

EDITORIAL

David Dallman has noted that although each issue of NUTS Notes in 1970 had an average of 9 pages - "a significant upward trend" as he puts it - we still get "virtually nothing from most of the members". As editor, I should like to emphasise that the more contributions I receive the better. Let us make 1971 the year which sees the end of "the silent majority".

There has been a change in our publishing plans since the last issue: the new edition of "UK Best Performers of All Time" will appear, at the suggestion of our President (who has most generously offered to back it financially) in 1972. The ESAA is purchasing 120 copies of the "UK Junior All Time List" for distribution to all attending the Littleshall Easter Coaching Course.

Two dates to note in your diary now: July 24 - AGM; August 29 - Pentathlon and Dinner. Full details will be notified later.

MISCELLANY

§ Hitherto unreported performance: Nos Galan 4M road race at Mountain Ash, Glam. on 31 December 1970, Cliff Temple finished 126th out of 231.

§ Congratulations to Tim and Janet Lynch-Staunton on the birth of Paul Jonathan (15 January, 5 lb 12.5 oz/2.3 kg).

§ BARGAIN OF THE YEAR!! Limited number of ATFS Women's Handbook (1970 edition) available at 40p each (post free) from A Huxtable, 78 Toynbee Road, LONDON SW20.

§ Keith Morbey has suggested a junior NUTS sprint championship to be held in conjunction with the pentathlon (for all those little Greenbergs, etc). Maybe we can wipe up some of the world age records, such as 26.0 for 50y by a 1 year old!

THINKPIECE by Pete Pozzoli

It is my opinion the 100mH and 200mH are pretty much one and the same event, just as I consider the 100m and 200m flat about the same thing. With very rare exceptions, the athletes (of either sex) who make the top rankings in one also do so in the other. The number of sprint doubles in major Games almost outnumber the solo wins.

The big mistake was made in the 1930s when the 60m was dropped from the international schedule. I believe it would have made better sense to have dropped the 100m and retained 60m and 200m as the short distances. Check the lists and you will find the reverse is true - with rare exceptions the top athletes are completely different. Logical enough, since the events call for quite different abilities. The 60m shows us the cheetahs of sprinting; the 100m and 200m both show us the greyhounds.

I would like to see the present 100mH reduced to 90mH with 3m to the first hurdle and a 3.5m run-in (number of hurdles and distance between to remain unchanged). This would throw the emphasis entirely on hurdling ability alone, and rule out sprinting ability. (How often have you seen the first girl over the last hurdle beaten at the run-in? Which - as I see it - means the best hurdler lost!)

Men reckon the 400mH is the killer of the track. I do not suggest women should run it. But... if women from 13 to 40 have run Marathons without dying I feel sure they could run a 300mH event without harm. This event would be a boon for the host of women able to run 400m in under 60" but just not fast enough to be top class. These girls have the stamina for a hurdles event of 300m, which would be the counterpart of the men's 400mH.

BRITISH WOMEN'S BEST PERFORMANCES - 100 METRES TABLE

	Best	No. of marks at or better than:				Av. best 10	inc.	w.a.
		11.5	11.6	11.7	11.8			
Dorothy Hyman	11.3	9	19	32	51	11.47 - 1	11.38 - 2	
Valerie Peat (Wild)	11.3	6	9	13	27	11.43 - 2	11.36 - 1	
Della James	11.3	2	5	10	16	11.60 - 4	11.56 - 6	
Anita Neil	11.5	5	16	25	32	11.55 - 3	11.51 - 3	
Daphne Arden-Slater	11.5	1	4	13	30	11.64 - 5	11.53 - 4	
Jenny Smart	11.5	1	1	4	3	11.76 - 13	11.69 - 14	
Heather Young	10.6y		3	3	11	11.69 - 6=	11.63 - 3	
Mary Rand	10.6y		1	7	13	11.71 - 9	11.68 - 13	
Maureen Tranter	10.6y		2	7	18	11.70 - 8	11.62 - 7	
Jill Hall	11.6		2	6	12	11.72 - 10	11.67 - 12	
Elizabeth Gill	11.6		3	7	8	11.73 - 11	11.64 - 9	
Janet Simpson	11.6		2	2	6	11.80 - 14	11.73 +17	
Denise Ramsden	11.6		1	3	5	11.81 - 15	11.66 - 11	
Helen Golden	11.6		1	2	4	11.86 - 18	11.55 - 5	
June Paul (Foulds)	11.6		1	2	5	11.82 - 16	11.76 - 16	
Anne Pashley	11.6		1	2	3	11.84 - 17	11.82 - 20=	
Madeline Cobb (Weston)	10.7y			12	30	11.69 - 6=	11.65 - 10	
Liz Parsons-Johns	10.7y			4	13	11.75 - 12	11.73 - 15	
Wendy Kavanagh	10.7y			1	2	11.88 - 20	11.80 - 18=	
Margaret Critchley	11.7			3	5	11.87 - 19	11.82 - 20=	
Jean O'Neill	11.7			1	4	11.89 - 21	11.85 - 22	
Sheena Willshire	11.7			1	1			
Sheila Cooper	11.8				2	11.91 - 22	11.80 - 13=	
Andrea Lynch	11.8				3	11.93 - 23	11.91	
Janette Champion	10.8y				2	11.97	11.91	
Sheila Sherwood (Parkin)	11.8				2	11.94	11.94	
Joy Grieveson	10.8y				2	12.05I	12.01	
Others with I mark at 11.8:						11.96	11.96	

Barbara Jones, Linda Peck

Others with I mark at 10.8y: Margaret Francis, Carol Quinton,
Sheila Hoskin, Sue Midgley, Pat Pryce, Pat Pennycock, Lorna McGarvey.
Jenny Pawsey 11.9 11.97 11.83 - 23

Conversions: 10.4y=11.35; 10.5y=11.46; 10.6y=11.57; 10.7y=11.68;
10.8y=11.80; 10.9y=11.91; 11.0y=12.02; 11.1y=12.14

200 METRES

	Best	At or better than:						
		23.7	24.0	24.3				
Dorothy Hyman	23.2	16	34	56	23.52 - 1	23.50 - 1		
Margaret Critchley	23.2	2	9	13	23.81 - 3=	23.55 - 2		
Val Peat (Wild)	23.3	3	11	21	23.82 - 5=	23.76 - 5		
Lillian Board	23.4	6	11	14	23.66 - 2	23.58 - 3		
Maureen Tranter	23.5	2	14	39	23.82 - 5=	23.63 - 4		
Daphne Arden-Slater	23.5	1	6	19	23.97 - 7	23.97 - 9=		
Janet Simpson	23.6	3	12	25	23.81 - 3=	23.78 - 7		
Jenny Smart	23.6	1	5	11	24.06 - 10	24.06 - 11		
Della James	23.6	1	5	17	24.00 - 8	23.94 - 8		
June Paul	23.7	1	5	11	24.03 - 9	23.97 - 9=		
Helen Golden	23.7	2	4	12	24.07 - 11	23.77 - 6		
Anita Neil	23.6	1	1	1				
Ann Packer	23.7	1	2	3	24.34 - 17=	24.28 - 18		
Heather Young	23.8		3	7	24.19 - 12=	24.18 - 14		
Jean Scrivens	23.8		1	6	24.28 - 15=	24.19 - 15		
Janette Champion	23.9		3	8	24.19 - 12=	24.09 - 12		
Mary Rand	23.9		1	3	24.34 - 17=	24.20 - 16		
Sheena Willshire	24.0		2	5	24.28 - 15=	24.23 - 17		
Elizabeth Gill	24.0		1	4	24.51 - 23	24.43 - 24=		
Madeline Cobb (Weston)	24.1			7	24.27 - 14	24.11 - 13		
Marianne Dew	24.1			5	24.39 - 20	24.39 - 20		

cont.

200 METRES (cont.)

	23.7	24.0	24.3		24.53	24.41	-21=
Ann Jenner	24.1		2				
Nolly Hiscox	24.1		1		24.48-22	24.44	-23
Liz Sutherland (Toulalan)	24.1		1				
Sonia Lannaman	24.1		1				
Jenny Pawsey (Taylor)	24.2		4		24.37 -19	24.36	-19
Fat Kippax	24.2		2		24.42 -21	24.41	-21=
Avril Usher-Bowring	24.2		2		24.54	24.50	
Christine Carter	24.2		2				
Marlow Hadler	24.2		2				
others with I mark at 24.2:							
Barbara Jones, Ann Porter							
Linda Peck	24.2		3		24.56	24.48	-21=
Wendy Kavanagh	24.3		2		24.57	24.49	
Jean Hiscock	24.3		2				
others with I mark at 24.3:							
Margaret Cheskin, Sue Scott							
Pat Jones	24.2		2		24.61	24.55	
Sheila Cooper	24.4				24.61	24.43	-24=
Ex UK							
Marilyn Neufville	23.6	5	9		24.05	23.97	

400 METRES

Under:

	Best	54.0	55.0	56.0	Average top 10	
Lillian Board	52.1	11	11	33	53.13	1
Ann Packer	52.2	11	12	22	53.21	2
Janet Simpson	52.5	5	15	20	53.34	3
Joy Grieseson	53.2	4	24	44	53.83	4
Mary Greer (Tagg)	53.6	5	8	12	54.55	7
Rosemary Stirling	54.0	1	18	36	54.27	5
Avril Bowring (Usher)	54.0	1	7	10	54.35	9
Deirdre Watkinson	54.3	1	10	22	54.50	6
Nolly Hiscox	54.4	1	11	16	55.57	17
Barbara Lyall	54.1	5	5	13	55.03	10
Janette Champion	54.2	7	7	19	54.78	8
Jenny Pawsey	54.3	3	3	14	55.04	11
Linda Peck	54.3	4	4	8	55.67	13
Maureen Tranter	54.3	2	2	8	55.55	16
Pat Kippax	54.4	3	3	9	55.32	15
Pat Lowe	54.6	5	5	11	55.05	12
Jean Dunbar-Sorrell	54.6	6	6	10	55.03	13
Gloria Dourass	54.3	1	1	15	55.21	14
Margaret Critchley	54.7	1	1	11		
Avril Beattie	54.3	1	1	5	56.11	19=
Pauline Attwood	54.9	1	1	3	56.36	23
Pam Piercy	55.0	3	3	3	56.12	21
Christine Howell	55.0	3	3	3	56.46	
Joy Jordan	55.1	3	3	3	55.39	19
Mary Hodson	55.2	4	4	4	56.14	22
Liz Parneutt	55.2	1	1	1	56.11	19=
Jean Hiscock-Hall	55.2	1	1	1		
Shirley Pirie	55.5	2	2	2		
Dawn Webster	55.6	2	2	2		
Margaret Pickerell	55.6	2	2	2	56.83	
Anne Smith	55.7	2	2	2		
Others with I mark under 56.0:						
Rona Livingston 55.7, Phyllis Perkins 55.8,						
Rosemary Godsolve 55.9; Joan Page 55.9 Av. 56.44; Pat Stanley						
Sue Midgley 55.9; Theilyn Bateman 55.3 Av. 56.82						
Ex UK						
Pat Jones 2 marks best 55.6						
Marilyn Neufville	51.0	7	14	13	52.89	

Handwritten notes and signatures at the bottom of the page, including names like 'Marilyn Neufville' and 'Pat Jones'.

Under:

	Best	2:05.0	2:06.5	2:08.0	2:09.5	Avg. best 10	
Lillian Board	2:01.4	4	8	11	11	2:04.9	4
Ann Packer	2:01.1	1	3	3	3	only 9 races	
Pat Lowe	2:02.9	6	17	32	45	2:04.4	1
Anne Smith	2:03.2	6	19	34	43	2:04.5	2
Sheila Carey (Taylor)	2:03.6	inc. 5	in 2:06.5	to 2:07.9	range as NZ		
Pam Pierty	2:04.1	1	5	18	36	2:04.6	3
Rosemary Stirling	2:04.2	3	7	13	20	2:05.6	5
Joan Page-Allison	2:04.3	1	4	11	18	2:06.5	7=
Joy Jordan	2:05.0		3	13	32	2:06.6	7=
Mary Hodson	2:05.3		1	5	10	2:08.1	12
Norine Braithwaite	2:05.5		1	3	5	2:10.2	21
Iris Lincoln	2:05.3		1	3	12	2:07.5	9
Georgina Craig	2:05.8		1	1	5	2:09.2	17
Adrienne Lynch	2:06.0		1	1	1		
Thelwyn Bateman	2:06.2		1	2	10	2:08.4	14
Gloria Dourass	2:06.4		1	3	5		
Mary Green (Tagg)	2:06.5		1	3	11	2:11.0	
Jane Perry	2:06.5		1	5	12	2:07.9	11
Margaret Beacham (Moir)	2:06.61		1	5	7	2:08.5	15
Diane Leather-Charles	2:06.6		1	5	19	2:07.8	10
Mary Speedman	2:07.1		1	1	5	2:09.3	18
Phyllis Perkins	2:07.3		1	2	15	2:08.3	13
Mary Sonner	2:07.4		1	1	2	2:11.6	
Joy Catling	2:07.8		1	1	2	2:09.8	19
Anita Webb	2:07.9		1	1	3	2:10.1	20
Pat Brown	2:08.0		1	1	1	2:10.6	
Margaret MacSherry	2:08.0		1	1	2		
Rita Ridley	2:08.2		1	1	10	2:08.7	16
Betty Loakes	2:08.7		1	1	1	2:10.9	
Pauline Moulton	2:08.9		1	1	2	2:11.4	
Gillian Tivey	2:09.4		1	1	1	2:12.3	
Susan Carnegie	2:07.9		1	1	1		
Deirdre Watkinson	2:08.5		1	1	1		

WOMEN'S 1500 METRES/1 MILE

END '70

	Best	No. of marks under:				Avg. best 10	
		4:20.0	4:25.0	4:30.0	4:35.0	Inc. 1 Mile	
		4:41.2	4:46.6	4:52.0	4:57.4	conversions	
Rita Ridley Lincoln	4:15.4	7	18	26	35	4:18.4	1
Anne Smith	4:37.0y	3	5	9	11		
Norine Braithwaite	4:16.8	I	6	7	7	4:24.3	2
Joan Page	4:17.6	2	3	6	6		
Sheila Carey	4:17.6	1	3	3	4	4:33.2	11=
Gillian Tivey	4:21.0		1	3	3	4:31.1	7
Margaret Beacham	4:21.6		2	3	13	4:28.1	3
Jane Perry	4:22.3		1	7	11	4:28.5	4
Margaret MacSherry	4:22.4		2	1	12	4:29.1	5
Lillian Board	4:44.6y		1	1	2		
Diane Leather-Charles	4:45.0y		1	4	5	4:31.8	9
Christine Haskett	4:23.8		1	4	5		
Thelwyn Bateman	4:23.9		1	3	8	4:31.4	8
Iris Lincoln	4:45.7y		1	2	4	4:35.1	13
Angela Lowell	4:26.0		1	2	14	4:35.6	14
Joyce Smith	4:27.0		1	4	14	4:30.5	6
Mary Speedman	4:27.7		1	1	1		
Barbara Banks	4:27.8		1	1	6	4:33.2	11=
Marie Herron	4:28.1		1	2	8	4:32.1	10

not cont.

The following athletes have marks under 4:35.0/4:57.4y:

Carol Firth-Gould	4:30.6	I	Alison Leggett-Noble	4:56.0y	I
Lesley Coshall	4:31.2	2	Pat Winter	4:33.8	2
Maureen Smith	4:53.6y	I	Joy Jordan	4:55.4y	I
Roma Ashby	4:54.2y	I	Brenda Grianey	4:33.8	2
Susan Carnegie	4:32.4	2	Leila Buckland	4:54.8y	I
Sandra Marquis	4:32.8	2	Dian Elliott	4:34.5	I
Valerie Tomlinson	4:55.8y	I	Penelope Gardner	4:56.9y	I
Gabrielle Carpenter	4:55.0y	I	Ann Barrass	4:34.6	I
Phyllis Perkins			4:57.0y	2	

WOMEN'S 100 METRES HURDLES END '70 @2'9"

	Best	At or better than:			Av. best 10	inc.	w.a.
		13.2	14.0	14.3			
Chris Bell (Perera)	13.4	4	13	30	13.76	- 1	13.74 - 1
Ann Wilson	13.6	I	5	11	14.01	- 2	13.83 - 3
Mary Peters	13.6	I	15	10	14.06	- 3	13.86 - 2
Sue Scott	13.7	I	6	16	13.97	- 2	13.96 - 4
Sheila Garnett	13.8		3	12	14.10	- 5	14.03 - 5
Pat Jones	13.8		2	3			
Mary Rand	14.1			2			
Irene Powder	14.1			1	14.53		14.51
Linda Robinson	14.2			5	14.44	- 8	14.43 - 8
Linda Caruthers	14.2			1			
Barbara Corbett	14.3			2	14.42	- 7	14.34 + 7
Moira Walls	14.3			1			14.49
Liz Toulalan-Sutherland	14.3			2			
I mark at 14.3: Pat Pryce, Eileen Dawson							
Susan Hayward	14.0		2	7	14.21	- 6	14.21 - 6

WOMEN'S 200 METRES HURDLES END '70

	Best	27.5	28.0	28.5		
Chris Bell (Perera)	27.4	2	7	12	27.79	- 1 27.72 - 1
Sandra Dyson	27.3	I	2	5	28.34	- 2 28.13 - 2
Pat Jones	27.3	I	3	5		
Sheila Garnett	27.6		4	7		
Linda Robinson	27.9		1	4		
Lindsay Cooke	27.9		1	3		
Linda Caruthers	28.0			4		
Barbara Corbett	28.2			3		
Others with I mark to 28.5: Pat Pryce, Blondelle Thompson 28.3;						
Jackie Philp, Sue Scott, Moira Nimmo 28.4; Ruby Campbell 28.5						
Susan Hayward	28.3			2		

XX

IMPORTANT!!

A red sticker affixed to the foot of this page means that you have not paid your 1971 subscription. Please send fl as soon as possible to the Hon Treasurer (Brian Nott, 22 Bridge Court, Bridge Street, LEATHERHEAD, Surrey).

XX

No. of marks over:

	Best	1.73	1.70	1.67	Average best 10
Linda Knowles-Hedmark	1.79	14	32	49	1.750 - 2
Barbara Inkpen	1.79	24	46	64	1.766 - 1
Frances Slaap	1.76		24	49	1.720 - 3
Dorothy Shirley	1.74		18	54	1.717 - 4
Thelma Hopkins	1.74		13	31	1.703 - 5
Ann Wilson	1.74		6	3	1.696 - 6
Gwenda Hurst (Matthews)	1.72		3	12	1.683 - 8
Moira Walls	1.72		6	17	1.694 - 7
Mary Rand (Bignal)	1.72		2	10	1.680 - 9
Sheila Lerwill	1.71		1	6	1.668 - 12
Eleanor Rowe	1.71		2	7	1.669 - 11
Janet Oldall	1.70		2	6	1.674 - 10
Sue Wright	1.70		2	6	1.666 - 13
Rosemary Curtis	1.70		2	2	1.642 - 2
Iris Pegley	1.69			1	1.648 - 17
Dorothy Tyler (Odam)	1.68			1	1.655 - 15
Jenny Wall	1.68			3	1.644 - 19
Leonie Esdaille	1.68			3	1.646 - 18
Susan Denner	1.67			3	1.656 - 14
Pat Veals (Robson)	1.67			3	1.652 - 16
Mary Peters	1.67			1	1.637 -
Janet Gaunt	1.67			1	
Jean Pearce-Card	1.67			1	

LONG JUMP

END '70

	6.30	6.15	6.00	Average best 10	Legal	inc
Mary Rand (Bignal)	6.76	35	69	103	6.58 - 1	6.60
Sheila Sherwood	6.73	20	32	52	6.53 - 2	6.53
Ann Wilson	6.55	13	27	49	6.40 - 3	6.48
Moira Walls	6.43	5	11	13	6.29 - 4	6.35
Barbara Inkpen	6.331	1	4	15	6.14 - 7	6.16
Maureen Barton	6.34	1	8	18	6.21 - 5	6.23
Alix Stevenson	6.27		3	10	6.11 - 9	6.19
Anita Neil	6.27		35	10	6.12 - 8	6.12
Sue Scott	6.23		7	16	6.15 - 6	6.19
Jackie Caswell-Franklin	6.23		1	5	6.01 - 11	6.01
Barbara-Anne Barrett	6.16		1	7	6.06 - 10	6.09
Sheila Hoskin	6.14			3	5.99 - 13	6.06
Ruth Martin-Jones	6.14			2	5.94 - 15	5.95
Shirley Clelland	6.12			3	6.00 - 12	6.03
Thelma Hopkins	6.11			3	5.99 - 13	6.04
Jean Desforges	6.10			2	5.93 - 16	5.93
Jean Jamieson	6.07			2	5.87 - 18	5.94
Marion Needham	6.02			1	5.83	5.83
Hilary Hodges	6.02			1		
Sylvia Powell	6.00			1		
Janette Neil-Towl	5.96				5.86 - 19	5.88
Christine Persighetti	5.95				5.88 - 17	5.89

N.B. Both the above lists include indoor performances.
All imperial marks converted using R.S. tables.

	SHOT					END '70	
	No. of marks over:						
	Best	15.00	14.50	14.00	13.50	Average best 10	
Mary Peters	16.40	1	28	50	62	35	16.03 - 1
Brenda Bedford	15.65		20	55	83	98	15.38 - 2
Suzanne Allday	15.18		1	18	51	77	14.82 - 3
Gay Poréter	14.77			1	1	9	13.78 - 4
Jenny Bloss	14.03				1	8	13.69 - 5
Jo Cook	13.95					2	13.31 - 11
Heather Stuart	13.94					7	13.58 - 6
Kathryn Duckett	13.92					3	13.46 - 7
Janis Quick-Kerr	13.76					3	13.42 - 9
Brenda Gill	13.75					4	13.45 - 8
Moira Kerr	13.64					1	13.34 - 10
Sue Barrett	13.60					2	13.18 -
Rosemary Payne	13.31						13.05
Deborah Kerr	13.57					1	

	DISCUS				END '70	
	50.00	47.00	44.00			
Rosemary Payne	55.04	33	69	114	53.03	- 1
Brenda Bedford	50.53	2	19	97	49.00	- 2
Gay Poréter	49.66		4	17	46.83	- 4
Suzanne Allday	47.70		9	59	47.21	- 3
Jo Frampton	46.44			10	44.98	- 5
Jean Fielding	45.84			3	44.59	- 6 =
Maya Giri	45.80			2	43.18	- 10 +
Barbara James	45.74			7	44.59	- 6 =
Maureen Arnold	45.02			4	43.86	- 3
Jenny Bloss	44.80			1		
Wendy Thomas-Da Silva	44.76			4	43.35	- 9
Jill Lucas	44.76			1	41.51	
Margaret Pulman	44.32			1	42.20	- 13
Sue Campbell	44.30			1	42.72	- 11
Maureen Burtenshaw	44.18			1		
Jackie Elsmore	44.08			1	41.83	
Wendy Blackwood	44.08			1	41.52	
Christine Chalk	44.00			1		
Others :	Josephine Williams-Romer	43.76	Av.	42.13	- 15	
	Gail Smith	43.23	Av.	42.36	- 12	
	Sylvia Needham	43.12	Av.	42.23	- 14	

	JAVELIN				
	51.00	48.00	45.00		
Sue Platt	55.60	24	64	108	53.33 - 2
Rosemary Morgan	54.13	1	9	32	49.10 - 2
Anne Farquhar	50.32		3	26	43.69 - 3
Shara Spragg	49.58		2	2	44.63 - 8
Averil Williams	49.50		5	26	47.93 - 4
Pru French	48.30		1	6	44.42 - 9
Angela King	48.14		2	9	46.63 - 5
Barbara Nicholls	47.60			10	46.08 - 6
Barbara Thomas	47.43			4	43.89 - 11
Janet Baker	46.76			9	45.67 - 7
Brenda Gill	46.30			2	43.34 - 13
Mary Tadd (Robson)	45.72			1	43.42 - 12
Monica Podmore (Hartland)	45.53			1	43.17 - 14
Diane Coates	45.30			1	
Kay Newton	45.24			1	42.86
Margaret Whitbread	45.16			1	43.92 - 10

almost identical in names. I would wager after my suggested 90mH (over 2-9) and 300mH (over 2-6) events had shaken down, it would be as rare to see the same athletes at the top of both lists as it is now in the men's 110mH and 400mH.

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TWINS IN ATHLETICS by Andrew Huxtable

Since the article by Cliff Temple appeared in the June 1967 issue of "World Sports", I have been attempting to carry out some more detailed research on twins in athletics.

Despite their known limitations, twin studies do enable assessments to be made of the relative importance of heredity and environment - and of the interaction between the two - on various traits:

A common procedure is to compare samples of monozygotic (MZ) twins, possessing identical genes, of like-sex dizygotic (DZ) twins, possessing no more genes in common than siblings of different ages would be expected to possess, and of like-sex singletons.

The aim of the present study is to locate as many twins as possible where both members of a pair have participated in athletics. In order to calculate intra-pair differences, the twins' best marks at all events are scored on the 1962 Portuguese Tables, the intra-pair difference being that between the highest scoring performances of co-twins. It is hoped to obtain definite evidence of zygosity (based mainly on comparisons of blood groups and bernal configurations) so that a comparison can be made of mean inter-pair differences, i.e. between the MZ and DZ groups. Incidentally, only one unlike-sex (DZ) pair has been noted so far.

Leading UK pairs are as follows (intra-pair differences in parentheses):

HOLT	Robert	28:40.2-10,000m	David	27:43.6-6M	1956 (6)
COOKE	David	8:07.4-3,000m	John	13:52.4-5000m	1895 (25)
MILNER	Anthony	4:02.7-1M	Peter	4:03.4-1M	1877 (5)
MURRAY	Michael	4:06.3-1M	Patrick	4:12.0-1M	1792 (39)
TUCK	Gréville	14:26.4-5000m	Graham	14:32.6-5000m	1768 (12)
VARAH	Andrew	51.8-440y	Michael	1:48.2-880y	1739 (181)
McWHIRTER	Norris	81.10.7-100m	Ross	10:1-100y	1626 (66)
LINCOLN	Rita	4:15.4-1500m	Iris	2:05.8-800m	1880 (34)
YEOMAN	Ann	2:15.3-880y	Paula	4:35.7-1500m	1652 (14)

Select Bibliography

- Allen, G. "Twin Research: Problems and Prospects" in "Progress in Medical Genetics" (Vol IV) 1965
- Bulmer, M.G. "The Biology of Twinning in Man" 1970
- Carter, C.O. "Human Heredity" 1962
- Newman, H.H., Freeman, F.N. & Holzinger, K.J. "Twins: A Study of Heredity and Environment" 1937
- Parsons, P.A. "The Genetic Analysis of Behaviour" 1967
- Scarr, S. "Environmental Bias in Twin Studies" in "Progress in Human Behavior Genetics" 1968
- Scheinfeld, A. "Twins and Supertwins" 1968
- Shields, J. "Monozygotic Twins brought up apart and brought up together" 1962

MISCELLANY continued

§ For those who haven't sampled the work of Nobel prizewinner Alexander Solzhenitsyn, the following extract from "Cancer Ward" (Penguin, 50p) may whet their appetite: it's part of an exchange between the young girl Asya and the youth Dyoma.

"Are you an athlete, then? I'm not bad at the pentathlon myself, by the way. I can do a hundred and forty centimetres and I can do thirteen point two seconds..."

"No-o, I'm not." Dyoma realised bitterly how worthless he must seem to her.