## EDITORIAL

The A.G.M. this year was held in the bizarre surroundings of the dive bar at the Springbok FH on 27 inay. While everyone appeared to be vearm ing fluorescent mauve shirts and playing bongo. drums and a few muncged cheose rolls the quictrat AGif ever passed off, disturbed only by a terryfyingly louc thuncerclap.

The only real discussion point was raised by Bob Sparks, who drew attention to Rule 1(b) of the Constitution, which states that the objects of the organisation shall be,inter alia,"to standardise methods of presenting ranking lists! Bob will set to work to produce some sensible criteria which members producing books should. follow.

Peter mentions some of the other happenings in his column below:
The provisional date for the members' pentathlon and dinner-is August 27: It is hoped that as nany as possible will participate in these. usually hilarious activities: as an added attraction we hope to have astar. guest (or two? the Lincolns? ) at the dinner.

From the Secretary by Feter Hophins
Once again I must apologise for the late production of an issue. The four weeks sinee the AGli seem to have been the most crowded in my ever crowded life. Both at work and"in, athletics I have-scarcely had a minute.. to spare for the whole month.

The reason for the 'bizarre surroundings' at the AGM was the failure of the landlond to get my confiriatory letter. Consequently we were exteenely grateful that he managed to find us a room at such short notice.

I have already told you that Dob Phillips. was elected chairman.
Fersonally, I look forward to working closely with Bob, and hope we can form a managenent tean worthy of the N.U.T.S. We alsa elected the committee, and I welcone Peter ilatthews - the only newcomer to the Bowater Hadhouse Session Ve elected our second life Vice-vesident in Neil Allen, and were particular. ly pleased to ionaur liartin James and Ian Smith by making them Vicealresi-. dents.

He have sumbitted a memorandum to the Byers Cominittee setting out what I beleive are most members views for the future of athletics in this country - a closer link between coaching, selection and management: a paid secretary and a professional administration; the formation of leagues; a more realistic.fixture list etc.

## ISSCHILNY

$\because$ Congratulations to Bob Sparks, appointed to the BUSF selection cominttee.for the UK athletics tean to compete in the Tokyo Universiade; and to like Fleet, one of a three man sub-comriittee appointed by the AAA organisation and development comittee to consider the domestic fixture list.

+ Would nembers please note that Cliff Temple's home telephone number is Folkestone 76238

THINKPIECE by Peter Pozzoli Part One.
Having just finished the compilation and entire typing of
 one fact in particular and the more I raced through the typing of this mass of well over 125,000 words and figures the more it. seemed to stare me in the face. It was simply how the same names of Dolish, ©erman, Russian, French, Rumanian, Yugoslav, Bulgarian and other girls lept coming up year after year. For 10 years,for 15 yearssome for even longer. You may think this of little import - I thinls it's a highly significant reason to explain why at international level we are no longer the power we were a while back. At club level I think British women's athletics is probably the highest in the world (check in depth through national ranking lists of other countries and you will imediately see how weak their stancards are in 20th, 30th, or 50th place as opposed to our own. With..only one or two exceptions this is even true in the discus and shot, but there is lithle doubt the elite of other nations are now fully up to, and often well above, the British aces. The reason is lihely to be - at least partly, probably very consider. ably - cue to the fact their best best women continue to participate with
the same keenness and love of the sport until enes when mhrsical maturityy is reached,i.e. between 26 and 34 or thereabouts. With the years of course as well as maturity, also comes the benefit of more polished and perfected. techniques, and the experience and lnow-how that makes all the differencé in the pinches.

How many British top-class women are competitive by these ages? I can think of Dorothy Tyler and Mosemary Payne and it is not without significance both set British records at 28 and 32 respectively, but it is easier to count the absentees - those whose love of the game was so 'great' they quit before ever they had truly started. Seaborne, Gardner-Dyson, egley, Facker, Jenner, Byman, Marion leedham - just check the lists of past topnotchers and then see how many of them retired before 30 ,or 28 or even the extremely young age of 25. Then check comparable lists of continental stars or the ages of the world all-time top-30 and see the huge difference.

The point that became clear in going through the YRSBOUK line by line was that these long-lasting dedicated continentals continued to improve steadily year by year. Of course they had talent to begin with, girla like Viscopoleanu, Yorgova, Luncer, cetrescu,Sobotta, Bibro,Ciepla, Balzer, Birkmeyer, Cleiberne, Manoliu,Stamejcic,Bistrova, Itkina and dozens more, but had they retired at 23 or 24 as most British wonen do, none of them would -ever have achieved all-time status. How many British are thern who wnuld likewise have made the stellar rankings if they had been persuaded to continue in the sport. The fact so many British girls quit so easily and so quickly seens to indicate British women athletis by and large have little.. guts and not much deep-rooted love of the sport itself. The answer is inducements must be offered to make it worth their while to continue. Je are no longer in the Victorian age (though perhaps Lord Exeter doesn't lnow it yet) - in a dolce vita society such as Britain is to-day,inducenents must be offered if interest and enthusiasm are to be sustained. Continental countries offer inducements suited to their societies and econonj.c structures We must do the same - and in our society which is based on the paramountcy of materialist gain and capitalist profit motive the only realistic, meaningful, and candid inducement is MOMEY. And this is understood by top stars. The artificial segregation of professional and anateur dates back to the Victorian days and the "two nations in Britain" age. Nowadays apartheid has no place in sport and I see no ethical difference between to refusing to allow a man to run with you because he nay have talen a few pound for running elsewehere than to refuse another man to run with you because his skin is black.

There is plenty of money in Britain to-day, in fact there is more in this little island than anywhere else except USA and USiJR. If we can afford in our abundance of wealth to iritter away $\mathrm{E} 2,000,000,000 \mathrm{ZVERY}$ YiAR on the futility of 'national' defence (the inverted comians because I cannot see how the defence of Britain is in any way advanced by money scuand.. ered in Fiong Fong, Singapore, iden, iialaysia or elsewehere throughout the world) then if we really are the natioh of sports-lovers we always profess to be, if we are not just a nation of big talkers, surely we can afford just one-hindrecth of that sum for something which will benefit the youth of the nation as a whole, Sport, which will give them healthier bodies,sounder rinds, and through life a clean moral outlook and a. fitter longevity, All things which indirectly will also aid national defence (the fitter the population the more and better soldiers aie available for war) and also indirectly aid social security (the fitter the population the less money needs to be spent on drugs, medecine and the like).

I do not think there is any shortage of tracks in Great Britain. There seem to be tracks wherever they are needed but money could usefully be utilised in improving the standards of actual runways,field facilities, and the erection of good stands, dressing room, and refreshment bars which are woefully lacking in most.grounds. The rocent Hendon Stadium is a good example of what a club ground should be like. Covernment grants should be available without quibble to bring up to this level 200 to 300 crounds throughout England - it would not cost. a fortune - it woyla probably cost less than .imerica's genocide campaign in Vietham in a day.
 strikes me the only people in these islandswho really wish for a fundemental change in the way of life are the Fascists and Comanists and the fact that both have signally failed to build up a mass force is proof,the British people co not wish to alter their centuries-old habits. Under the symbolic nemes of Labour, Liberal and Tory all are united in a spirit of conservatism. Indeed our prancig popinjay, Earold 'beatle i:tilson, has proved hinself the finest Conservative premier since the 'winderful' days of Stanley Baldwin.

Statistics 2 by R.G.Clarke
I have compiled a list of percentages from the margins between
2the winners anc runners-up times, heiehts and distances for the last three Olympic celebrations. I don't know if this has been done before but it will at least stimulate comment on who was in fact the nost superior champion in other IUTS views compared with a cold percentage view.
100n *iorrow $\frac{1956}{(10.5)}-\quad$ Hery (10.32) $\frac{1960}{0.484}$ Heyes (10.0) $\frac{1964}{2.0}$ 200m Horrow ( 20.6 ) 0.405 Berutti (20.5)0.400 Carr (20.3) 0.985
400 m Jenlins (46.7) 0.2:4 "Devis (4.4.9)
Lerrabee (45.1)0.217
800m Courtney (1:47.7)0.092Snell (1:4.6.3)0.183 Snell (1:45.1)0.4.76
1500: Delany ( $3: 4: 2 ; 0.362$ 2lliott ( $3: 35.6$ ) 1.299 Snell ( $3: 30.1$ ) 0.757
5000m Kuts (13:39.6)1.342 Ielberg (13:43.4)0.14.6Schul(13:43.3)0.097
10000 m Kuts $(20: 4.5 .6) 0.394$ Dolotnilov $(23: 32.2) 0.23 \mathrm{Fizils}(28: 24.4) 0.023$

110ה*Calhoun(13.5) - "Calhoun(13.3) - Jones(13.6)0.735
400 E Davis $(50.8) 1.378$ Davis( 49.3 ) $0.609 \quad$ Cawley ( 49.6 ) 1.01
400R USi (39.5) 0.761 Germany (39.5)1.519 USA (39.0)0.769
1600R US\& ( $3: 04.3$ ) 0.758 USS (3:02.2) 0.274 USA (3:00.7)0.493
Mar Kinoun ( $2: 25: 00$ ) 1.057 Abebe $(2: i 5: 16.2) 0.313$ \&bebe $(2: 12: 11.2) 3.127$
IIJ Dumas $(2,12) 0.943$ Shavlatradze(2.16) - Brumal(2.18) -
IV Richards (4.56)0.657 Bragg(4.70)2.123 Hansen(5.10)0.908
IJ Bell (7.83) i.c.16 Boston(8.12)0.123 Davies (3.07)0.496
TJ dafilva(16.j5)0.550 Schmidt(16.01)1.071 Schmidt(16.35)1.602
SF O'Brienl18.57)2.100 ilieder(19.68)2.396 Long(20.33)0.639
Dr Oerter (56.36)2.75 Oerter(59.18)1.96 Oerter(61.00)0.787
IIT Connolly (63.19) 0.253 Rudenkov (67.10) 1.952 İlim(69.74)0.932
JT Danielsen(35.71)6.6851sibulenlro(84.64) 6.238 inevala (82.66)0.411
Dec Cempbell(7708) 1.816 Johnson(8001)0.887 Holdorf(7387)0.571

## Vomen

100 m Cuthbert (11.5) 1.739 Rudolph (11.0)2.727 Tyus (11.4) 1.751
200 m Cuthbert (23.4) 1.282 Rudolph(24.0)1.666 icGuire(23.0)0.435
400 m - - Cuthbrt(52.0)0.333
300m - Shevtsova(2:04.3)0.03 acker (2:01.1)0.661

$\begin{array}{lll}400 \mathrm{il} \text { Australia(14.5) } 0.449 \mathrm{USA}(44.5) 0.674 & \text { Poland } 43.6) 0.688 \\ \text { HJ FicDaniel }(1.76) 5.113 & \text { Balas(1.85)7.567 } & \text { Balas(1.90)5.263 }\end{array}$
IJ Trzesinsla(6.35)4.094ireplina(6.37)1.569 Rand(6.76)2.367
SD Tychryevich(16.59)0.361-ress(17.32)4.099 Üress(18.14)2.921
DT Fikatova(53.69)2.142 Onomaryeva(55.10)4.555 íress(57.27)0. 105
JT Juansmme (53.36)6.1.61 Czolina(55.98) 3.929 Penes (60.54)3.749
-en -
rress $(5246) 4.022$

* Wlectric times not available.

BSMYGA AREA LAN by Sean Kyle
Cublished recently by HisO at 22s 6d, Uis plen:ring study lists in Appencix 1 İl those organisations which subaitted evidence; among them is Ballymena $A C$ and here Sean explains the bacieground -iDd).

I must say that I din't know what to expect when I went along to chat to the Ministry of Developnent officials about sports facilities and needs to be incorporated in the plan.

Ballymena had been selected as one of the nain new growth areas in NI and it was envisaged that the present 15,000 population woumd expand within 20 years to over 60,000. Transport, incustry,schools,etc, had all provided evidence of likely needs, but from what I could make out, youth and sport was sonething of an afterthought. I started by taking the of icials round in my car and showing then what facilities we had for sport in general in the town and pointed out that most was the result of voluntary effort. A new swimning pool is planned, and I felt that if this could be made a focal point, rith other sports areas built around this might well encourage a general family interest. An indoor sports hall to cater for table tennis,indoor bowls etc. seems essential in a wet climate like ours. A restaurant and bar added to the pool and sports hall would forrn the centre of the complex, with playing fields surrounding. I stressed that there was no need to have elaborate buildings but rather types capable of easy extension. Stress was also put on the need for practice areas; much worls can be carried out on quite small areas, which incidentally can be more easily no. wa on jowty covered.

The plan as published provides limited play areas,bui
unfortunately they are scattered around the town and this way prove a, disadvantage as regards ubeep and staffing. However, the plan includes á permanent track and indoor sports hall so it would seen that our evidence was acted on It will be some years before these ideas become reality and we now intend to press strongly for a review of the plan as time goes on with a view to gaining extra practice areas and the lile. We also intend to gain representation for youth on the local advisory committee and to be on hand at all times to try to help,advise, suggest, plan and if need be help wit! actual work.

## INTERVINW WITH PMRICK MACKINZIE - No. 6 in a series

AH: You have probably the longest and most detailed annunl progressive record of any British high jumper, extending back to $2^{\prime \prime 11}$ in 1948. Could you recall how your interest in theevent started and the nost memorable moments of 20 years engaged in one of the two ebents which always (or usually) end in failure.

PM : I persued high juinping because it was the only thing I was any good at in sport. It was not until $\dot{\text { gay }} 1955$ that I started anything that could be called "trainingi, and improved by 11 inches between that time and July 1957. I suppose the most memorable moments should logieally be those whre one first breaks the 'barriers' of 6 feet and 2 netres etc., but oddly enourh my first six-footer (at roodside, ifatford) on 19 July 1958 does not seen to be one of them. The marlis that stick in my mind are 5'10 at Scotstoun, Glasgow for Cinburgh v Clasgow fchools in 1957,6'6 in the Sussex, Scottish and ARA chanpionships in 1961, 617 at Stanmore Farl (Western Roll) indoors in Hovember, 1963,616 at the same venue (stradde) to defend succesfully ry Southern Counties AiA indoor title in Jinuary 1965 and 6'3: at Perrer jark, Bingapore, in September 196.5. The latter was my only outdoor competition in 1965, and followed nil training for two months after a fortnicht on my back in hospital at Gan with a thrombosed vein in iny leg in June. "his was, I presume, the consequence of a weight-training session at Gan one afternoon in liay,but I felt nothing wrong until the following rorning and wesumed it to be muscular. It did not respond to progressive resistance exercise in the way muscular injuries normally do, and the 10 diagnosed the true trouble. The September mark was made in a very huaje and hot atmosphere following rain, of $\hat{i}$ an all-weather surface in a pair of gym shoes without the benefit of a built-up sole. iiy 614 at Cosford on 20 Jan 67 geve me cuite a kick, particulctly as I cannot use my full lencth run-up there.

Oneor two warss in other events stick in zy uind, particularly a 129'2 $\frac{1}{2}$ discus throw in training in June 1964,7 competition bests out of eleven in the Southern Decatillon in 1964 and an indoor long jump competition at $\mathrm{F}^{2}$ eltwell in iarch 1964 with a personal best in each oif the three jumps, the thirs being 21' $8 \frac{1}{2}$, aly current best.

In a. sense $I$ suppose representing the full GB $\because I I$ team $v$ USA in July 1961, my first international, was menoreble. But it did not produce a personal best although I dic jump higher than any other UK high jumper had up to that date in their first full international.

Aii : That are your highlights as a statistician (e.g.best arins witnessed) and as a coach (e.g. nost perfect technicues seen)?

Pri : : The two co-incide with Valeriy Drumel's 7'3 ZJ at the ihite dity in September 1961 so far as that event is conceined. Brumel's techaique is not,in fact, "periect; but his hieh juming contained the vital incredients of power and lift, and the conversion of buge cuantities of horizontal momentum into vertical monentum. Technically, Jhhn Thomas had a superior bar clearance technirue, but then it's those jump the highest and win that count. If you had asked the same cuestion 6 years ago, however, I would have answeered with Thomas's 7'0 at the Thite City in pouring rain.

I heve not seen many world records;among the few I have seen were those in the $1963 \mathbb{B B} \because$ III v USA,Tanara iress's discus throw in the 1961 .ingland $v$ ISSSR, John Cennel's vault in the 1963 AAA champs and Englend's $4 \times 110 y$ women's relay mark in the 1958 EE e:CG at Cardiff. I regret not having seen Ron Clarke's 12:52.4 in 1965, I only heard the radio comientary through tize static. Incoors, the highljghts are Meureen mranter's
$35^{\text {i.1 }}$ for 300 yards this year (a great pity sile was not it sucue to rul 400m) anc. the second European Indoor Games at -rague; the hurciling by
*Jddy Ottoz c.nc Karin Balzer was terrific.
The sprinting actions that stic'r in my mind are leter Radford and Tomine Smith at top speed, both able to hold their top syeed for far loncer than their contemporaries. Being more more relaxed at top speed means less oxygen "asted, and the relanation made then loole head and shoulders above the rest.

To pick out a really good technirue in a ficiad event one needs to excrine film-loops.Only than can one see in detail the wecise of movements being wade and start correcting minor faults. Then one can see, for exaimple, whether a discus thrower is pulling his ar: through too soon, or whether (as in the case of Oerter) the curn is beinc comionced with moving the richt shoulder forward instead of the left leel, thus wreventing the legs from zleying thoir full part.

Arthur Nowe's shot-jutting vas,in my opinion, as perfect as any I have seen. I don't lnow nuch about pole vauling, but it seens to me that the aejority of British vaulters do not attacl: the box as one would use a beyonet on a. rifle(although the arm actions differ the attacing principle remeins the same). in excertion is Milse Bull, and I think it is no coincidence that he has vaulted higher than any other Briton.

AH : Before joining the Ris in 1962 you were at Cimbricage University for 2 years followed by a similar leriod with inglish illectric at stefford. Your interest are clearly oriented ;owards science and technology and I wonder if there are any research-rojects you would lilse to carry out in the field oi athletics?

Ni In more interested in the end procucts of scientific achievement than in the detailed techaical data. The Fipons have put $\varepsilon$. useful litile machine on the mariset for taling a soortan's pulse at any time curing physical activity. It consists of a couple of electroces and a recio transwitter which exe strapped onto the a.thlete, and the coach sits anc reads the pulse rate a.t eny instent ofir a dial on the receiver. I would line to see if these 100 mite a veek merchants reach enywhere near what I consider to be the optimu in training for midde distance events,i.e. pulse rates of 160 tol 0 sustained for periods of up to 2 minutes, recovering to 120 within a minute or two before the ne:.t sustained effort. I think it should be gossible to produce a. four-minutemiler on only 2000 yards of herd runians daily. The 2000 yards would be bro'sen down into, say, $10 \times 200,20 \times 100$, $4 \times 500$, varying it daily, graduelly speeding up the tempo as fitness is gained, and reducing the interval rest periods. To be able to take an athletes pulse easily durinf wor:-outs would anable the coach to see if the athlete, in fact, is worling and recovering as planned.

I woulc also like to see some worl done to move sone ather theories, wainly in connection with weight training. I'm not convinced that power and strensth are cained best by moving heavy weights, ${ }^{\prime}$ to repetitions and tho like. I'm thinking in terms of 10 to 15 repetitions with each exercise worling against the clock, trying to reduce the time anc: only increasing the weight moved when the tiae won't come down any further. The weight one would initially use is about that which one can just do 20 to 25 untined repetitions with.

I'rinot at all keen to uncertake the projects mysel.f, would be auite happy to see then undertaiten alsewhere by a rosoonsible body. If there is real evicence to show, for exampe, that the starinc tecminue used byturmin Hary, Dennis Johnson, and Tomie Emith has any sicuificant edvantase over the nore convontionel method, I woulc lise to innow about it. I know, ior exaple, that John Ieeasurier is not leen on it, but the system coos have some merits.

I realise that iscience and techology: co not directly pley their part in what $\because$ woulc like to now in connection with weight training end arrint starting, but the electro-inyocraph is a useful machine for determining the amount of work being cone by a muscle curing ezercise and it could (and has in the past) play a part in tha lavoratory-cyanasium. However, there are not wany athletes who relish the thoucht of having needile elactroces stuck into thej.r muscles.
in :
I beleive it is your ambition to appar not only in the AJ list in the third (1971:) edstion of Eis Best ierformers or ill Time; but in the decathlon list also: what total do you aupect to achieve this year anc with what iarles?

PM : At the current "rate of stagnation" (retrojreos.), I titin" thet 616/1.98 will be sufficient to appear in the UK all-time top-100 high jump list for a couple of decades. This year my training has been on more general lines than previous winters. I did little in the way of work-outs , from liay 1965 until a week before the 1966 NUTS pentathlon except for short spells in Dec $65 / J a n 66$ and March 66. Consequently I was not in good shape to start with, and a lot of encurance and geheral strengthening work work was called for. I think I'm now runaing faster than in 1964 , and I'm definitely stronger, but a bit out of practice with the technique events. I'm a bit loath to forecast anything specific, but I thnik a total of around 5,500upoints in the Southern Championships on liay 12/13 at Iurlingham is possible(MOTE - this forecast was made one weel before the event - DD). I suppose 6000 is possible, but in 1968 rather than in 67.

With regard to "UK Best Performers of All-Time"(2nd edition), my work on this was held up during early 1967 for several reasons, and I feel it would be wiser to produce it in 1968 (to 31 Dec 1967) than sonewhat later than anticipated in 1967 (to 31 Dec 1966). From an overall NUTS-productions sales angle this should be beneficial both because 1968 is Olympic Year (when one hopes public interest in track and field will be more stimulated) and it will give a two year interval between its publication and the publication and the publication of British Best Performances of All-Tine"(2nd edition). I would like to see a four-year cycle where these two are published once each during the cycle, one of the two every other year, with the indoor booklet coming out during the odd-numbered years.

I have in mind a nev system of prosenting information in the best performer lists without having to use conversion "factors" in related events. The system also enables one to include an athlete's best at both, say, 400 m and 440 y (e.g.Robbie Brightwell 45.7 m and $45,9 \mathrm{y}$ ) with the intrinsically superior of the two being given more prominence in the main list. The system also allows oneto include John Holt's 800 m and 380 y bests of $1: 49.2$ and $1: 50.0$ both made in the same race. Tirst names and full date of birth will appear in the main lists, full initials and club or other affiliation in alphabetical indexes. For women, the name under which they set their best mark will be used in the main list, and alternative second name or names will all appear in the women's index, all crosspeforred.

STOP PRLSSS


IMORTINT IFBSBGQ TO ALL LIST COMPITMS
Are you checking oh past performances of all athletes that you list - this is essential if the index is to be accurate?

MUS HEBERS BLECTBD
Two new inembers were elected at the General Comittee mecting held last Priday. These were fiery Canadian Dave licJannett known to all a.s the man behind the Bracknell Relays, and Roger Gynn who helped as a shaciow lister last year. We welcome them both to membership. Directory details of the pair will be sent out when received.

RMMMATHLON DHMAILS SEMYLED
The annual members pentathlon will be held at Iurlingham Park, Iondon on Sunday August 27 th at 2.30 p.in. The events will be the usual pentathion events :- long jump, 200 netres, discus, javelin and 1500 metres. Tle have decided to make a small admission charge this year to help cover expenses. All those who wish to compete should therefore advise leter Hopins before August 20 th and enclose cheque, postal order, stamps to the value of 2 s 6dis

The opinions expressed in these articles are not necessarily those of the Editor ' C of the General Cominttee of the National Union of Track Statisticians.
Erinted, produced and published at 22 Valerie Close, St.Albans, Herts.

