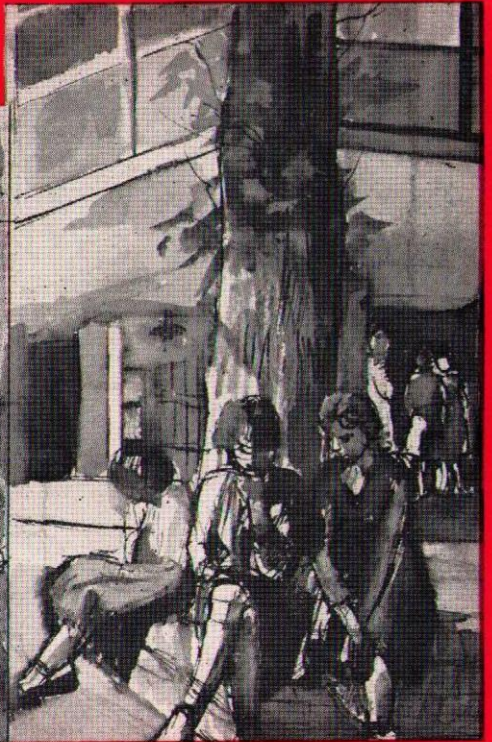
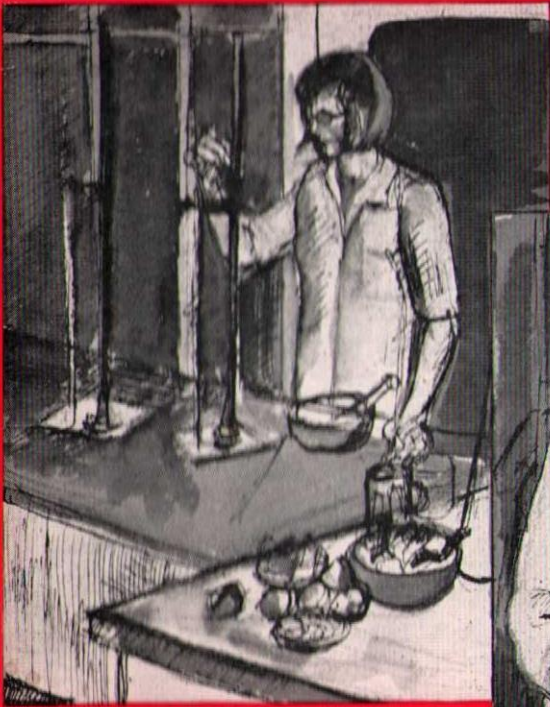


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SPRING 1967
Vol. XXII, No. 1 (56)

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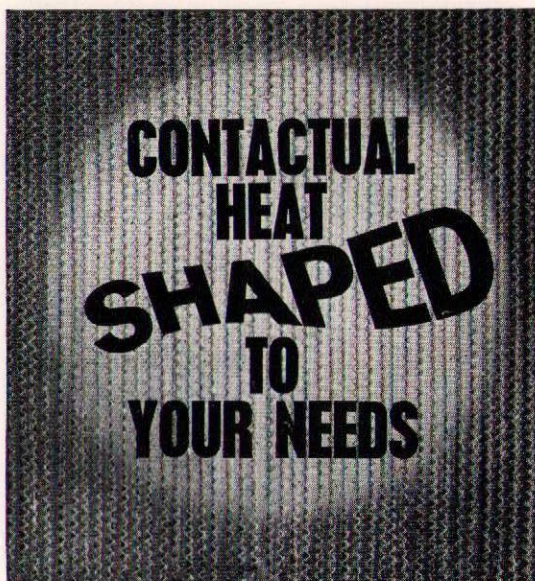
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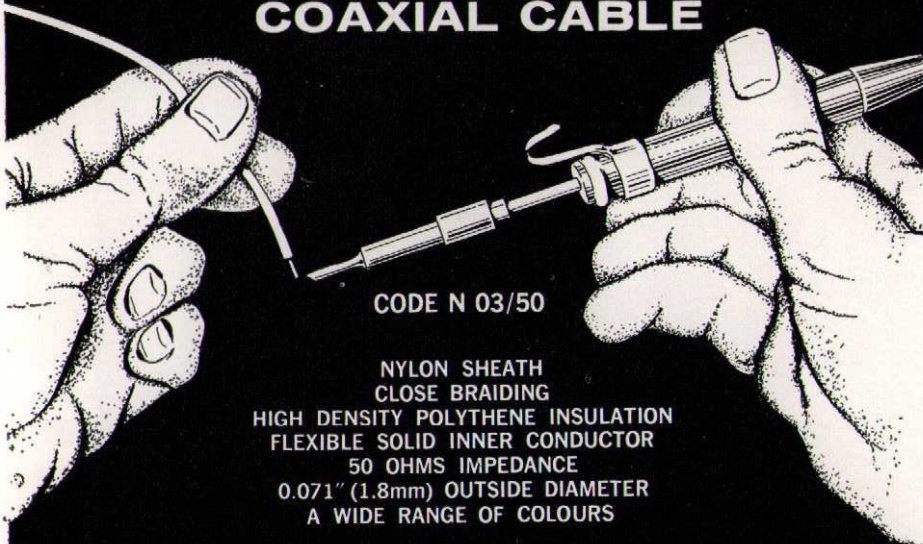
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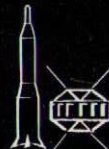
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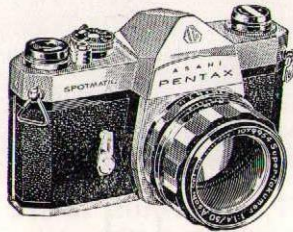
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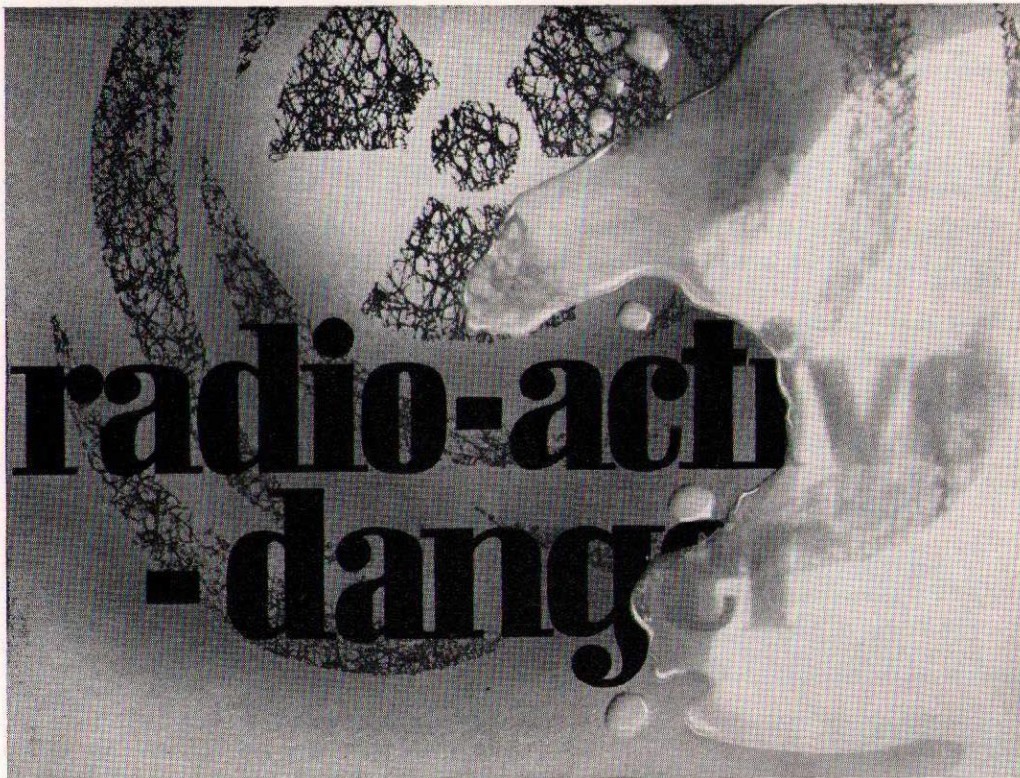
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Ciudadela, Menorca — illustrating the article on page 32

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EDITORIAL

Differing methods have been used for producing "Harlequin" in the past: from that of a too-large committee, pre-occupying itself with who-does-what disputes, to that of one editor working more quickly, but somewhat isolated from new ideas.

The compromise is for the Editor to maintain continuity, but with a Guest Editor for each issue to whom is left the final selections of material, to achieve a desirable difference from one issue to another.

Vic Wheeler has been an occasional contributor in recent years and was the choice for Guest Editor of this issue. With his help, a larger Spring "Harlequin" has been published — and earlier than before. Now that his part is finished, I shall miss what might have appeared to be clandestine meetings with him outside the fence in the evenings . . . with a hurried exchange of documents for reading on the bus home!

Guest Editors of the future will come from other divisions, and from contributors and readers in M.R.C. and in the Science Research Council. Let me know if you are interested . . . but over now to the Guest Editor of this issue: -

D.A.T.

* * *

In collaborating as Guest Editor, I began with the misconception that the selection of material was the first and last function of editing. It was found to be more complicated, with many more factors involved than I imagined.

I was glad to have matters such as the lay-out of the issue left to the Editor, and to remain in blissful ignorance of technicalities such as "bleed-off" and "justification". Also I was glad to have resort to a circle of friends able to provide not only criticism but contributions; it will be seen that fellow contributors from Chemistry Division have filled a third of this issue.

The role of Guest Editor is free from the fears of libel action and bankruptcy — which remain the Editor's! I commend it to anyone invited to follow in my footsteps.

As I return now to being a mere reader, I hope I shall see in future "Harlequins" a widening of the scope of this magazine, reflecting the increasingly diverse operations of the Authority.

V.J.W.

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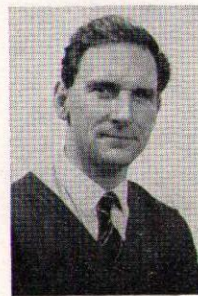


An upside-down view of the author of the article on grass-track racing

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Cover Artist: *Iris Baldwin*



V. J. Wheeler



G. Rogers



R. Bones

1946 1967

HARWELL'S

As part of the 21st anniversary celebrations at Harwell, Sir John Cockcroft, its first Director and now Master of Churchill College, Cambridge, was invited to the lecture theatre that has taken his name.

Sir John was given a standing ovation before giving this lecture, which "Harlequin" features at the request of the many readers who were unable to be present in the over-packed Cockcroft Hall.



A corner of the Chilton pre-fab site is just visible in the top right-hand corner of this photograph. The houses were built so that one of the old airfield run ways provided the road between them. Beside such signs as "Danger: do not move doors", contractors' lorries and Post Office telephone engineers were busy around hangars which still had their wartime camouflage paint.

21st ANNIVERSARY

SIR JOHN COCKCROFT, O.M., F.R.S.



We are celebrating today the 21st anniversary of the founding of Harwell.

The conception of Harwell goes back, however, at least two years earlier. Perhaps it starts with my chance meeting with Chadwick and Oliphant in a Washington hotel in November, 1943. I was on a Radar Mission and Chadwick and Oliphant were preparing for the resumed collaboration with the United States made possible by the Quebec Conference a few months earlier. I was urged (quite unofficially, of course) to take charge of the Anglo-Canadian Atomic Energy Project at Montreal, and I visited the Montreal Laboratory on my way back to England. After discussions between Chadwick, Groves and Mackenzie, the Combined Policy Committee agreed in mid-April 1944 on the programme of the Montreal Laboratory, and after a few days' notice I was flown in a U.S. bomber across the Atlantic to take charge of the Laboratory.

I attended a meeting of the Tube Alloys Technical Committee in Washington on 11th November, 1944, when the foundation of a research establishment in Britain was considered. We thought that it should be equipped with a graphite pile, a 4 Mev Van de Graaff for making nuclear measurements, a mass spectrograph, an electro-magnetic plant for separating isotopes of uranium, a radio chemistry "hot laboratory" and an electronics shop. We guessed that it might require an initial staff of about 600, including 134 graduates — very modest compared with Harwell's later growth.

Although no official decision had been taken to found the establishment, we began to devote any effort which was not required for the Canadian project to start work on U.K. projects at the Montreal Laboratory. We founded the Graphite Group, led by John Dunworth, to carry out design studies to prepare for the 5 MW reactor which was later to be known as BEPO.

When we moved from Montreal to Chalk River, U.K. chemists led by Dr. Spence followed up the work of Dr. Bertrand Goldschmidt, the French chemist who was on the Montreal staff and worked on the flow sheet of a Chemical Separation Plant for plutonium based on solvent extraction — a plant known as the "Trigly" plant — to be constructed in Chalk River. A team from the Ministry of Works came later to Chalk River to work with Dr. Spence on the design of the Harwell Hot Laboratory, and enjoyed steaks for the first time for five years!

Official sanction to the preparatory planning of the Establishment was given during my visit to Britain in April, 1945, when I met the Tube Alloys Consultative Committee — Sir John Anderson, Sir Edward Appleton, Sir Henry Dale — with Akers, Oliphant and Simon in attendance from the Technical Committee.

Lord Cherwell had emphasised to Sir Edward Appleton the importance of a large measure of freedom from Treasury control. He had also stressed the importance of easy access to Universities and of good working conditions for the staff. Oliphant and I suggested that we



Sir John Cockcroft (left) opened the Isotope School at Harwell in April 1951. With him is Dr. Henry Seligman, then Head of the Isotope Division. The wooden hut was to be the school's home "until more permanent buildings are available".

should look for a permanent R.A.F. airfield as a site and when I returned to Canada Oliphant began to search for one. I suggested Duxford, near Cambridge, but it had too little cooling water. South Cerney near Cheltenham, Abingdon and Harwell were put on the short list.

On 13th July, 1945, Sir John Anderson offered me the post of Director. He told me that "it was his intention that the Director should have the utmost measure of freedom in the control of the Establishment; it was necessary that when public money was expended there must be appropriate control, but he thought it should be possible to devise a form of organisation which would permit the vigorous development of Atomic Energy. He agreed with Lord Cherwell that it was essential to have reasonable amenities and that it should not be so isolated that contacts with scientists in Universities should be difficult." The invitation was received most pressingly when the new Government took office and decided to found the Establishment.

During my next visit to U.K. in October, 1945, I had further discussions with Sir John Anderson and with Sir Alan Barlow, the enlightened supporter of science at the top level of the Treasury. We then agreed on the principles on which Harwell would be administered.

During my visit it was also agreed to recommend the Harwell airfield as the site. So we entered into possession on 1st January, 1946. In the meantime an interesting meeting took place at Chalk River in November, 1945, when

Mr. Hoff and Major Sumner met the U.K. staff to offer appointments at Harwell. There was a great deal of excited discussion, during which many staff members expressed their disappointment at the prospect of entering the Scientific Civil Service under the Ministry of Supply. Eight years later there were similar expressions of disappointment at the prospect of leaving the Scientific Civil Service for the Atomic Energy Authority!

Another decision taken in the pre-foundation days was to add GLEEP to our list of projects, and on 8th January, 1946, Watson-Munro and his mainly New Zealand team were given the responsibility of building GLEEP; they started the planning whilst still at Chalk River.

During the early days I remained in Canada, and Dr. Skinner was in charge, ably supported by John Fisher and A. B. Jones who had come to us from Malvern.

Apart from the many technical problems Dr. Skinner had a number of administrative battles to fight — in particular with the Ministry of Supply headquarters on the transport of children to schools in Abingdon and Oxford. This argument was finally settled after a long-range cable from myself to the Permanent Secretary at the Ministry of Supply, offering to lend to the Ministry an ancient Austin which I had had in store throughout the war.

I first visited Harwell on a stormy day at the end of January, 1946, the rain coming down at a typical Harwell angle of 45°. We then decided the allocation of the numerous buildings of the airfield — two hangars to house GLEEP and BEPO, Hangar 8 to house the cyclotron, Hangar 10 to house the main workshop. We were able to get agreement to install the first hundred prefabs, and later a further 100, incurring thereby the displeasure of John Betjeman. These were expected to last ten years.

Our greatest difficulty was in feeding the rapidly growing staff, and some of us will have memories of the "Black Beetle", with the long queues winding across the grass in wintry conditions. We were very glad when we were able to take over the old NAAFI building to replace this obnoxious object.

The Ministry of Works went ahead rapidly with the conversion of barrack blocks and hangars to laboratories, and with the construction of the Hot Laboratory. They had a bad time in the hard winter of 1946/7 when the snow poured down through the open roofs of BEPO hangar. The construction workers were housed in a camp at Kingston Bagpuize. They complained of low pay — since overtime was

banned — poor food, poor accommodation. So I was asked by M.O.W. to address the construction workers on a temporary platform rigged up in the BEPO hangar. I told them about the importance and urgency of the programme. The upshot of this was that the Trades Unions relaxed their ban on overtime, and with the introduction of a 10-hour working day our labour troubles disappeared.

Meantime collaboration with our Risley colleagues had started with a meeting at the Railway Hotel at Crewe, when I met Hinton and Owen. They decided to centre their organisation at Risley partly because it was an industrial area and an existing Admiralty establishment was available. Hinton became head of the Productive Organisation with Owen as Deputy. After this the Industrial Group took charge of the design and construction of BEPO.

GLEEP came into operation in October, 1947. In addition to testing graphite and uranium metal for impurities, it was used to make, for the Isotope Division, directed by Henry Seligman, the first radioisotopes, P-32 and I-131, for radiotherapy in hospitals and began the service of irradiation of small samples of material.

One of our most important steps was taken in June, 1946, by arranging for the takeover by the Ministry of Supply of the radium business of Thorium Limited at Amersham. At this time the sole laboratory was in Chilcot House, where Dr. Grove worked. He visited us in the Montreal Laboratory in the last three months of 1944 and became enthusiastic about the prospects of producing radioisotopes in reactors, and this led to his proposal in November, 1945, to combine radium and radioisotope work in new buildings at Amersham. For four years the Radiochemical Centre was managed by Thorium Limited, and after that Harwell took over the responsibility. The management of the Centre did not add significantly to my own work, apart from a few demarcation disputes on the relative responsibilities of the Isotope Division and the Radiochemical Centre. Between them they built up a remarkable organisation for speedy delivery of isotopes on an economic basis. The foundation of the Isotope School was another important achievement of the Isotope Division.

Work in aid of the Windscale Production piles and the associated Chemical Separation Plant formed a large part of the early Harwell programme. There were considerable discussions about the site of the production piles. At

first water-cooled piles on the Hanford model were favoured, and Dr. Arms spent some happy months testing the water of Loch Morar for its heat-transfer properties and enjoying the fishing.

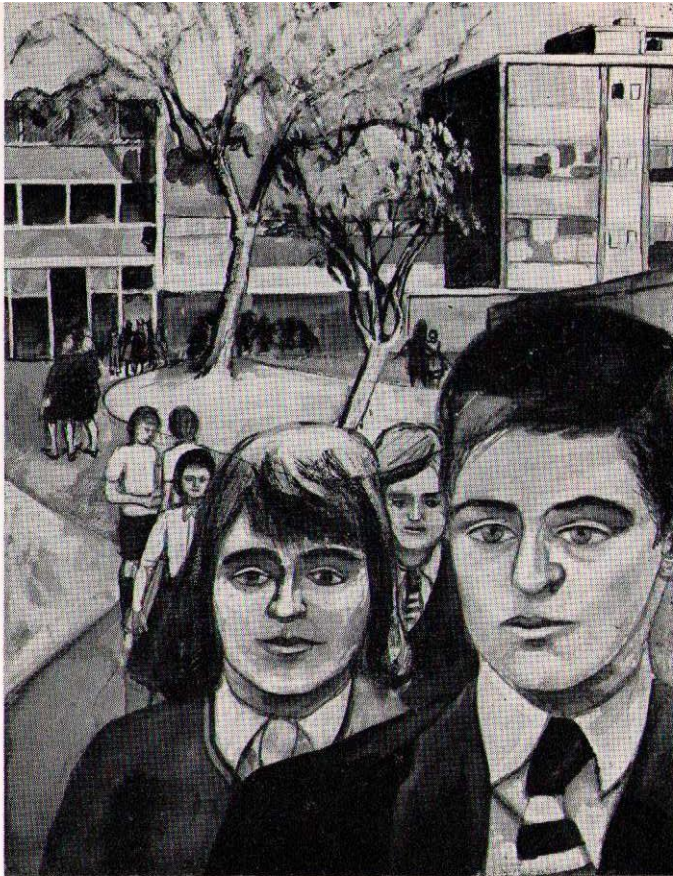
At this time it was easy to conjure up visions of the dangers of water-cooled piles, due to possible loss of coolant, and this, together with the remoteness of the Loch Morar site for construction purposes, turned attention to air-cooled piles, which were thought not to have similar dangers and siting restrictions. Rennie at Harwell worked out the dimensions of a graphite reactor containing about 100 tons of uranium: Diamond and Buneman showed that adequate plutonium production could be obtained by an air-cooled pile; Ginns, Gott and Dixon at Risley worked on the design. So by April, 1947, it was agreed with Risley to recommend a change to this type of pile.

At a fairly late stage in the construction of the Windscale piles I learnt, during a visit to Oak Ridge, that radioactive UO_2 particles had been found on the ground near the Clinton graphite pile, and this caused a considerable scare, so much so that it was decided forthwith to instal filters in the exit duct to the Windscale piles. It was too late to instal the filters at the base of the stack, so the large galleries which are such a feature of the Windscale stacks were installed at the top.

We found later that the UO_2 particles came from the Chemical Stack at Oak Ridge, and not from the reactor! In spite of this misinformation the filters proved to be very useful when 10 tons of uranium fuel elements were melted in the Windscale accident.

After Dr. Spence's micro-scale experiments at Chalk River on the flow sheet of the Chemical Separation Plant, a decision was taken by September, 1947, to build a Chemical Separation Plant at Windscale. There was a certain amount of pessimism in those days about the probable performance of this plant, and I remember a special meeting convened by Lord Portal at which serious doubts were expressed as to whether it would work. These were largely dispelled by results obtained from a pilot plant built in a concrete tower at Chalk River by Nicholls and his group. Difficulties were still anticipated in the final stages at Windscale, and it was decided to found the R and D Branch of the Industrial Group to deal with any difficulties. However, no difficulties were met with, but many other problems arose which absorbed the activities of the R and D Branch from 1952.

(To be continued)



The Future for Education in Oxfordshire and Berkshire

— described with the help of the Directors of Education for Berkshire and Oxfordshire, who made available local plans for the re-organisation of secondary education.

On 21st January, 1965, the following motion was passed by the House of Commons:

That this House, conscious of the need to raise educational standards at all levels, and regretting that the realisation of this objective is impeded by the separation of children into different types of secondary schools, notes with approval the efforts of local authorities to re-organise the secondary education on comprehensive lines which will preserve all that is valuable in grammar school education for those children who now receive it and make it available to more children; recognises that the method and timing of such re-organisation should vary to meet local needs; and believes that the time is now ripe for a declaration of national policy.

This was followed on 12th July, 1965, by the issue of a circular by the Department of Education and Science, giving guidance to local authorities on the methods by which the re-organisation of secondary education on comprehensive lines could be achieved, and requesting them to submit their plans to the Secretary of State. The main patterns accept-

able to the Secretary of State were outlined as follows:

- (1) Orthodox comprehensive school, age range 11-18.
- (2) A two-tier system, with a junior comprehensive school (from age 11), followed by a senior comprehensive school (from age 13 or 14).
- (3) Comprehensive schools, age range 11-16; with sixth form colleges for pupils over 16.
- (4) A system of middle schools which straddle the primary/secondary age ranges. Pupils transfer from primary school at 8 or 9 to a comprehensive school with an age range 8 to 12, or 9 to 13. From this school they move on to a comprehensive school with an age range of 12 or 13 to 18.

Obviously, local factors such as location and size of present schools, population increases and availability of staff all influence the methods eventually adopted by local education authorities to implement the re-organisation scheme. In addition, national factors such as finance and increase in school-leaving age also play a major part.



Illustrations by Iris Baldwin

So far as the Berkshire and Oxfordshire Education Committees are concerned, the Secretary of State's preference for the "orthodox" comprehensive school is endorsed, though in some cases the other types have been necessitated because of local circumstances. Thus, in Abingdon there are detailed proposals to extend John Mason, Larkmead and Fitzharrys Schools to orthodox comprehensives, containing about 1,400 pupils each, and the Matthew Arnold School, Cumnor, will undergo a similar conversion. These schools will all be co-educational. Didcot will have separate boys and girls (orthodox) comprehensive schools, whereas Faringdon and Wantage will probably have some sort of tiered arrangement. Wallingford will have a junior and a senior comprehensive school, which will probably amalgamate to form an orthodox comprehensive at a later date. These plans are due to commence operation in 1970.

Oxfordshire's plans in fact represent a continuation of long-term policy, some schools in the county having been comprehensive for some time already — Burford Grammar School since 1953! In general the orthodox comprehensive of not more than 1,250–1,500 pupils is the most strongly favoured.

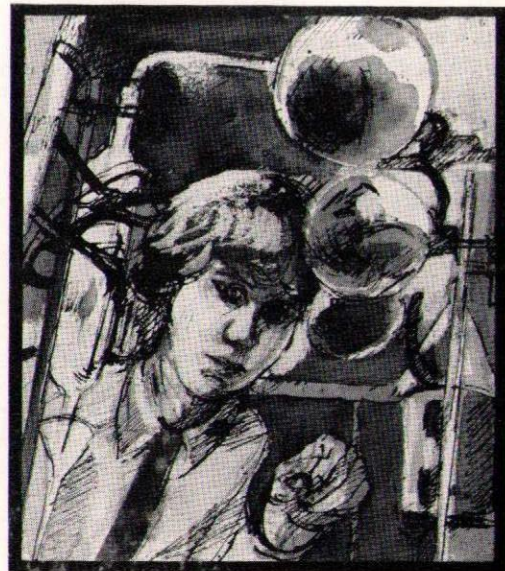
The concept of comprehensive education has been the subject of a great national debate for some time, but a private canvass of opinion suggests it is now clear that the majority of parents and teachers now accept the principle of the system — albeit with many reservations on methods of implementation. It seems that the advantages of the removal of a specific

selection test at an early age, the ease of transfer between courses and "streams", and the promise of a better education for the majority of children have tended to outweigh fears of disadvantages: that the removal of competition and incentive would lead to a general slackening of effort, and that standards would be lowered.

But even those in favour of the new system have their doubts, mainly concerning the provision of buildings and staff. Many are sceptical of the effectiveness of converting existing schools into comprehensives by means of an administrative exercise. In many areas the buildings are not suitable, with many staff shortages in some categories. It is feared that children who have received a grammar school education, in any case, would continue in the "academic stream", taught by staff who would have been grammar school teachers. The rest would continue as before, with the one advantage that children who showed late development could easily transfer to the "academic stream". It is difficult to see how this can be otherwise, unless streaming were abolished — a solution favoured by only a small minority.

There is no doubt that the experiment and the debate will continue for a long time to come. Let us hope that the outcome will be happier and richer lives for those children who will depend upon the right decisions being made now.

V.J.W.





OPPORTUNITIES FOR YOUTH IN OXFORDSHIRE & BERKS

18 PLUS

Stuart Sanderson (Chem.)

The Host and Hostess of the
Oxford Group — now engaged

In 1939 the Carnegie United Kingdom Trustees published a report 'Disinherited Youth', in which the leisure activities of the 18 to 30 age group came under close examination. The outstanding conclusion drawn from this report was that the recreational outlets for this age group were totally inadequate.

As a result of this report, in 1941, "18 plus" was created as a social experiment. Its prevalent aim was to present young people with an attractive challenge to think and act in accordance with their convictions, and to achieve a personal philosophy.

The early growth of "18 Plus" was financed by the Carnegie Trust, who believed the country needed an independent national movement for the 18's to 30's.

Under the leadership of Dr. Nicholson, later to become the Federation's President, and a paid secretary, Miss Jean Graham-Hall, about £2,000 was spent over a period of five years, allowing many small groups to be set up, including one at Oxford. By 1943 the Federation contained 24 groups with a membership of 350.

For various reasons, the Carnegie Trust decided to cease their annual grants, and from this time on "18 Plus" was financially indepen-

dent. The scattered groups federated, became self-governing, self-supporting and completely independent. They met once a year to forge their aims and constitution, and to decide National Policy.

It was found, however, that due to the limited leisure time of members expansion was impossible. Also, during this period, 'call up' and the war seriously affected many groups.

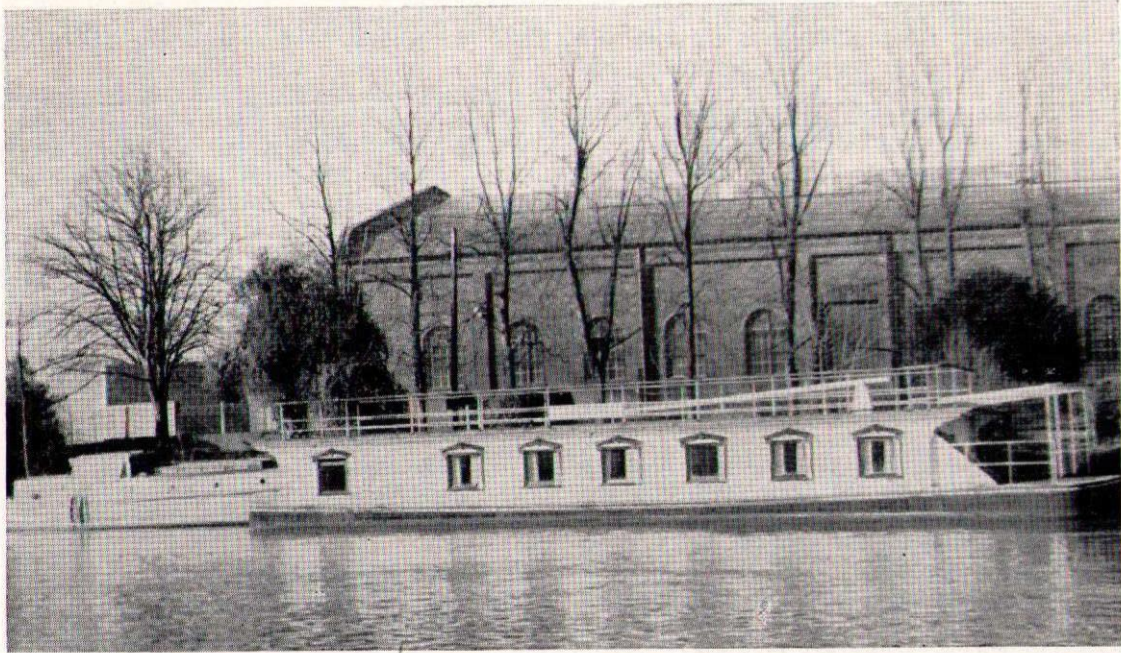
In 1947, the Executive Committee persuaded the Carnegie Trust to donate a final £1,500. This allowed a paid organiser, L. Gordon Horne, to travel around setting up many new groups. His salary was £300 per annum.

The movement grew slowly, financed by affiliation fees, and by 1948 there were 480 members gathered into four Regions.

North West:	14 Groups	332 Members
Midland:	5 Groups	79 Members
London:	1 Group	18 Members
South Coast:	2 Groups	51 Members

During 1956 there was a slight decline, when membership dropped to 439. This was followed in 1957 by a marked improvement when membership increased to 568. By the end of 1962, 30 groups existed with a membership of 958.

During the last 18 months a really rapid expansion has taken place, with over 120 groups



H.Q. of Abingdon 18 Plus —The Mary Watson, moored on the Thames

now in existence and a membership of over 5,000. There is even a group in Northern Ireland.

The basic aims of "18 Plus" have changed very little since the original conceptions were formed 26 years ago. Members have the opportunity to understand and appreciate life, acquire experience in public affairs, help the community, and take part in cultural, social and recreational activities. Each group is financially independent and has no allegiance to any political or religious body.

On November 15th, as part of the rapid expansion of the Midland Area, a group was opened at Abingdon. The opening night was a great success, 27 people turning up. One thing quickly emerged: there was a great need in Abingdon for recreational activities for the 18's to 30's.

After less than two months our membership has increased to 40, and the group began to flex its muscles and review ambitious schemes for social work. The credit for the opening of the group is due to Oxford Group, who worked for 3 months trying to find an adequate meeting place.

So far, very little has been said of the actual activities of 18 plus Groups. What do we do?

We do just what the members of the group want to do; the list is endless: - talks, socials,

quizzes, dances, rambles, debates, film shows, concert and theatre visits and a great many sporting activities.

One of the most outstanding features of "18 Plus" is the remarkable friendliness of everyone. No new member is allowed to stand awkwardly on his or her own. He or she is always very quickly drawn into the particular activity the group is undertaking at the time.

No "18 Plus" group is isolated; members travel to other groups, and there is at least one Area Event a month. This could be a dance, football, tenpin bowling, a pram race, visits to other cities or a barbecue. All Midland groups take part in these events.

Oxford Group is particularly strong in Area events, being the current 5-a-side football champion, and also well on the way to becoming National Debating Champion.

Social work is not neglected at the Abingdon and Oxford "18 Plus" groups. Activities have included a bonfire party for a children's home, which was financed entirely by group members; redecoration of Old Age Pensioners homes, and running stalls at a bazaar for the South Oxford Community Centre. At present the Abingdon Group is considering a scheme to collect old, unwanted television sets for redistribution to old people.

The present premises of Abingdon Group is

a barge moored on the Thames. We anticipate a lot of visits from other groups during the summer, anxious to enjoy the swimming and sunbathing available.

1967 will undoubtedly be 18 Plus Year. Following a report of a committee of the Youth Service Development Council published in December 1965, the Federation of 18 Plus Groups is to hold a conference at Central Hall, Westminster on Saturday, October 28th.

This conference will discuss the part the young adult has to play in the future. Every organisation will be represented, the Government, local councils, Boy Scouts, Girl Guides, political Youth Groups, Church Youth Groups and of course "18 Plus", who will fill 1,800 of the 2,640 seats.

The Duke of Edinburgh, the Prime Minister and the Leader of the Opposition, Church dignitaries and many other important people have been invited. The subjects to be dealt with at the conference are: -

- (1) The part young people have played in the past;
- (2) The part young people play today;
- (3) The part young people have to play in the future.

- (a) Their aims—to ensure a happier life for all; to promote friendship to all; to ensure a moral country.
- (b) Their responsibilities—to themselves, their children, their country.
- (c) The way they can do it: by more social and public service, by drawing in outsiders and getting them interested in helping the community.

Perhaps you would like to know more about "18 Plus"? If you are between 18 and 30, why not come to a group meeting? The weekly subscription is 1s. 6d., but the first week is always free.

At Oxford, we meet at 8.00 p.m. on Thursdays at

The South Oxford Community Centre,
Lake Street,
Oxford;

and at Abingdon, on Tuesdays at 8.00 p.m. on the

Mary Watson Barge,
St. Helen's Wharf,
Abingdon.

You will be very welcome.

STUART SANDERSON,
Chairman, Abingdon "18 Plus" Group.

Sue Macready, one of the organisers of the Children's Party



IN THE AGE OF THE COMPUTER...

ARE TRANSLATORS REDUNDANT ?

Вывод первого искусственного спутника на орбиту вокруг Луны — новая выдающаяся победа советских ученых, инженеров и рабочих. Наша страна, создавшая в 1957 году первый искусственный спутник Земли, ныне вывела первый искусственный спутник на орбиту вокруг Луны, что является важным этапом в ее исследовании.

This was the final paragraph of a press release from Moscow's TASS news agency concerning Luna-10, the first artificial satellite of the Moon, which went into orbit on 3rd April, 1966. At the Union Carbide Corporation's laboratory in Oak Ridge, Tennessee, U.S.A., the Russian text was transliterated into English letters, punched on to cards and fed to an IBM-7090 computer, which generated the following:

The conclusion of the first artificial sputnik on orbit around Moon—the new outstanding victory of Soviet academic, engineers and workers. Our country, which created in 1957 to year the first artificial sputnik of ground, now concluded the first artificial sputnik on orbit around Moon, that is important stage in its investigation.

For comparison, a human translation reads:

The placement of the first artificial Moon satellite in orbit is a new outstanding success of Soviet scientists, engineers and workers. Our country, which created the first artificial Earth satellite in 1957, has now placed the first artificial satellite in a lunar orbit; this is an important stage in the study of the Moon.

HARLEQUIN asked Dr. J. B. Sykes, head of the Translations Office at Harwell, whether translators such as himself have anything to fear from machines usurping their places. His reply is:

“Definitely not. The Americans themselves, commenting on the computer's effort, point out the difficulties of correctly inserting the articles *the* and *a*, which do not exist as such in Russian, the incorrect rendering of vocabu-

lary (*ground* instead of *Earth*) and grammar (*academic*, an adjective, instead of *scientist*, a noun), and other errors. One important point which they do not mention is the wrong use of the words *conclusion* and *concluded*. These are in fact possible meanings, in other contexts, of the Russian words *vyvod* and *vyvela*, but they are not, as is seen, the only meanings. The big problem in machine translation is just this, to select the right word or words in one language to correspond to a given word in a given context in another language. Human translators can generally do this because they know what ‘makes sense’, that satellites are *placed* into orbit, not *concluded*, brought out, exterminated or hatched (to give a few other meanings of this particular Russian word). But telling a machine how to search the last sentence, paragraph or chapter, or its accumulated store of data, for the clue to the meaning of such ambiguous words (of which there are usually several in every sentence) is no easy task at the present stage of development.

“Research on machine translation is also being conducted in many other countries, including Britain. At the National Physical Laboratory, work is aimed at producing (to quote a recent article) ‘quickly and inexpensively, usable translations in a limited technical field for a reader who is expert in the field concerned’, namely electrical engineering. The N.P.L. is now inviting anyone interested to submit texts in this field for translation by machine, and to evaluate the results. Having seen some examples of the output, where the problem of ambiguity described above is dealt with by listing two or three alternatives to about one word in every five, I feel that the recipients will find it somewhat laborious reading. (Especially as even the words *not* equipped with such alternatives are not always the correct ones).

“There is no doubt that machine translations can be of some use in giving an initial indication of the subject matter of a passage (it's easy enough to get the general idea of the

TASS news item) and helping to decide whether a conventional translation is worth making. Machines can also play a big part in automatically looking up words and phrases and providing a printed list of dictionary entries to save this routine labour which occupies much of a translator's time. This line is being followed in a number of research projects".

The Harwell Translations Office, located in the Library (Bldg. 465), serves A.E.R.E., R.C.C. Amersham, Rutherford Laboratory, Atlas Laboratory and the M.R.C. Unit. It provides about 350 tape-recorded translations and 150 written translations of scientific articles each year. Most of the latter are made by expert translators outside the Establishment, but all are edited by Dr. Sykes before being passed on to the scientists who asked for them and ultimately (in most cases) published for the benefit of the world in general. The tape-recordings are a service unique to A.E.R.E., as far as we know, and so (probably) is the range of languages covered; during his nine years in the Translations Office Dr. Sykes has grappled with 25 different languages, and new ones are still occurring (Finnish and Latin, for example, in 1966). The only thing that has completely stumped him was an ornate scroll in Persian awarded to Dr. Schonland. The great majority of the requests, however, are for

translations from German or Russian. In addition, the office deals with about 250 letters and other small items every year.

The tapes are not intended for transcription; instead, the Translations Office subsequently arranges, if desired, a written translation directly from the original.

The hazards of transcribing Dr. Sykes' tapes were described by a secretary in *Harlequin* No. 34 (Autumn 1961); *The machine made the usual introductory scraping noises and then the voice projected itself in a decisive monotone with all the intensity of machine gun fire. The reader was obviously translating on sight and at a regular dictation speed in the region of 180 words per minute. Indeed he spoke more rapidly than I could hear and retain for more than a short phrase at a time, and his pace was such that whole sentences came over as one long word. I wondered sourly if familiarity with tongues had infected him with the laborious German characteristic of building up a compound word simply by lumping together a number of smaller ones, as, for instance, "Menschenfreundlichkeit" or "Unterscheidungsvermogen".*

It seems fair to add that the scientific staff, as opposed to the typists, appear very satisfied with the service!



Dr. John Sykes, Harwell's Translations Officer



AUTOCROSS — MOTOR RACING ON GRASS

A.E.R.E. MOTOR CLUB

“But they’re such *new* cars. I expected them to be old bangers,” said the nurse attending my injuries after I had overturned my Mini in an Autocross. I should have replied: “This is the quickest way I know of converting a new car into an old banger”. But I was not feeling so bright at the time.

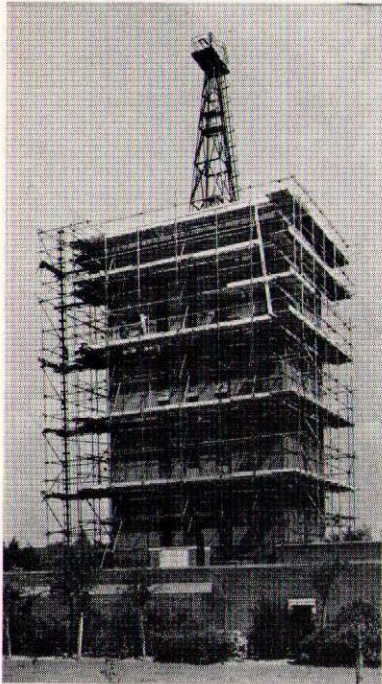
Why should people want to race round a bumpy, dusty or muddy field—and in a perfectly good car? The answer to the second part of the question is easiest; namely, that they use their normal road car, although some enthusiasts do build specials. To the first part of the question the reply may be that they enjoy the thrill of motor sport, compounded of a mixture of speed and danger, a combination shared with sports such as ski-ing and parachuting. They may also enjoy controlling a powerful machine (a property not generally found in “old bangers”) and they may be interested in the mechanics of motor cars (or the mechanics of making motor cars go faster).

Why Autocross rather than other forms of motor sport? Autocross has the advantages over road circuit racing of being cheaper, and on a slippery surface. (Don’t you find it rather boring always motoring in a forwards direction?

Sideways is so much more interesting!). Autocross has the advantages over rallying of being cheaper, less damaging to the car, less fatiguing and of taking place in the daytime. Autocross has the advantages over driving tests (timed manoeuvring tests) of being more expensive and more exciting.

Having established what a magnificent sport Autocross is, it might be as well to fill in a few details. A course is marked out in a large and, one hopes, not too bumpy field. Cars are divided into classes based on engine capacity and on which wheels the engine is connected to. Competitors race in pairs, with two pairs diametrically opposite each other on the course at the same time. They have several timed and practice runs, and results are decided on the best time recorded by each competitor. Speeds reached can be 60 to 70 m.p.h. in the right vehicle, and drivers have to wear crash helmets.

Are you thinking of entering for a few Autocrosses this year? Not if you’ve got any sense. (This is known as the Soft Sell). You could enter in your present car. You would almost certainly not win anything — but you might enjoy yourself! ★



This panoramic view of Harwell was taken looking west from the water tower, which now stands resplendent after last year's face-lift.

In the foreground is Building 424, headquarters of the engineering divisions.

On the left is Rutherford Avenue with Building 35 on its left. This one-time R.A.F. engine workshop became a graphite shop in the days of the Ministry of Supply, and now includes the machining of uranium and ceramics. Beyond it are seen the exhaust stack of BEPO reactor, and the extract tower of Chemistry Division's Building 220.

At the end of Thompson Avenue on the right of the picture is the one-time articulated vehicle bay of the R.A.F. It became a garage in the days of the Ministry of Supply and is now the Paint Spray Shop of Production and Works Division.



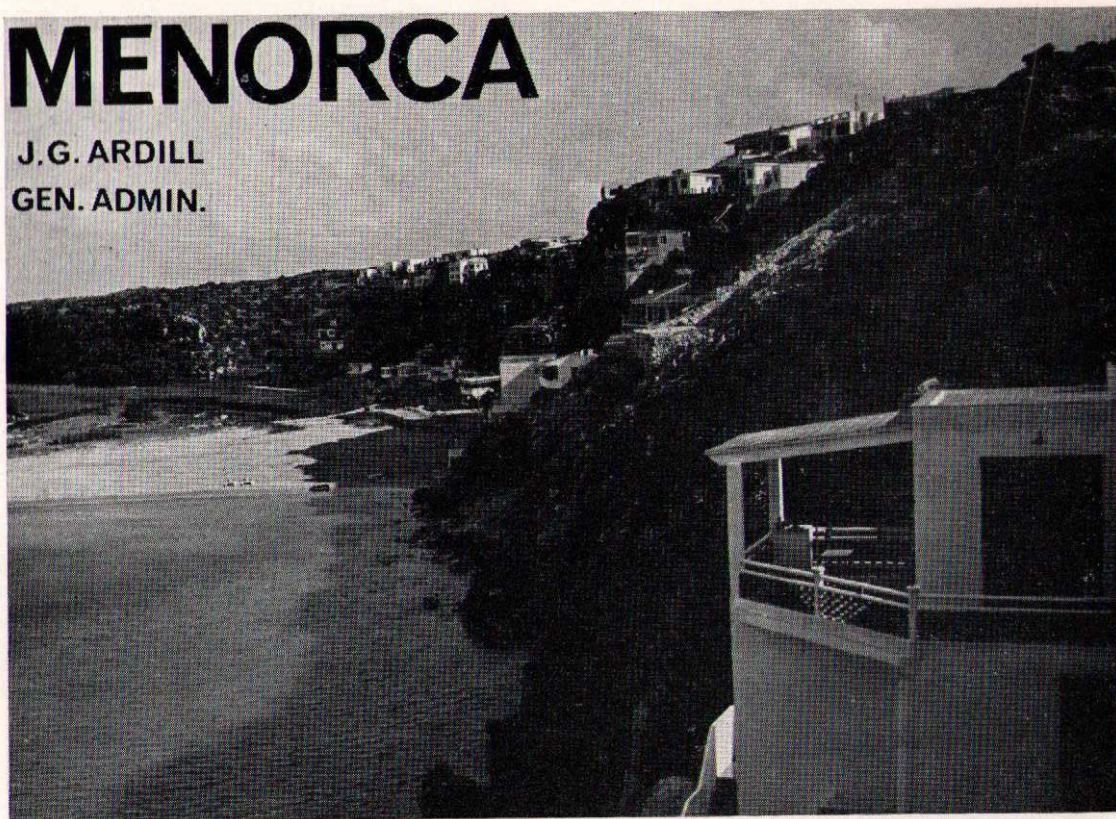
To the right of the Paint Spray Shop is the old R.A.F. and Ministry of Supply Transport Office. The road leads into the old M.T. yard where a combined Transport/Stores Officer functioned until 1949. This is now the depot of the Building Section.



THE CHANGING FACE OF HARWELL

MENORCA

J.G. ARDILL
GEN. ADMIN.



Calan Porter, Menorca

I think it was the complete lack of publicity that stimulated my curiosity in Menorca. Here is an island within a short distance of the over-sold Majorca and Ibiza—yet one hears so little about it. Why?

It is no more difficult to get to than to the other Balearic Islands—you can go by air or by sea—my choice was to drive down to Barcelona and take the car by the thrice-weekly boat to Mahon.

Travel in Spain is always an education—and to drive your car up a 1:4 ramp on the Barcelona Dockside from a standing start of 3 feet and face a 20 foot drop into the ship's hold within inches of the top is something to be remembered.

The crossing is a night one, and the early morning arrival at Mahon a lively affair since the passenger list contains a high percentage of Menorcians visiting their families.

Mahon, the capital of Menorca, is counted among the finest and best-protected harbours in the world and contains one of the largest natural deep-water anchorages. Some four

miles from the open sea, it is only on very rare occasions that the smallest of small boats cannot sail in this magnificent water.

The passage of time has dimmed my knowledge of history, for how else could I have been surprised, as the ship moved around a bend in the harbour approach, at the large sign announcing the Lady Hamilton Hotel? For this famous character had spent some very pleasant times with Nelson on this particular island and their house, the Golden Farm (now known as Villa San Antonio), has some of the finest Georgian furniture and china I have seen outside England.

It is not generally known that Britain and Menorca have associations going back to 1708. The island has been inhabited for at least 3500 years. There is plenty of evidence that the Phoenicians were there in 1600 B.C., if not earlier. Later the Greeks "cannibalized" all that had gone before and built settlements which have now vanished except for the amphorae and figurines. Next came the Carthaginians; then the Romans, and it was they

who christened the island Menorca.

The commonly spoken language is Spanish, but there are variants with a mixture of derivations from Arabic, Greek, French and English, and it is best described as Menorcan. It was several weeks before I realized that "Gizalye" was sometimes used for the word "match". A philologist could spend an interesting holiday tracing the origins of such place names as Es Bou-i-sa-Vaca, Ets Esculles Redous, Cala de Bini Pauatx Es Llebetxats, Es Te Roig, Ets Aljups and St. Joan Dets Horts.

The spread of the Moorish and North African settlement is indicated by the prefix "Bini"—attached to the names of very many villages and hamlets on the south-eastern side of the island. It is old Arabic for "son of" and indicates where the eldest son of a family set up his own establishment.

Dotted round the country and on the hill-sides I saw what I took to be ship's life-boats upside down, but on closer inspection I found them to be large piles of stones shaped and painted to give this peculiar appearance. I discovered later that they are in fact "Navetas", prehistoric graves.

From the end of the thirteenth century until 1708 the island was Spanish, but then was captured for the British by Major-General James Stanhope. Our first occupation lasted 48 years, until 1756, when it was taken after a surprise attack by the French under the Duc de Richelieu.

Admiral Byng was despatched to re-capture the island, but could not get near enough to the enemy shores and returned empty-handed. For his failure he was court martialled and shot.

Eventually in 1763, under the Treaty of Paris, the island was handed back to Britain in exchange for Cuba and the Philippines, but this occupation lasted only 20 years and the Spaniards recovered it with French aid. Britain's final period of occupation started in 1782 and lasted a further 20 years up to the signing of the Treaty of Amiens in 1802. This ceded the island to Spain in return for their promise that Gibraltar would remain British for evermore.

Today the talking point among many Menorcians is: "If Gibraltar is taken back by Spain, will our island revert to British rule again?" From a holiday-makers' viewpoint I would support an exchange.

Menorca is about 31 miles long by 9 miles at its widest, and has a population of some 50,000, among whom at least one family of MacTavish's (Mackta-Vish in the vernacular),

who speak no English and have never left the island! At Villa Carlos (at one time called Georgetown) the barracks bore a remarkable likeness to those I have seen in many British garrisons overseas, and I was told they were the original buildings put up by the British. At the fiesta of San Jaime many of the dances reminded me of Highland dancing.

So far, development on the island has been relatively slight. I was told that the Menorcians were not very eager supporters of General Franco in the Civil War and as a consequence were "overlooked" in the Spanish tourist boom of the last decade.

I found the Menorcians to be a kindly, warm people who wanted to welcome one as an Englishman and not as a tourist. I was unable to pay a bill for some furniture I purchased in Mahon before I left the island, so I wrote to the shop-keeper explaining the situation and asked him to forward the account to enable me to settle the debt. In due course I received a most courteous reply from the shopkeeper in which he apologised for wasting my time, saying that it was his fault that the shop was closed when I called. However, if I would care to call again next time I was on the island I could settle my debt.

I saw no poverty on Menorca and, unlike so many villages on the mainland, it is everywhere particularly clean and tidy. The majority of the population depend on agriculture for their livelihood and it is by no means easy to get a maid to carry out one's domestic chores. The young girls and women contribute to the economy by making jewellery and delicate silverware and leather goods. Menorcan shoes made on your personal last are a very good investment.

Wherever the British Army or Navy went in days gone by a steady, reliable source of gin was a necessity, and Menorca was no exception. Today Mahon has a flourishing distillery—the Beltran, producing Lord Nelson Gin according to a 1716 recipe. Storage in wooden casks gives it a slightly "oakey" flavour, but I found it quite good value at 8/- a bottle.

In some respects Menorca is not unlike Devon and Cornwall, the cliffs being of steep rock interspersed with many interesting coves and small beaches; to get to some of them one must be fairly agile, but the bathing and underwater swimming and exploration are well worth the effort. You can spend a most interesting week (or longer if you choose) sailing around the island, exploring coves and bays. Snr. Juan de Mantequilla, a retired C.P.O. from the Spanish Navy, was a most generous and helpful



Santa Galdana, Menorca

guide when I hired a yacht to do this trip. His knowledge of the local coastline was most detailed and, on the two nights when we ran into rather squally weather on the north side, his handling of the craft was something to be admired.

On the western side of the island is the town and port of Ciudadela, the original capital until the War of the Spanish Succession when the island was invaded by General James Stanhope in 1708. This worthy commander had a good eye for a defensive position and decided that Mahon was the better harbour, and would thenceforward be the capital. However, the Bishop of Ciudadela had different views and flatly refused to move his see, so today the Island has two capitals, one for local government and one for ecclesiastical matters.

The main road from Mahon to Ciudadela, through the centre of the island, was originally built by Richard Kane, the first British Governor, whose statue still remains. Other roads to coastal villages fan out like ribs from a spine, and unfortunately you cannot move from rib to rib without going back to the spine. Apart from this system of roads, communication is difficult and slow.

Housewives and gastronomes will be interested to know that Mayonnaise Sauce had its origin in Menorca, in Mahon to be precise. During a brief occupation by the French, the Duc de Richelieu found the normal food of Menorca rather plain and ordered his chef to

prepare a "Grande Dégustation". The French chef enlisted the help of a local dairy-maid with whom he was having an affair, and between them they produced a sauce made from thick cream, olive oil, fresh lemon juice and a large number of eggs. This sauce became the rage of the French aristocracy and was known as "sauce Mahonesa". A fresh Fornells lobster with a generous dressing of "Sauce Mahonesa" makes a superb meal. I now view with horror the English mayonnaise at 1/11d. a bottle (less 2d. off)!

The prices of most food-stuffs and furniture (locally made and of good quality) were found to be fairly low. A great deal of cheese is produced on Menorca during the winter and spring when the cattle feed on the fairly lush pastures. I found the young cheeses of up to about six month's maturity to be very pleasant; after that they become somewhat hard, and are then used in cooking.

I was amazed at the size of blackberries in the hedges in early July. My wife and I picked 2 lbs. in less than 10 minutes, none smaller than a thrush's egg.

At the start of this article I posed the question as to why so little is heard of Menorca and, having visited the island twice, I am forced to the conclusion that there is no very obvious reason for its failure to be publicized. It has a wonderful climate, beautiful beaches and many places of interest with a reasonable amount of life and amusements; and it is not expensive.

FOOTBALL...

WHICH TEAM AT THE TOP?

Roger Bones (Chem. Div.)

Association Football enthusiasts have short memories. In the past two seasons the performances of two great Merseyside clubs — Everton and Liverpool — and England's World Cup victory have been the major topics of discussion. Going back a few years, one remembers the impressive efforts of Manchester United and Tottenham Hotspur in both domestic and European football competitions. But the Football League was founded in 1888, and it seems an interesting exercise to establish the club with the best record of all time, to see if the recent impressions were accurate — or due merely to short-term good fortune.

To do this one has to devise a set of rules. The original Football League had only twelve members, and some of these ceased to exist long ago. It was

decided to establish the season 1919-20 as the starting date: the reasons for this were that all the major clubs were then well established and, more important, that this was the first season when Divisions I and II each had 22 clubs — which is still the basis of the league competition. Results were calculated up to season 1965-66 (giving 40 seasons in all) and only Division I records were included. To qualify, a club had to spend at least twenty seasons in Division I. The final order was decided on the average number of points obtained. This method is to a large extent arbitrary — but it is difficult to establish any basis for calculation which would satisfy everyone, and this seems to be the best compromise.

The table below shows the final order of the ten top teams:-

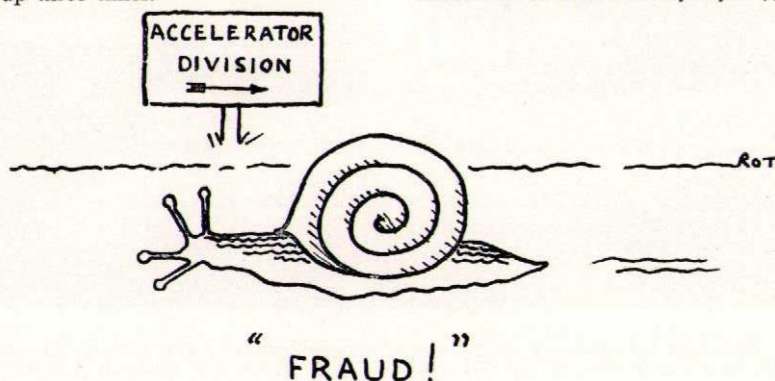
Position	Club	Seasons in			Goals				Points	
		Division I	Played	Won	Drawn	Lost	For	Against	Total	Average
1	Wolverhampton Wdrs.	26	1092	495	243	354	2183	1745	1233	47.42
2	Arsenal	40	1680	724	411	545	3050	2510	1859	46.48
3	Tottenham Hotspur	26	1092	479	235	378	2013	1694	1193	45.89
4	Manchester United	30	1260	530	312	418	2242	1958	1372	45.73
5	Burnley	30	1260	537	282	441	2099	1926	1356	45.20
6	Liverpool	32	1344	541	345	458	2219	2025	1427	44.59
7	West Bromwich Albion	32	1344	539	313	492	2265	2170	1391	43.47
8	Huddersfield Town	28	1176	463	290	423	1807	1756	1216	43.43
9	Sunderland	34	1428	565	345	518	2445	2389	1475	43.38
10	Derby County	22	924	364	215	345	1612	1532	943	42.86

It is ironical that Wolves, the "winners", are at present members of Division II! They were promoted to the First Division in 1931-32, where they remained until being relegated in 1964-65. They achieved three championship wins, and appeared in four F.A. Cup finals, winning twice. From 1952-53 to 1960-61 they always featured in the top six clubs in Division I.

Arsenal are the only club to have been in Division I throughout the period, recording seven championship wins. They will always be remembered as the team of the "thirties", when they won the championship in three consecutive seasons (1932-35), equalling the feat of Huddersfield Town (1923-26). They also won the F.A. Cup three times.

Tottenham Hotspur have suffered mixed fortunes, being relegated in 1927-28 and 1934-35. In 1949-51 they won the Division II and Division I championships in consecutive seasons, a feat recently equalled by Ipswich Town. They won two championships in fact, achieving a remarkable "double" on the second occasion (1960-61) when they also won the F.A. Cup. They were the first British winners of a major European trophy.

It is impossible here to elaborate on the records of the other clubs in the table — or of clubs which didn't make the "Top Ten" — but no doubt their supporters will have alternative views on how the list should be worked out anyway! ★



During the past hundred years the face of Britain has undergone a greater change than at any period in its history. Many new towns have been built, while the growth of cities has led to the incorporation of villages into large urban communities. Sprawling residential suburbs, which are such a feature of our landscape, have arisen from the demand from city dwellers for a higher standard of living. Modern industrial estates have taken the place of nineteenth century factories. Trunk roads have been developed and have taken much of the traffic formerly carried by the railways. The widespread ownership of the motorcar, coupled with greater leisure time, has led to a popular desire for travel and the growth of resort centres and National Parks. Garages, hotels and other facilities for the traveller have sprung up everywhere. Since 1945 the pace of change has quickened as the quest for better living conditions has led to an increasing invasion of the countryside. Under these conditions, one must be thankful for the rigid control over building which exists today, and which is necessary if England is to remain a "green and pleasant land".

What has all this to do with Local History? The average person, thinking of local history, conjures up visions of Bronze-Age ornaments, Roman villas, or medieval monasteries. All these, it is true, are a rightful part of our historical heritage and as such constitute a fascinating field of study for the amateur local historian. Frequently, however, it will be found that scholarly histories have been written by

LOCAL HISTORY TODAY

Ron Dell (Chem. Div.)



**Much of Berkshire has changed almost out of recognition since the turn of the century.
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An early view of the Bull Hotel, Streatley.

former generations, and the opportunities for further original work are somewhat limited. Fortunately, the field of local history today is much broader, extending through the Industrial Revolution of the eighteenth and early nineteenth centuries, the development of our newer cities and manufacturing centres, the Victorian era and right into the twentieth century, with its revolutions in transportation and communications which so profoundly affect our everyday life. Even now, as contemporary history is being enacted, it is the responsibility of those interested in local affairs to ensure that a detailed and accurate record of events in their community is made for the benefit of future generations of residents.

All this may seem self-evident, and one may be forgiven for assuming that "someone is taking care of these matters". Many activities of general interest are, of course, recorded in the local press and filed away in the newspaper archives. But the retrieval of particular items of news from newspapers of forty or fifty years ago is a notoriously difficult and time-consuming process—no computer programme has yet been written to aid such searches! In any event, much material of interest to the local historian is not considered "newsworthy" at the time and so is not recorded by the press.

Where, then, does one seek to find information to build up a documented picture of village

life in the early part of this century? The most obvious, and indeed often the most important, source may lie in the recollections and possessions of older members of the community. But these must be carefully harvested and recorded before the owners pass on and their possessions are dispersed or destroyed. All this is work for the local historian. It is a common sight, after a death, to see younger relatives burning old letters, papers, photographs and "assorted rubbish from the attic" without a thought as to their possible historical interest. Such documents may contain fascinating pieces of local information which would help to complete a picture of village life as it existed before the first world war. A similar fate may befall the confidential papers of private companies or public utilities when storage presents a problem, again with hardly a thought for their historical value. To anyone interested in the history of local industry (the "industrial archaeologist") such material may be a mine of information, providing facts and statistics on topics as varied as machinery design, costs of materials and sources of supply in bygone days, employment conditions in factories and the development of trade unionism in the region.

Considerations of this nature led recently to the formation of a local history society in Goring.



Toll house and toll gate on the river bridge between Goring and Streatley

Although Goring has a long and venerable history, its written record is fragmentary and relates mostly to the Church and Priory. Since about 1850 the character of the village has changed dramatically, and during the past decade the population has almost doubled. This influx of new residents, largely professional and technical people, has led to a dilution of the established village families and a change in social structure of the community. At such a moment it seemed appropriate to form a Local History Society and to compile a record of Goring's recent past before it fades from living memory.

GORING AND ITS HISTORY

The origins of a settlement in Goring are shrouded in antiquity. Certainly, in early British days it was an important river crossing, linking the Icknield Way with the Ridgeway, both part of that famous upland route which stretched across England from the Wash to Avebury in Wiltshire. Remains of Roman occupation have been found in the area, particularly in the vicinity of the river ford, a short distance to the south of the present-day bridge, and also along the route of the Icknield Way. Little is known of Goring in Saxon times, except for the existence of a Manor (the Manor of Garinges) held by Wigod, thane of Wallingford. Goring's well known parish church is believed to have been built by the great Norman baron, Robert d'Oilly, in the latter part of the eleventh century. Throughout the Middle Ages the church was associated with a priory occupied by a prioress and a

house of Augustinian nuns. The priory finally fell into disrepair in the sixteenth century and was dissolved by Henry VIII. The domestic buildings of the priory, which nestled around the church, have long since disappeared. To this day there rests in the nave of the church one of the oldest bells in England, cast about the year 1290. For over six hundred years, until 1929, it formed part of the ring.

The River Thames has always played an important part in the life of Goring. Even before the locks and weirs were built, the river provided an important means of communication and transport, and horse-drawn barges with flat bottoms were used to convey imports from London Docks upstream as far as Abingdon. Goring then was sited at the intersection of two great routes, the River Thames and the Icknield Way. The village itself was an essentially rural and agricultural community, and thus it remained until the latter half of the nineteenth century.

The advent of the Great Western Railway brought many changes in its wake. The journey to London was reduced from a full day's travel by coach to a few hours. Wealthy London businessmen were quick to appreciate the beauty of the Goring Gap and the amenities of the river, and started to build imposing country homes in the village. In the space of thirty or forty years, Goring was transformed from a typical agricultural village into a fashionable riverside resort.

The construction of large upper-class houses continued well into the early years of the



Goring Regatta in late 19th century

present century. The architecture of the Victorian and Edwardian houses is varied and fascinating. Many of the former are richly ornate and heavily proportioned in the romantic style. In contrast, the large house known as "Nun's Acre" (until recently the country-club of the Civil Service Motoring Association) shows traces of William Morris' influence in its simpler style. The Edwardian houses are generally lighter and more gracefully proportioned, and still form fine family homes.

During this period Goring was very much a two-class society — the aristocracy and the village folk. It was a common sight to see children's nannies escorting their charges around the streets during the afternoon, while social life for the rich revolved around gay house parties and punting on the Thames. In this period the Goring Regatta was even more famous than its counterpart at Henley. Another notable feature of the time was the existence of a flourishing riverside boat-building business which subsequently became the famous Saunders-Roe Company.

Between the two world wars, Goring lost a little of its aura as a resort and settled down again to a steady village life, albeit in a rather different vein from previously. The architecture of the period was indifferent, and little of importance seems to have taken place.

The second major change in Goring has occurred since 1945. At least seven distinct new housing estates have been constructed,

mostly since 1960, with a proportionate expansion in the population. A variety of new architectural styles has been introduced, among which the neo-Georgian terraced houses are particularly striking. A new middle-class society has emerged, based upon the scientists and engineers of Harwell and the Rutherford Laboratory, the airmen of Heathrow and Benson, the businessmen of Reading and the daily commuters to London. Gone are many of the social barriers: new institutions such as the rebuilt Church of England primary school (a showpiece in Oxfordshire), the Further Education Centre, the new shopping arcade and the recreational and sporting clubs in the village are serving to weld together people of varied backgrounds and interests, drawn from many quarters of Britain.

Yes, the pace of change has quickened, and even now Goring is in the process of evolving from a rather stratified England village society into an integrated modern residential community. It is in this changing environment that the local historian finds his greatest challenge. The enthusiasm which has been shown in Goring for the new Historical Society is a tribute to the interest which residents, old and new alike, are taking in their community and its life in bygone days.

It is encouraging that in this scientific and technical age there should be an awareness of the past and that people should be striving to retain a sense of historical perspective.

WOODCOTE VETERAN TRANSPORT RALLY

Graham Rogers (Chem. Div.)

Many of the problems of running a successful rally are very similar to those encountered by the organisers of any fund-raising event. As we found out at Woodcote, there are other problems which may not be so widely known.

The first moves to organise this rally took place before Christmas, 1963. Woodcote had a number of residents with an interest in traction engine preservation, and a village hall with a keen management looking for an additional fund-raising event, more novel than the standard village fete. So the two interests joined forces, in the hope that the traction engine enthusiasts could organise an attractive entry and supply the specialists to run the events, whilst the village hall supporters were asked to find the staff to look after the public.

As we had no funds whatsoever we had to tailor our rally to a small budget. The National Traction Engine Club states that a rally should plan for an average of 10 cwt. of coal per engine, plus appearance money of £10. We felt we should start the 1964 rally by inviting 12 engines. With this entry we should hardly be able to match the drawing-power of the well-established Appleford rally (with an entry two or three times as big). To add interest we decided to broaden the scope of the event by inviting internal combustion-engined vehicles and any other forms of transport in preservation.

We had personal contacts with members of the Historic Commercial Vehicle Club, and through them we were able to send entry forms to owners of buses, vans, lorries and tractors. For our entry of cars and motorbikes we relied on a mention in the "Forthcoming Events"

columns of the enthusiast magazines, and we made personal approaches to owners at other rallies.

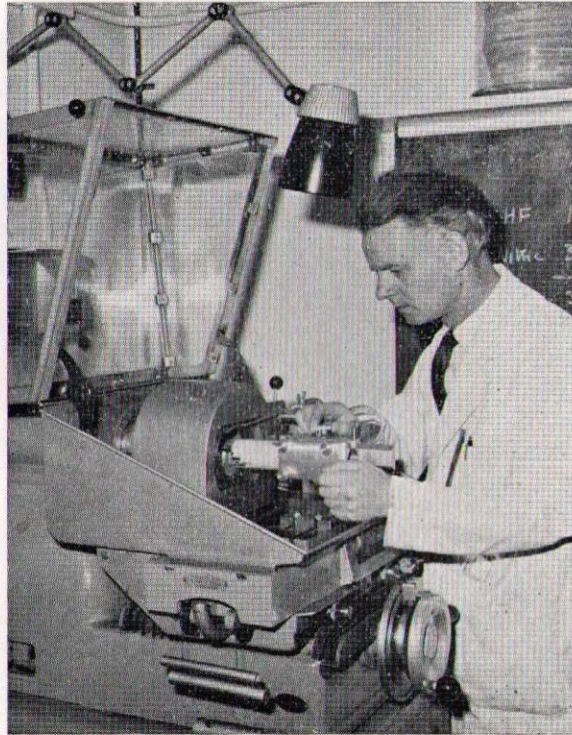
Many traction engine rallies have invited other old vehicles to attend. At Woodcote we hoped that the title of Veteran Transport Rally would encourage all our entrants to feel that they were present with equal status.

We felt that car and motor-bike owners would not be put to heavy expense by attending, and would come for the joy of showing their own vehicles and seeing the rest of the entry. Old commercial vehicles can be expensive to run. One fire engine consumed one gallon per six miles and came forty miles to the rally. Therefore we accepted that here, too, we must pay at least token expenses.

One difficulty in running a rally is that vehicle owners are often reluctant to commit themselves far in advance of the rally date. We had chosen August 22nd as our date. On June 23rd the steam entry was as big as we had hoped for, the commercial vehicle entry was promising, but three motor bikes, one "Penny Farthing", and one Victorian bath chair were meagre response to a lot of hard work.

We had agreed to send our programme to the printers five weeks in advance of the rally, a mistake which made it less accurate than we would have liked. It did include a considerable increase to fifteen motor bikes, and the committee felt we had sufficient entries to justify putting on the event.

Whilst one section of the committee was organising the entries, others had been hard at work. One member gave the use of a thirty acre field, capable of housing ring, side-shows



Ed Storey of Electronics Lab. Workshop setting up a mounted germanium ingot for diamond cutting on a Capco Q-35.

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Woodcote Rally 1964: A Fowler Showman's Road Locomotive, "Prince of Wales"

and car park all in one. It also happened to be an excellent rally-field with an iron-hard surface capable of standing up to our heavy steamers, and it had three good road entrances.

We had secured the attendance of a small fair and various side-shows. Beer tents and refreshment facilities were booked, so were the toilets. Our car park attendants, gatemen and programme sellers had been recruited. Above all, we had arranged as much publicity as we could afford.

In the last few weeks there were two developments which encouraged our efforts to put on a good show: John Snagge had consented to come and open the rally, and BBC Television were sending a team to cover the event.

The day itself was fine and sunny. At 12 o'clock the entries were beginning to arrive, but the car parks were still empty. Our treasurer was gloomy, and the rest of the committee apprehensive. At 2.30 p.m. we were much happier. Cars were streaming in much faster than our gatemen had ever expected, and there was a nice crowd around the ring. Mr. Snagge duly declared the rally open, and set off on a lap of honour on Mr. Hare's magnificent coach and four. Following the horses came Mr. Piper of Ashmore Green, made up in Victorian attire, towing his wife in the bath chair. He received the day's biggest cheer, and deserved it.

The programme lasted about three hours, and by the end we knew that we had succeeded financially. This was a big relief, for the committee and several other local supporters had

guaranteed to contribute in case of a loss.

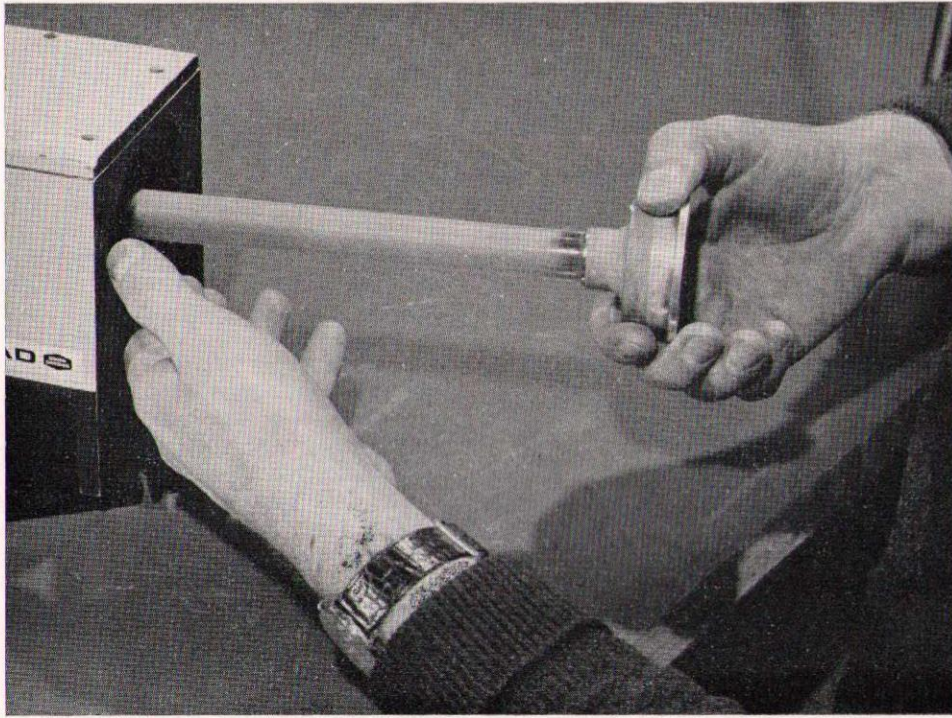
We were then able to plan for 1965 with a reasonable amount in the kitty. There were two main difficulties. Firstly, we could not use the same field, as it had been ploughed. Good rally-fields are not easy to come by and we were lucky to be offered an excellent alternative. Secondly, the change of the August Bank Holiday date led us to move to the first Saturday to avoid clashing with other rallies.

There was nothing particularly adventurous in the 1965 programme. Our gatemen were better prepared for the crowd, and that was just as well, for we believe that more than 5,000 people came. Entries were up in all sections. In particular, the Historic Commercial Vehicle Club had circulated entry forms to all its members.

This resulted in some fine vehicles in this section. The Tate & Lyle 1913 McCurd box van attracted much attention. Starting with little more than a rusty chassis and engine, lying forgotten in a Northampton haulier's yard, the van had been beautifully restored in the style of the vehicles owned by Henry Tate and Sons in the 1910-20 era. Equally fine work marked Mr. Banfield's Chevrolet and Leyland buses, and many other commercials.

The motor bikes were without a weak link. The judge said that it was impossible to pick the best in the class without being unfair. The cars were perhaps not quite to the same standard.

Expenses were up in proportion to the in-



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creased entry, but once again we were able to give the village hall a substantial sum, and add to our reserve fund.

And that was just as well, for the 1966 rally was very wet indeed. After a miserable week the Saturday started dull and grey, and for once the weather forecast at 1 p.m. was all too accurate: "Light rain now affecting parts of Oxfordshire will become heavy and continuous throughout the area".

Many of our competitors had arrived well before the rain, and we had many new vehicles to show. Messrs. Fellmere and Tame brought one of their pair of 1870 Fowler ploughing

engines from Appleford. The Berkshire and Reading Fire Service presented the 1894 Shand-Mason steam-powered horse-drawn fire pump. This veteran was used until 1945, and is still capable of pumping vigorously. Members of the West of England Transport Collection drove their Albion Merryweather fire engine in pouring rain all the way from Exeter to Newbury, only to have the rain catch them on the rally field. With no cab roof the driver was very wet.

We had our first true Veteran Car, a 1907 Renault. Much more modern was an entry of five 1940-5 German Army vehicles with the crews in uniform. This caused a considerable stir and some protests, but undoubtedly attracted a great deal of attention.

A surprisingly large crowd turned up despite the rain and lined the ring throughout the programme. I am sure this encouraged the competitors, who drove their vehicles so long as we asked them to do so.

The field was clearly becoming boggy, so we curtailed the programme at 4 p.m. and concentrated on clearing. The public was able to drive out of the car park without much difficulty, and the lighter competitors' vehicles departed with little incident. Not so the heavy showmen's traction engines. An 18 ton engine on smooth rubber tyres has little adhesion on the greasy surface of a churned-up wet rally field. It was a slow job winching the engines out to the road, and what a mess they were in. Mud was everywhere, even on the underside of the roof. One owner said it took three people over two days of hard work to bring his engine back to a reasonably clean state.

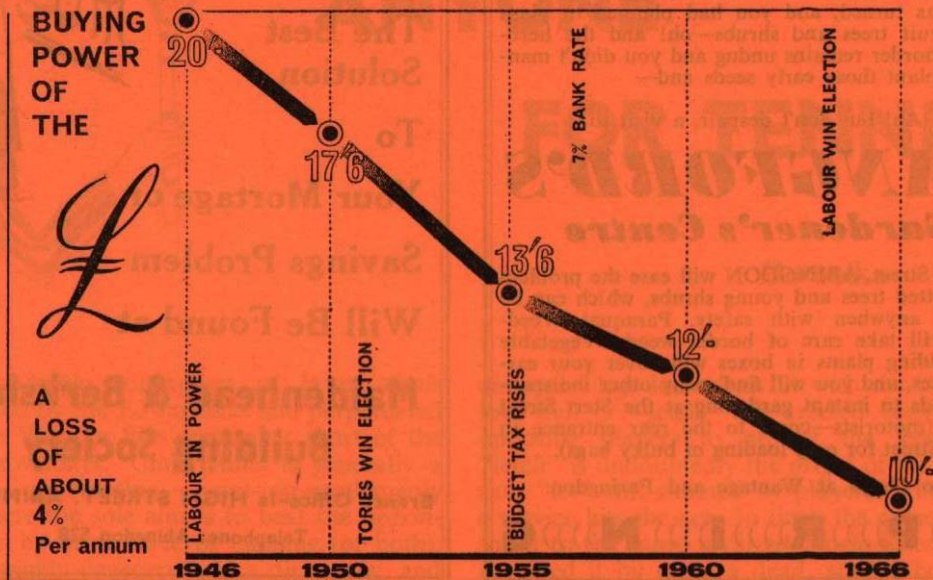
Despite everything, we broke even financially, and can hope that 1967 will see a return to the conditions of 1964-5. The rally date is fixed for August 5th, and we must look for some new ideas. The possibilities are enormous—as would be the costs of realising many of them! It does not seem practical to expect transport other than road vehicles: Railway engines need track to show off their paces; likewise river craft are best seen on water. An aerial display would be a great attraction, but I imagine it would take the profit from several fine rally-days to pay for it.

We must not stagnate. Any idea will be considered, and feasible ones welcomed. We hope to enlarge, and for this many more volunteer staff are needed. Harwell Chemistry Division already supplies the staff to look after the non-steam entry, but there are plenty of vacancies for the other disciplines! ★



Cartoon by kind permission of 'Punch'

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STOCKS & SHARES	×	✓	×	×	✓	×
UNIT TRUSTS	✓	✓	×	×	✓	✓
BUILDING SOC'S	✓	✓	×	×	×	×
DOVER PLAN	✓	✓	✓	✓	✓	✓

Money saved through the International Life Insurance Co. (UK), Ltd., by means of the Dover Equity Plan Policy not only has retained its purchasing power, but has shown impressive growth in real terms. The value of each unit attributable to the Dover Plan rose by 22.8% in 1963, 14.0% in 1964, 23.5% in 1965, and 6.4% to June 30th. 1966. This Financial Programme can be discussed with Bernard L. Walker by an appointment made on Abingdon 1367 or through "Harlequin".

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ANYONE FOR TENNIS?

Homolka

The nostalgic conception of lawn tennis perpetrated by the Edwardians and perpetuated by Bertie Wooster falls somewhat short of the picture nowadays. Club tennis is generally a sweaty — or freezing — not-too-gentlemanly affair where the sole aim is to beat the opponent either by brute force or cunning (or both). Whites quickly degenerate to a dirty grey, and ladies only become “deliciously flushed” as the result of some remark uttered by their male partners. In a word, or rather in several words, tennis is *not* a soft game. And neither should it be, when one considers its origin and history.

Lawn tennis developed from tennis, which is played in an enclosed court: monastery cloisters or prison quadrangles make excellent tennis courts. This in turn developed from an outdoor variety, played mostly in a fallow field, on moor or mountainside. Some clubs in Berkshire apparently still play this variety.

A form of tennis was certainly played in England in the 13th century, but it originated much earlier than that. It evolved as a game about the same time as football. Actually, it was a refinement of the first football played in these islands, where a Danish skull was used as a ball. The Celts (who, incidentally, used *Viking* skulls) found that kicking a skull about was great fun, but hell on the toes. So, canny and inventive as ever, these early Scots started to use the femur bone of the deceased Viking with which to hit the skull. This was fine, except that, with the increased power, the “ball” tended to cave in the face or break the legs of an opposing player. The Scots, of course, did not mind having their faces or chests mutilated, as they were an ugly lot anyway, but the legs were a different matter. Scarred and

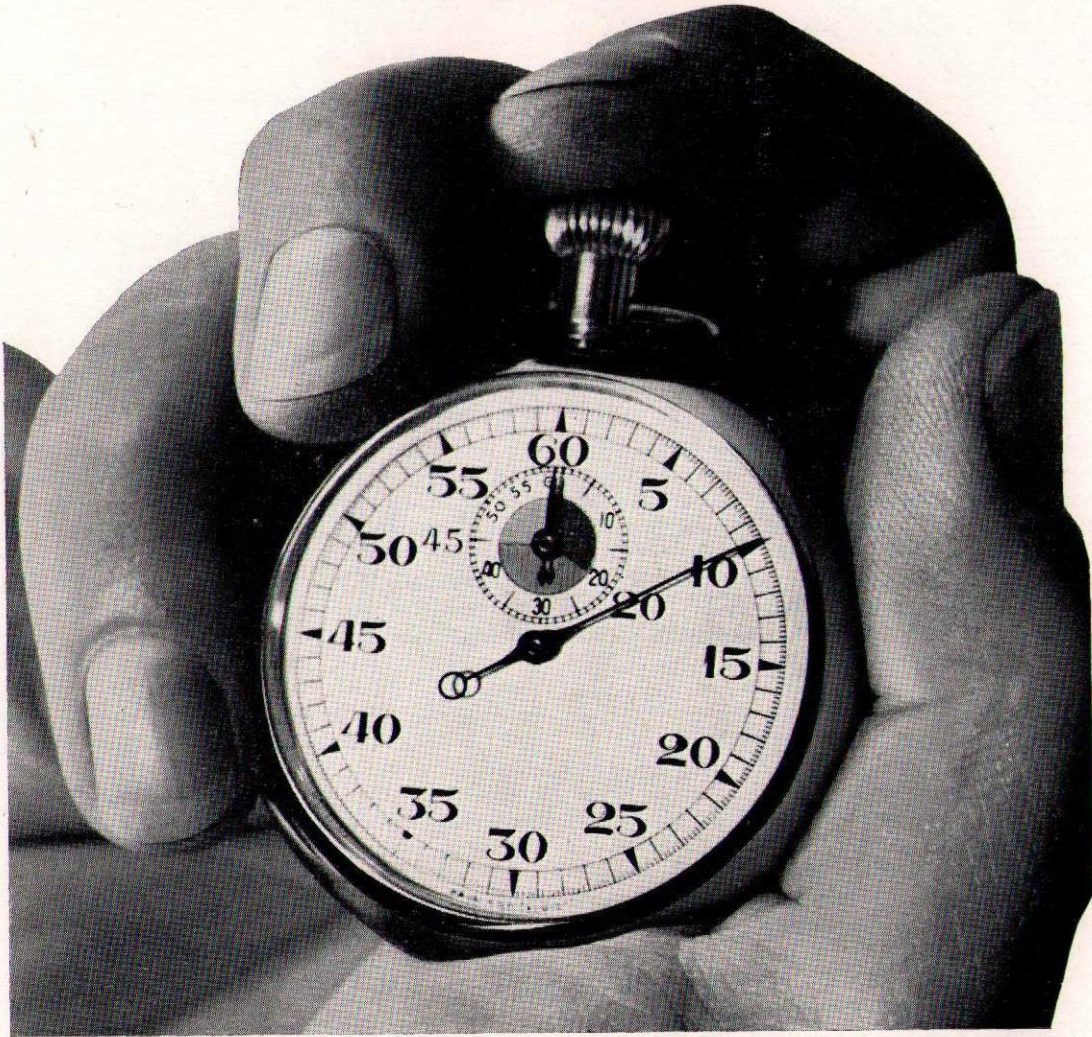
deformed legs looked awful with the kilt, so a low wall or “letch” was erected between the opposing players to protect the legs. This “letch” is undoubtedly the origin of the expression “let” still shouted by players today when a service hits the net. In time, the game spread south to the more civilized Anglo-Saxons who modified it by using a dead, stuffed hedgehog as a ball.

Like many British inventions, tennis was taken up by other countries, refined, capitalised and returned to us as a desirable import. France probably adopted the game first and, in all fairness, there was plenty of room for improvement. Fifty to sixty a side with the last man left standing as the winner did not appeal to the fastidious French (in some cases, it was the last man left alive). The French cut down the number of players, used a small bladder for a ball, bedpan-like things for bats and, to their eternal glory, introduced women into the game. Many modern tennis terms come from the French. “Advantage” is a corruption of the old French “A vent ague” meaning, roughly, “with laboured breath”, a



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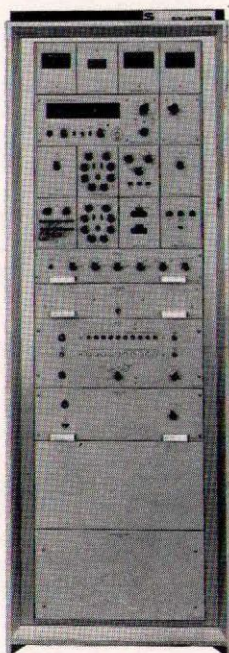
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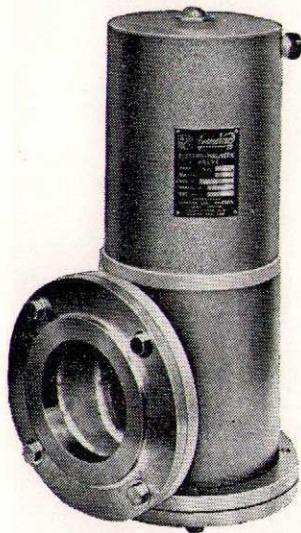
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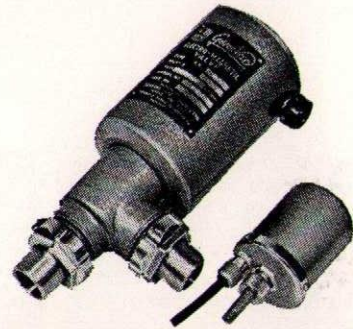
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condition quite common at this stage in the game. Contrary to popular belief, "Deuce" and "Set" are not of French extraction but are as English as Yorkshire pudding. "Deauce" was originally "Juice" and arose from the habit, in a more graceful age, of having a drink — usually fruit juice — at this stage in the game. "Set" was of course originally "Sit", from the custom of sitting down for a rest after six games, a custom, which, alas, has fallen into disuse.

Tennis spread throughout the civilized world and some parts of the uncivilized world with modifications to suit the national taste. In the 18th century a type of tennis was played in Russia in which a small fused bomb was used as a ball and 'grodskis' — huge spoon-shaped scoops — as rackets. The idea was to return the "ball" just before it exploded. This was possibly the beginning of knock-out competitions. In time the racket evolved to the highly-strung sophisticated article in use today. Players also became highly strung and sophisticated.

Lawn tennis is no longer merely a social accomplishment. In fact it is quite often an unsociable accomplishment and it is often this more than lack of skill which deters beginners. This is a wrong idea, of course. Most crack players are extremely pleasant people who will wipe the court with you in the friendliest manner, making you feel like Maria Bueno if you are a woman, or Margaret Smith if you are a man. If one is really interested in tennis as a game and not in the uncouth, physical side of it — running about draughty courts half-naked, perpetually bending down to lift balls,

dodging semi-lethal projectiles travelling at 50 m.p.h — the best approach is to read books about it. There are thousands of books on lawn tennis: like cricket, it is more important to know what is happening than to be actually doing it.

• • • • •

If, after reading this inspired research, there are those who still want to play at lawn tennis then the nearest club to A.E.R.E. is, oddly enough, the A.E.R.E. Lawn Tennis Club. They do not cater for the "Peg's Weekly" type but have a record for good tennis. Two men's teams and one mixed in the Oxford League, county representation (P. Gracie, A. Davies and L. Kay), county championship (A. Davies), "Oxford Mail" championship (L. Kay) and runner-up (Miss J. Bartlett) are some of their achievements. And, lest this impressive talent discourage would-be members, the club has its fair share of beginners and all the grades in between: new members are always welcome. There are four hard courts, four grass courts, several club evenings in the week, balls provided, access to the courts and club hut, club championships open to all, and the Social Club within easy reach. Friendly matches and entry into the Newbury League provide opportunities for the more competitive player. The subscription rates are: -

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In passing, an incident not recorded in the club memoirs suggests that lawn tennis may still retain vestiges of its murderous origins — not to man, but to innocent birds. A certain A. Hewlett, who shall be nameless, when performing a not-too-expert back-hand stroke, hit a sparrow with the ball. The ball went off at a tangent, but the sparrow, fortunately dead, went over the net to be returned with a creditable fore-hand drive. The club was able to convince the Anti-Blood Sport League that (a) they did not use dead sparrows as balls and (b) the mathematical probability of it happening again was small. Nevertheless, there is a certain atavistic suggestiveness about the incident.



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Galileo will be remembered by most people as the "inventor" of the telescope, which he wasn't, but he *can* deservedly be given the title of this column for his ideas and methodology are the very foundations of modern physics.

His trial is one of the most notorious in history. The first man to use the telescope to study the skies, he amassed evidence that anthropocentric speculations had to give way to a new thinking in which the earth revolved round the sun.

Four hundred years after his birth, his anniversary was especially remembered at research centres such as Los Alamos, where an exhibition and open evening lecture marked the occasion. In the same year, Galileo enthusiasts at Vatican Council II proposed that the Church should review his case. In the next year Pope Paul VI went to his burial place and "mentioned Galileo graciously" — at last.

The most recent appraisal of Galileo* should be of interest to both scientist and laymen: to the scientist because of Galileo's pioneering of the path to the understanding of physical phenomena, and to the layman because here is seen an integrated life lived to the full.

As a boy Galileo showed a certain mechanical inventiveness, but he received the broad literary education of his day which consisted largely of the classics. He was interested and skilful both in music and in drawing and painting. At the same time, he is described as having a scientific approach motivated by a desire to know "how" and "how much" in order to understand "why".

The author describes Galileo as a "typical humanist of the Italian Renaissance who had also a genuine curiosity about physical phenomena". Using the word "humanist" in its original sense as "a student of human nature or human affairs", this is correct, but it would not be correct to use the word of Galileo in its more modern sense: in the Copernican war of ideas Galileo fought a critical battle in the history of science, against both theologians and philosophers, but he remained what the author also calls him: "a religious man of science". Even towards the end, when he could have found refuge in Venice, he remained loyal to the Church.

As a man Galileo is difficult to understand, but one cannot begin to understand the historical development of science without taking into account the part that he played in it.

D.A.T.

*Galileo Galilei, *His Life and Works*: Raymond J. Seeger, Pergamon Press, 21s.

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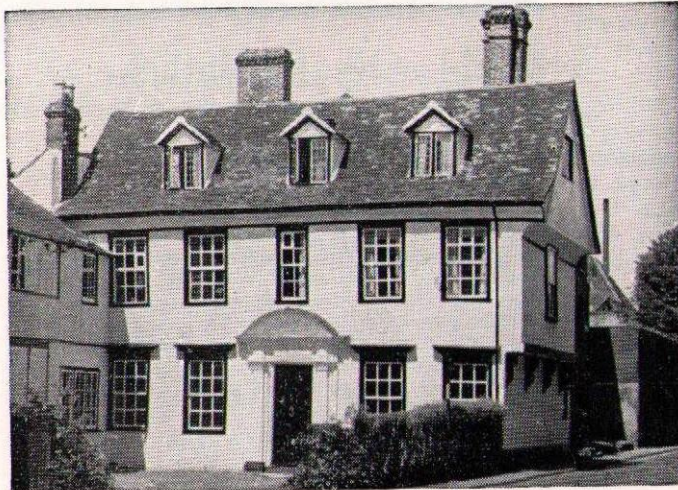
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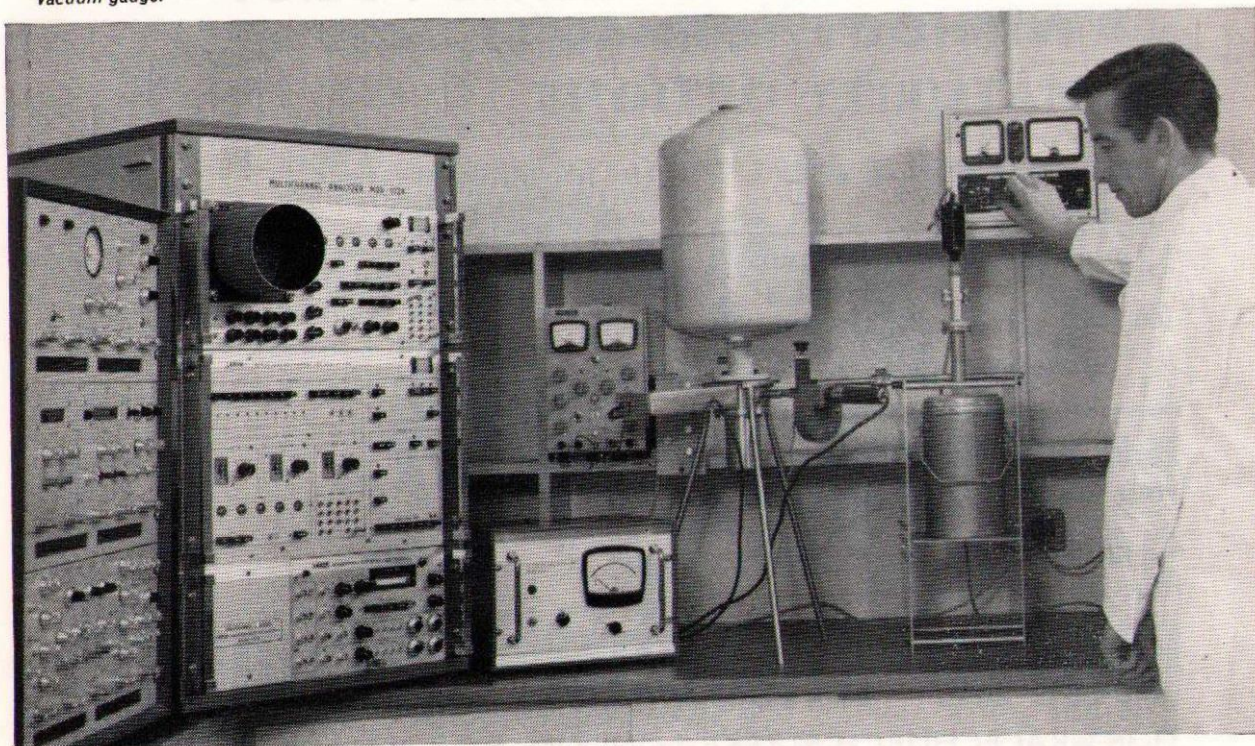
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It happened during the years of World War II, and was an experience very different from most of the occurrences of that time.

A crowd of young men, working on the aerodrome at Harwell, Berks, took lodgings in an old ramshackle house locally known as "Nanny Goat Farm" because the old lady who lived there kept goats.

She warned them right from the start that the house was well-known locally to be haunted, but the young men, feeling secure in their numbers and with the cynicism of youth, only laughed and joked about it; but certainly the surroundings did give an air of plausibility to the idea.

The site of the house was that of an ancient monastery, and under the kitchen table at which they had their meals were enormous flagstones bearing inscriptions "In Beloved Memory of Brother John" and of others who had passed their lives in this place. No modern lighting adorned this house, only the smoky fumes of oil-lamps and candles, which cast dark and flickering shadows about the rooms and made the ancient staircase seem full of hiding places.

One night the young men gathered together upstairs to play cards, all save one, who decided to sit up in bed and read his newspaper by the light of the bedside candle.

Suddenly the old-fashioned latch on his door slowly lifted up, a cold gust of wind swept in, blowing out the candle, and the young man, thinking that his mates were playing jokes on him, told them to stop larking about and get on with their game.

He got up and shut the door, lit the candle once more, and resumed reading, but a minute or two later, once again, the latch again slowly lifted, the cold wind blew and the candle went out.

Footsteps crossed the room to his bed but nothing was to be seen. Then something or someone slowly sat down on the bed beside him, though he could feel nothing; but he saw,

with terror, that the surface of the bed was sinking into a dent, as would be made by a person sitting there! After a few panic-stricken moments, which seemed like hours, the unknown visitor rose, the surface of the bed came up and resumed its normal appearance, and the steps retreated back across the room, nothing visible, and the latch lifted and the door opened and shut!

Shaking with terror, almost speechless, and ashen-white, he rushed into the other room where the others were, and spent the night sleeping on the floor with them, flatly refusing to return to his own room. None of his companions had left the room during the card games and, until he told them, knew nothing of the events which had happened.

The next day he packed his bags and moved into fresh lodgings, flatly refusing to spend another night in that house.

The author tells "Harlequin" that in the adjoining room were two brothers of the man concerned, one of whom is now her husband, and that both vouch for the truth of this account. When "Harlequin" began enquiries about "Nanny Goat Farm", we drew a blank until further facts from the author, and enquiries among the oldest inhabitants, bore fruit: the very first person we asked, a man working at A.E.R.E., who had taken the manuscript to read at his home at Harwell village, appears to be living at the property!

As in the case of another A.E.R.E. man, who bought a bungalow in the village without being told that his garden was an Anglo Saxon cemetery, it seems that this particular property may have more in it than was detailed in the lease.

On reflection, we decided not to tell its owner that he is probably living on haunted property; and we hope that he and his family will remain in blissful ignorance.

Yet, as another "Harlequin" ends, another story may begin . . .

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