11.2	12.0	12.5	12.6	12.6	11.4	12.6	12.2
13.	6.4		6.1	6.5	3.8	4.2	[illegible]	5.9	6.6	5.8	6.7
14.	5.8	5.6		5.9	5.9	5.7	2.8	4.7	6.0	2.6	4.9
15.	0.3	1.6	1.5		1.5	1.3	1.6	1.1	-4.9	1.8	0.4
16.	9.7	7.5	10.1	10.1		8.6	10.1	10.1	10.1	10.0	10.5
17.	9.4	7.1	9.1	9.1	7.8		8.7	8.3	9.1	9.0	9.3
18.	8.7	7.9	5.4	8.6	8.4	7.9		6.6	8.6	5.4	7.7
19.	4.8	4.1	3.4	4.2	4.6	3.6	2.7		4.2	3.6	3.3
20.	9.8	[illegible]	10.9	4.4	10.8	10.6	10.9	10.4		11.2	9.8
21.	7.8	7.1	4.4	8.0	7.6	7.4	4.5	6.7	8.0		7.3
22.	9.5	[illegible]	8.7	8.6	10.1	9.7	8.9	8.4	8.6	9.3	
23.	10.7	7.6	10.7	10.6	8.1	7.5	10.4	10.2	10.7	10.5	11.0
24.	11.7	12.4	12.2	9.0	12.4	12.0	12.2	11.6	8.6	12.5	10.7
25.	10.2	10.4	10.3	11.2	10.4	11.1	10.6	11.2	11.3	10.2	11.2
26.	13.6	12.2	12.5	13.1	12.8	11.4	11.8	10.5	13.1	12.4	12.7
27.	10.1	13.5	13.6	12.8	13.0	13.7	13.8	13.9	12.9	13.7	13.6
28.	9.7	9.1	7.1	9.5	9.6	9.0	5.8	7.2	9.5	7.3	8.4
29.	6.1	7.1	7.8	6.2	6.5	7.0	7.8	7.6	6.3	7.9	7.6
30.	9.8	10.1	8.5	10.4	10.2	10.4	9.2	10.1	10.5	8.5	10.0
31.	9.6	9.2	6.1	9.7	9.6	9.4	6.7	8.5	9.8	5.7	8.9
32.	11.6	11.7	10.3	12.2	11.9	12.1	11.0	11.8	12.3	10.2	11.7
33.	13.3	12.3	12.6	12.6	12.7	11.2	12.2	10.8	12.6	12.7	12.5
34.	7.2	9.1	9.4	9.0	8.5	9.4	9.6	9.7	9.1	9.4	9.6
35.	9.5	8.2	10.1	9.8	6.6	8.7	10.0	10.0	9.8	10.0	10.4
36.	10.9	12.1	10.7	11.3	12.1	12.2	11.3	11.6	11.4	11.2	10.6
37.	11.3	9.9	9.4	11.2	10.7	10.0	8.3	9.3	10.2	8.9	10.6
38.	5.2	5.2	4.8	4.0	5.3	4.6	4.6	3.4	3.9	5.1	3.4
39.	8.0	10.2	10.4	8.5	9.8	10.1	10.5	10.4	8.6	10.6	10.0
40.	1.6	-0.3	0.9	2.0	0.3	0.8	0.7	1.3	2.0	0.3	1.9
41.	4.7	3.8	4.4	5.3	3.9	4.7	4.5	5.0	5.4	4.0	5.3
42.	11.1	10.7	12.0	11.2	9.8	10.6	12.0	11.8	11.2	12.0	12.0
43.	11.0	8.3	10.6	10.8	9.1	8.0	10.3	10.1	10.9	10.5	11.0
44.	11.6	11.0	12.0	10.9	10.8	10.2	11.9	11.4	10.9	12.1	11.8

Star Nos.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.	33.
1.	2.8	2.8	2.8	3.0	3.0	3.0	3.1	3.1	3.1	3.2	3.2
2.	3.0	2.8	2.1	3.0	2.6	2.7	3.2	2.2	2.5	2.3	3.3
3.	11.1	12.0	10.2	11.7	11.4	11.7	11.8	11.1	11.4	11.1	12.0
4.	15.3	14.6	15.0	15.7	13.6	15.8	14.3	15.4	15.8	15.5	15.8
5.	8.8	8.6	8.9	9.5	7.6	9.7	7.3	9.5	9.7	9.5	9.5
6.	0.2	-2.6	0.4	-0.1	-0.1	-0.1	-0.2	0.4	0.3	0.4	-0.2
7.	13.6	13.4	14.2	12.0	14.5	12.2	14.4	14.1	13.3	13.1	12.5
8.	1.8	12.4	10.1	11.9	12.0	11.5	12.5	10.3	10.8	10.2	12.3
9.	10.3	13.4	13.6	12.0	13.8	13.2	13.3	13.9	13.6	13.9	12.2
10.	4.7	3.4	5.4	3.5	5.4	3.9	5.1	5.3	4.8	5.3	3.2
11.	12.8	13.6	13.2	11.7	14.0	11.4	14.0	13.0	11.8	12.9	12.6
12.	12.5	11.9	11.7	12.9	9.2	12.8	11.3	12.2	12.8	12.3	12.9
13.	3.5	6.6	6.0	5.5	6.6	6.2	6.3	6.5	6.3	6.4	5.9
14.	6.0	5.9	5.3	5.3	6.2	3.7	6.5	4.4	2.7	4.5	5.7
15.	1.5	-1.7	1.8	1.5	1.0	1.7	0.5	1.9	2.0	2.0	1.3
16.	7.6	10.3	9.6	9.8	9.8	10.4	9.4	10.3	10.4	10.3	10.0
17.	6.2	9.1	9.5	7.6	9.7	9.0	9.1	9.7	9.4	9.7	7.7
18.	8.3	8.5	8.3	7.2	9.0	5.0	9.1	7.8	6.0	7.8	7.9
19.	4.2	4.0	4.9	2.0	5.2	2.5	5.0	4.7	3.9	4.7	2.6
20.	10.9	7.2	11.2	10.8	10.4	11.0	9.9	11.3	11.3	11.4	10.6
21.	7.6	8.0	7.0	7.0	8.1	5.7	8.4	6.3	4.1	6.2	7.6
22.	10.1	8.2	10.0	9.3	10.0	8.8	10.1	9.7	9.3	9.7	9.4
23.		10.7	10.6	9.7	10.8	10.7	10.2	11.1	10.9	11.1	9.9
24.	12.3		12.7	12.1	12.2	12.3	11.8	12.8	12.6	12.8	11.8
25.	10.9	11.4		11.3	10.2	11.1	11.2	9.2	10.5	9.1	11.6
26.	12.2	13.0	13.5		13.9	11.8	13.6	13.5	12.7	13.4	10.2
27.	13.5	13.3	12.6	14.1		14.1	12.3	13.3	13.9	13.4	14.1
28.	9.4	9.4	9.5	8.0	10.1		10.1	9.0	7.2	9.0	8.6
29.	6.8	6.8	7.5	7.7	6.2	8.0		8.0	8.1	8.0	7.6
30.	10.5	10.6	8.3	10.4	10.0	9.7	10.8		8.6	3.1	10.7
31.	9.6	9.7	8.9	8.9	9.9	7.2	10.2	7.9		7.9	9.4
32.	12.2	12.3	9.9	12.1	11.8	11.4	12.5	4.8	10.3		12.4
33.	12.1	12.4	13.5	9.9	13.6	12.1	13.2	13.5	12.9	13.5	
34.	9.2	9.4	8.0	9.8	6.1	9.9	8.3	9.0	9.7	9.0	9.9
35.	7.8	10.1	9.5	9.8	9.5	10.3	8.8	10.2	10.3	10.2	9.9
36.	12.3	11.5	11.2	12.1	11.3	11.4	12.2	10.5	11.1	10.6	12.2
37.	10.4	11.1	10.8	9.0	11.6	8.6	11.6	10.6	9.3	10.6	10.0
38.	5.1	3.2	5.7	4.1	5.6	4.5	5.2	5.6	5.2	5.6	3.6
39.	10.1	9.2	10.0	10.6	8.1	10.7	7.9	10.5	10.7	10.5	10.5
40.	0.5	2.1	0.4	1.1	1.7	1.1	1.9	0.9	0.8	0.8	1.5
41.	4.4	5.5	2.7	5.0	4.7	4.9	5.2	3.8	4.4	3.7	5.3
42.	10.1	11.5	11.6	11.6	11.1	12.2	9.5	12.2	12.3	12.2	11.6
43.	7.6	10.9	10.8	9.4	11.1	10.5	10.6	11.1	10.8	11.1	9.7
44.	10.3	11.1	12.2	11.2	11.8	12.0	10.5	12.5	12.3	12.5	10.8

Star Nos.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.
1.	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.4	3.4	3.4	3.4
2.	2.9	3.3	2.3	3.0	3.2	3.1	3.1	3.0	3.5	3.6	3.6
3.	11.4	11.4	11.9	11.6	12.3	12.0	11.0	10.8	11.8	11.7	12.2
4.	14.4	15.3	15.1	16.0	15.5	13.9	15.9	15.7	15.2	15.9	15.4
5.	8.2	8.6	9.3	9.8	9.4	7.7	9.6	9.4	8.4	9.4	8.9
6.	0.4	0.6	-0.3	0.4	-1.1	-0.4	0.8	0.8	0.4	0.6	0.1
7.	14.7	14.4	14.1	12.9	12.9	14.6	14.1	14.4	14.5	13.9	14.1
8.	11.9	12.1	11.8	11.4	12.6	12.6	10.9	10.6	12.5	12.1	12.7
9.	13.9	12.5	14.2	12.8	13.3	13.9	13.0	13.5	12.9	11.4	12.6
10.	5.6	5.3	5.0	4.5	2.3	5.2	5.4	5.6	5.3	4.9	4.6
11.	14.0	13.6	13.6	10.6	13.3	14.2	12.5	13.1	13.9	12.9	13.8
12.	10.7	12.3	11.8	13.0	10.6	12.8	12.5	12.2	13.0	12.6	11.1
13.	6.5	5.0	7.0	5.6	6.7	6.8	4.9	5.6	5.8	4.3	6.0
14.	6.3	6.4	5.1	4.6	5.8	6.5	5.6	5.7	6.6	6.2	6.6
15.	1.5	1.7	1.4	2.0	0.6	0.2	2.3	2.2	1.4	1.9	1.0
16.	9.6	7.1	10.7	10.1	10.5	10.1	9.2	9.4	8.6	8.8	9.5
17.	9.7	8.4	10.0	8.6	9.0	9.6	8.9	9.4	8.6	6.9	8.1
18.	9.1	8.9	8.3	6.1	8.2	9.2	8.0	8.4	9.2	8.4	9.0
19.	5.3	5.0	4.7	3.2	3.1	5.2	4.7	5.1	5.1	4.4	4.6
20.	10.9	11.1	10.7	11.4	9.8	9.6	11.6	11.6	10.7	11.3	10.3
21.	8.2	8.1	7.4	5.9	7.9	8.5	6.8	7.1	8.4	7.8	8.4
22.	10.3	10.5	8.8	9.6	8.3	9.9	10.4	10.4	10.4	10.3	10.1
23.	10.8	8.8	11.4	10.3	10.8	10.9	9.9	10.4	9.4	7.8	9.5
24.	12.6	12.7	12.2	12.6	10.5	11.6	13.1	13.1	12.4	12.7	11.9
25.	9.9	11.8	10.6	11.0	11.7	11.1	10.1	9.0	11.2	11.3	11.7
26.	13.9	13.3	13.7	11.4	12.3	13.9	13.0	13.5	13.4	12.1	12.9
27.	10.4	13.2	13.1	14.2	14.0	11.6	13.8	13.4	13.1	14.0	13.7
28.	10.2	10.0	9.2	7.2	8.9	10.2	9.2	9.6	10.2	9.4	9.9
29.	6.5	6.4	7.8	8.1	7.5	5.3	7.9	7.8	5.4	7.4	6.3
30.	10.0	10.6	9.0	9.9	10.7	10.7	9.7	9.2	10.9	10.7	11.1
31.	10.0	10.0	8.9	7.9	9.6	10.2	8.9	9.1	10.3	9.7	10.2
32.	11.7	12.3	10.8	11.6	12.4	12.4	11.3	10.8	12.6	12.4	12.8
33.	13.7	13.1	13.5	12.1	11.5	13.5	13.1	13.5	13.1	12.1	12.2
34.		8.7	9.1	9.9	9.9	8.1	9.3	8.8	8.8	9.6	9.5
35.	9.3		10.5	10.0	10.3	9.7	9.3	9.4	7.3	8.6	8.9
36.	11.6	12.4		12.0	11.8	11.7	12.2	11.9	12.6	12.6	12.5
37.	11.6	11.1	11.2		10.8	11.8	10.0	10.7	11.4	10.3	11.2
38.	5.8	5.6	5.2	5.0		5.3	5.8	5.9	5.5	5.3	4.7
39.	8.9	9.9	10.0	10.9	10.2		10.7	10.5	9.4	10.6	9.8
40.	1.5	0.9	1.9	0.5	2.1	2.1		-0.8	1.5	0.6	1.8
41.	4.4	4.4	5.0	4.6	5.6	5.3	2.6		5.0	4.7	5.4
42.	11.1	9.0	12.3	12.0	11.9	10.9	11.6	11.7		10.9	10.0
43.	11.0	9.4	11.5	10.0	10.8	10.9	11.6	11.7	10.0		9.8
44.	11.9	10.7	12.4	11.9	11.2	11.4	12.0	12.2	10.0	10.8	

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<u>Errors</u>: There may occasionally be an error of 0.1 in magnitude due to the rapid mental truncations by the typist. I should like to hear about any other errors, however.

SCIENCE FICTION AND BENJAMIN LEE WHORF

In the May 1970 issue of SPECULATION David I. Masson devotes a good deal of space (seven and one half pages) to "Some Thoughts On Language In Science Fiction". On about the fourth page Mr. Masson lists 5 'linguistic pitfalls' facing the writer of science fiction who seeks to represent alien culture. Those few pages are devoted to the third such pitfall:

> "Thirdly, grammar; it is inherently improbable that an alien syntax could resemble the syntax of a European language, and quite possible that it would be totally different from that of any terrene language." (page 18)

Mr. Masson goes on to discuss this with reference to his own stories, and to the work of Borges, Kornbluth and others.

I expect that most readers of this will have had some experience with learning a non-English language. But if you are like me, that experience will almost certainly be limited to European languages. Even so, it can be frustrating to the beginner in these languages to learn that one needs more than a dictionary to get along - the damned foreighers don't even have words for some quite straightforward English expressions. We are, therefore, all aware of the sort of problem which may occur.

One of the occasional joys of life is to discover that one's crude notion of how the universe fits together is actually closely linked with a notion which is highly developed and results from years of study on the part of some particularly bright person (naturally, if you or I can think it up in a few moments, then to anyone else it would represent the work of at least two years). So a coupld of years ago I discovered that my idea of the way in which language influences our perception of the world, when suitably tidied up, is dignified with the name 'the Sapir-Whorf hypothesis'. Actually the Sapir-Whorf hypothesis is what I really wanted to talk about here, but this thing must be finished this afternoon, so I shall only be able to begin.

Whorf's formul tion of the Sapir-Whorf hypothesis is summarised by Science as being 'that the structure of a person's language is a factor in the way in which he understands reality and behaves with respect to it.' This seems to me a simplification, but it is a good general description.

But on to science fiction. The problem of alien languages is hardly attacked at all in modern science fiction (well, the modern science fiction that I read): perhaps this is because it is too difficult, and perhaps it is because writers are not particularly interested in anything more than moving the plot along ("OK Harvey, pass out the Communicator"). Whorf wrote quite a lot about the 'alien' languages we have here on Earth, and I propose to give a few examples to illustrate the point.

Firstly, an illustration of generaldifferences. I quote from Language, Thought, and Reality (by BLW, M.I.T. Press, 1966/pb).

In the important article "The Relation of Habitual Thought and Behaviour to Language", Whorf compares English with Hopi.

> "Our own 'time' differs markedly from Hopi 'duration'. It is conceived as like a space of strictly limited dimensions, or sometimes as like a motion upon such a space, and employed as an intellectual tool accordingly. Hopi 'duration' seems to be inconceivable in terms of space or motion, being the mode in which life differs from form, and consciousness in toto from the spatial elements of consciousness. Certain ideas born of our own time-concept, such as that of absolute simultaneity, would be either very difficult to express or impossible and devoid of meaning under the Hopi conception, and would be replaced by operational concepts." (page 158)

Later Whorf (in another essay) summarises the differences between the two languages in this way:

> "What are to English differences of time are to Hopi differences in the kind of validity." (page 213)

Then, in dealing with specific instances, Whorf illustrates the small-scale differences between languages on Earth: that, for example, Eskimo has three words where English has the one word 'snow'. There are many examples of such situations, as might be expected, for here environment helps to determine language to some extent.

Then, when one comes to examine longer structures - sentences, one finds stranger differences. Whorf quotes the two sentences "I push his head back" and "I drop it in water and it floats" and remarks that these are rather different in English (! page 235). He continues: "But in Shawnee the corresponding statements are closely similar, emphasising the fact that analysis of nature and classification of events as like or in the same category (logic) are governed by grammar". And Whorf makes it fairly clear just how the sentences are related in Shawnee.

Reversing the situation, he takes the sentences "The boat is grounded on the beach" and "The boat is manned by picked men" and shows that the Nootka (Vancouver Island) equivalents are dissimilar, and may be translated by 'It is on the beach pointwise as an event of canoe motion' and 'The boat has a crew of picked men' (together with a couple of lines of gloss in an attempt to get across the nuances).

The implications of this for 'alien speech' are considerable. It can be as simple as Mr. Masson (or Borges, for that matter) might choose to make it, but given that aliens have an experience totally different from our own, we should expect a language far less like our Standard European languages even than Hopi or Shawnee. To rely upon a very simple model (telling dirty jokes (Leinster) or playing with the elements (H. Beam Piper)) seems extremely optimistic.

One can't help noticing that of the current writers, J.G. Ballard comes closest to getting across the feeling of the sentence quoted above from page 213. But then his aliens are humans.

Finally, a word or two about the perception of reality. From page 261:

"In parts of New England, Persian cats of a certain type are called Coon cats, and this name has bred the notion that they are a hybrid between the cat and the 'coon' (racoon). This is often firmly believed by persons ignorant of biology, since the stress of the linguistic pattern (animal-name 1 modifying animal-name 2) causes them to 'see' (or as the psychologists say 'project') objective racoon quality as located on the body of the cat - they point to its bushy tail, long hair, and so on."

I'm sure anyone could add to that situation without assistance.

Of course the question of how language goes together and how it affects our perception of reality has aspects more important than the nature of small problems associated with some science fiction stories. McLuhan (the great borrower) as obviously leaned upon this kind of idea frequently. In the book mentioned, Whorf devotes several pages to this subject, at the same time indicating some areas in which English might be modified by borrowings from non-European languages (with ultimate simplification in mind).

But in science fiction, it seems to be something which doesn't matter.

....

That isn't exactly all I would have liked to have said. But on the other hand to develop the subject at greater length would have (i) consumed more time than I presently have and (ii) assumed that some members at least of OMPA would be interested (and that ain't necessarily so). But the collection of Whorf's writing cited is available, so this is some sort of introduction.

....

AUSTRALIAN CENSORSHIP:

This subject is much discussed but little understood. WCB proudly reprints a v*i*t*a*l document - a speech by the minister in charge. Well, the first episode of a serial, anyway. (from Parliamentary Debates 27,2,1, 3372)

In the past few months the subject of Austràlian censorship of both films and literature has been widely discussed in newspapers and magazines and on radio and television. There have been numerous meetings on censorship at universities and other places. There have been cases of picketing of theatres by an organised movement against censorship. It has become clear that the Australian public now has a livelier interest in the subject than at any previous time. Because the community is so clearly indicating its wish to be more concerned with the principles and systems of Australian censorship, I decided that I should make a statement to the House on the present censorship position and on the Government's attitude to a controversial and sometimes emotional matter.
(stay tuned for another para or two in three months'. time....)