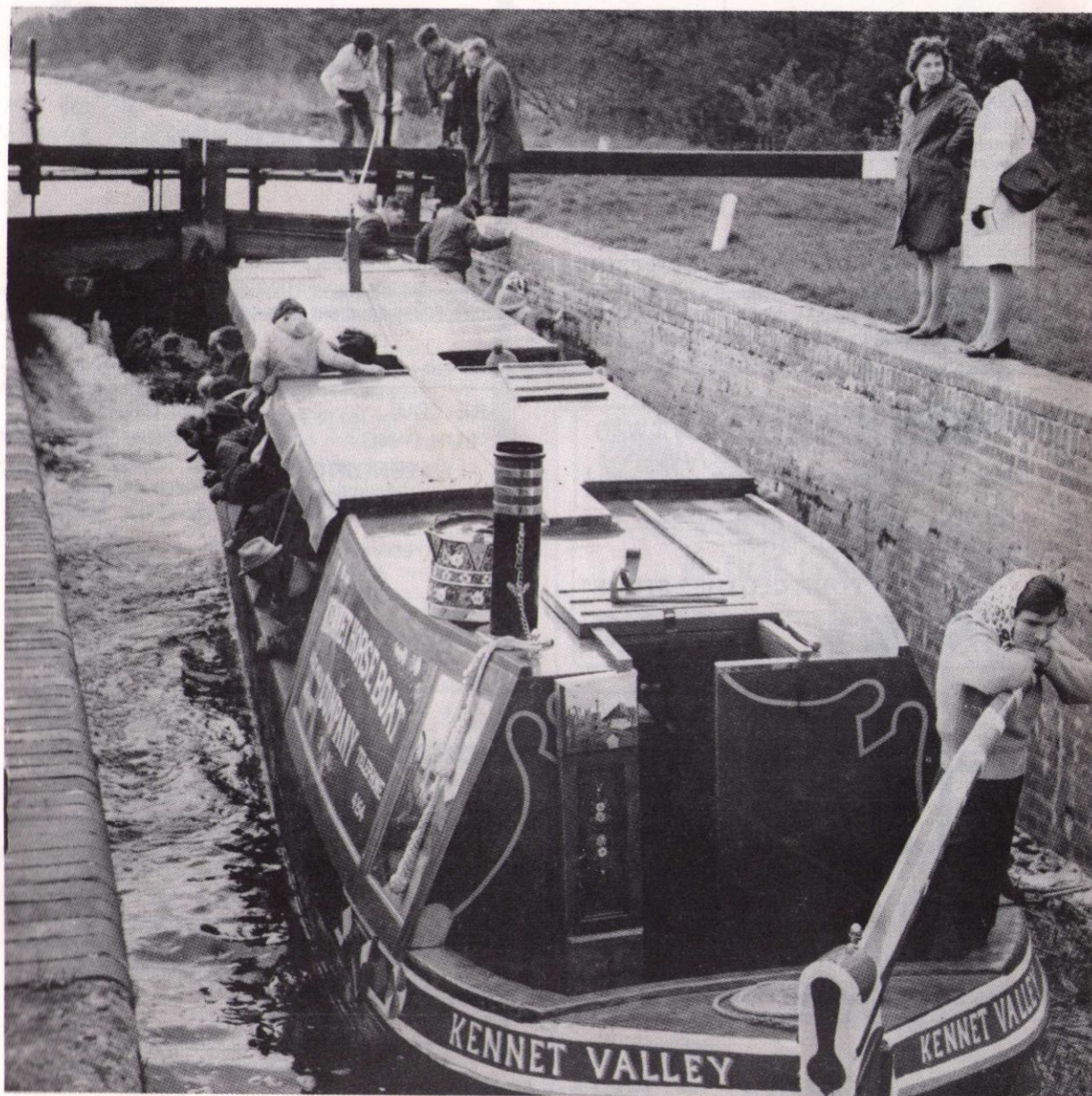


JUNE 1974

3p

Harlequin

Leisure Magazine of the United Kingdom Atomic Energy Research Group and Associated Organisations



In this issue

ENERGY FROM THE SUN — COMPUTERS
THE CANAL AT NEWBURY — GROWTH OF CHARLTON
WANTAGE OPERATIC SOCIETY — TENNIS — SQUASH — ETC.



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"HARLEQUIN" is dependent upon its readers for most of the material published; its quality can only reflect the quality of the material submitted. Only through your support can it be developed to its full potential.

COVER PICTURE

THE KENNET AND AVON CANAL, NEGLECTED THOUGH IT MAY BE IN PLACES, IS BECOMING INCREASINGLY USED AS A MEANS OF RECREATION AND ENJOYMENT, AS IS DEMONSTRATED BY THIS A.W.R.E. CAMERA CLUB PHOTOGRAPH OF A LOCK JUST OUTSIDE NEWBURY. SEE ARTICLE IN THIS ISSUE.



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Dr Mary Archer with her experimental "sun battery" which she hopes will eventually help to harness the unlimited power of the sun.

By permission of "The Daily Telegraph"

research, solar research has been almost forgotten.

It was to try to change this she helped found a movement to revive scientific interest in the sun. As secretary of the British section of the International Solar Energy Society, she has helped to build the membership from 11 to over 250 people in a year, getting scientists and architects to pool their ideas.

Lecturing on solar energy has become second nature. Her next date is at Harwell to get scientists there who are looking into unconventional energy sources to include the sun.

As the wife of Mr Jeffery Archer, Conservative M.P. for Louth, Mary also does her share of talking to political groups and opening bazaars, which she describes as "something I quite enjoy."

Amazingly it all fits in with family life. Her small son,

William, is two years old, and she is expecting her second child.

She looks slightly puzzled when asked if hers is not an extraordinarily busy life. "People keep asking me that, but somehow I feel more exhausted if I do not do anything. William was born on the evening of a full day's work, but that was not really very clever. I am much happier at my desk working than I am with my feet up."

She is musing over whether to take a little time off before having the next baby. "I think I shall."

Luckily, the "tall thin house" which is her Kensington home runs like clockwork, with the aid of Elizabeth, an excellent nannie who also likes cooking, and a Portuguese daily.

DR MARY ARCHER feels very strongly that we've let the colossal energy of the sun escape for far too long. This 29-year-old who is one of Britain's brightest research scientists would like to see us harnessing that energy to reduce our electricity bills.

And her research work at the Royal Institution in London, as well as in her role as a moving light in the British section of the International Solar Energy Society, is directed at doing just that.

Dr Archer quietly points out the inescapable logic of putting the sun to work for us. She explains that the amount of sunlight falling on the earth's surface in just a fortnight is equivalent to the energy from all the underground reserves of coal and oil which have built up naturally till now.

A few enterprising people have already tried do-it-yourself exercises in harnessing sunlight to heat their water, but Dr Archer believes her work may eventually point the way to household systems where batteries on the roof charge themselves in daylight and supply all our power for lighting and heating.

The idea is being taken so seriously that Parliamentary

SCIENTIST SEEKS TO SWITCH ON THE SUN

By Clare Dover

Under-Secretary of State for Energy, Mr Alex Eadie, told an international energy conference in London this week that inexhaustible sources of energy, like the sun, have to be examined to see how economic they would be.

In her laboratory Dr Archer is working to create a "sun battery" using the sunlight falling on its special blue-dyed plates to make electricity, and then store it. She builds experimental solar batteries and then puts them through meticulous trials, recording reactions on delicate measuring instruments.

Exact details of the type of light, how long it shines, how quickly the light-sensitive

plates respond, and the power input to the cell, all get noted down. Then, using a variety of dyes on the sensitive plates, she repeats the process over and over again with the same measurements.

It is some of the most complicated electro-chemistry and dyestuff chemistry research.

All the same Dr Archer is the first to admit that at the moment the system is highly "speculative." Her research, so far, has resulted in only a few hundreds of microwatts of power, which would not be enough to produce a flicker in a torch bulb.

"It is a case of research, research, and more research," she says.

Dr Archer feels passionately that, while Britain spends £50 million a year on nuclear

A NEW Energy Technology Support Unit is being set up at Harwell to help the Department of Energy. It will be led by Dr. J. K. Dawson, who has been head of the Applied Chemistry Division. He will work with a team of about 12 scientists and, said a spokesman, "some support staff".

They will examine such things as how to use

the wind to generate power, how to get power from the earth's underground heat and from the sun.

They will study uses of hydrogen, waste heat and new uses for heat from nuclear reactors.

The unit will also make a general study of the uses of energy and assess proposals from people who ask for Government help in research and development.

The CANAL at NEWBURY

REG WILKINSON,
M R C



As the years pass it seems that the Kennet and Avon Canal is mentioned more and more often in the local papers of Berkshire and Wiltshire. This is mainly due to the members of the Kennet and Avon Canal Trust, and their efforts to restore the waterway to its original glory. Once described as a "Sleeping Beauty", the K & A, as it is more usually known, is now showing signs of a complete re-awakening.

The canal runs for 87 miles between Reading and Bristol, and it is the only remaining east-west waterway in Southern England out of the three that were completed during the years of "canal mania" around the beginning of the nineteenth century. The other two were the Thames and Severn Canal and the Wilts and Berks Canal.

Schemes to link Thames and Avon were first put forward in Elizabethan times, but no effort was made to do anything really constructive until the eighteenth century. In 1712 an Act of Parliament was passed which allowed the River Avon to be made navigable as far as Bath. The River Kennet was made navigable between

Newbury and Reading, where it joined the Thames, under the Kennet Navigation Acts of 1715 and 1720.

A survey to find a possible route for a canal to join the two waterways was submitted to the interested parties by John Rennie, the engineer, in July 1793. Work on the project began in autumn 1794, and the canal was completed in December, 1810.

The cost of construction, including the purchase of the Avon Navigation and the Kennet Navigation, was about £980,000. The line of the waterway took it from Reading to Bristol by way of Newbury, Hungerford, Devizes, Bradford-on-Avon and Bath. There were 106 locks along its length, the longest flight consisting of No. 22 to 50 at Devizes.

The K & A soon became a prosperous concern. Toll receipts increased from £20,000 in 1812 to about £38,000 in 1823, and from 1824 to 1840 receipts were in excess of £42,000 per annum. The Company paid reasonable dividends and its future seemed assured.

Unfortunately, the arrival of the Great

Western Railway put an end to the prosperity of the K & A in common with the other two east-west canals of the region. In 1841 the line from London to Bristol was completed, and from then on toll receipts fell dramatically. Ten years after the opening of the railway the waterway was purchased by the G.W.R.

The Canal was sold to the railway company on the understanding that it would maintain the waterway in a navigable condition. However, almost from the start the management did its best to reduce traffic by increasing tolls and cutting maintenance to a minimum. This attitude caused the canal to deteriorate gradually over the next hundred years, although it had periods of prosperity during the First and Second World Wars.

Good use was made of the waterway during the late 1940s, but in 1955, when the second British Transport Commission Bill was introduced, the government of the day indicated that it wished to close the K & A completely, along with a number of other canals. At this stage the K & A Canal Association, together with the Inland Waterways Association, took up the fight to save the K & A for posterity.

The Canal Association had been formed in 1951 by a group of enthusiasts who realized that one day it would be necessary to organise an effective opposition to the canal's closure. A petition, signed by 20,000 people, was carried by canoe from Bristol to the Minister of Transport in Westminster. This caused the government to reconsider the future of the canal, and the idea of closure was abandoned.

In 1963 the Canal Association was re-organised and became the Kennet and Avon Canal Trust Ltd. Responsibility for Britain's inland waterways was taken over by the British Waterways Board in the same year. The aim of the Trust was the complete restoration of the canal along its entire length, with the idea of using it mainly for pleasure, as there appeared to be no commercial future for the waterway at that time.

The White Paper on waterways which was published in 1967 proposed that three separate sections of the K & A should be maintained as cruiseways. These sections were from Reading to Tyle Mill, from Bulls Lock (just east of Newbury) to Hamstead Lock, and from Bath to Hanham Mills. Together they made up about a third of the waterway's length, leaving the Trust with the task of opening up the other two-thirds.

A restoration scheme was produced,

and in the first five years the Trust achieved its target of about 60 miles of navigable waterway. Work has continued steadily, and at the end of last year the Newbury Cruiseway was extended to Hungerford. The restoration of two locks between Tyle Mill and Bulls Lock started in November, 1973, and should be completed in the near future.

The skilled work has been carried out by B.W.B. employees, with the assistance of Trust members. The latter have also been kept busy on a variety of tasks which are essential to keep the reclaimed sections of the waterway up to standard. These include repairing towpaths, clearing weeds and undergrowth, laying turfs and removing refuse from the canal bed.

In addition to the work on the actual waterway the Trust has also been involved in the restoration of the pumping stations at Crofton, near Hungerford, and at Claverton, near Bath. The former contains two steam engines, one dating from 1812 and the other from 1845. These have been completely renovated, and on the weekends when they are "in steam" they attract some 3,000 visitors.

The work at Claverton involves the restoration of a water ram built in 1813. This is being carried out by students from the Engineering College at Bath University, helped by contributions of materials and assistance from local firms.

Cash for the restoration of the canal is raised by means of jumble sales, charity walks, exhibitions, raffles, and events such as the Bath Water Festival and the annual Devizes-to-Westminster Canoe Race. Trust Members' subscriptions and contributions from County Councils, Local Authorities and private individuals also help. Further revenue comes from the sale of publications. Two booklets, written by Jack Dalby of AWRE, who is Chairman of the Newbury Branch of the Trust and author of "The Wilts & Berks Canal", were published last year and have had to be reprinted because of their popularity. The booklets are entitled "The Kennet Navigation" (price 20p) and "The Canal at Newbury" (price 18p). They are illustrated with line drawings by Ron Durant, and between them they describe the history and present state of the Berkshire end of the K & A.

The booklets, postage 8p each, are available from The Secretary, Kennet and Avon Canal Trust Ltd., "The Coppice", Elm Lane, Lower Earley, Reading RG6 2VG, who will also be pleased to supply information about the work and aims of the Trust. ■

NEW BOOKS

"The Cruel Year"
by Irving Werstein
Published by
Bailey Bros and Swinfen
Folkestone, £2.10.

K.A.D. LAMBE Materials Development

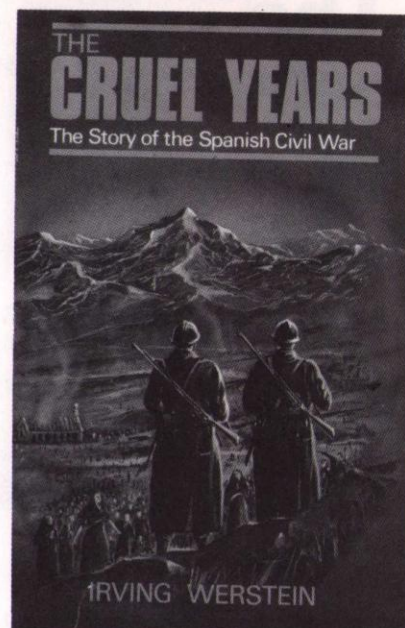
The Spanish Civil War is now a part of history. It is taught in English schools as such. However, there are many people still in active public life who cut their political teeth on the controversy that it raised in the U.K. With the General Strike it formed the two outstandingly obvious occasions in this century when the British people were divided largely on class lines.

The current fashion is to take a "cool, unbiased and academically detached" look at a foreign war that is now past and to declare that blame was to be found on both sides. And why not? It fits neatly into the currently fashionable views of the defence needs of NATO, it shows how decent we are in forgiving and forgetting the not inconsiderable aid given to the Axis Powers by Franco during the 2nd World War and, of course, it proclaims one's own unemotional and eternal search after truth!

Werstein eschews such noble practices. His total sympathy with the anti-fascists is plain from beginning to end. Because of this, his historical analysis is no substitute for Hugh Thomas's definitive work on this subject. Equally, his emotional involvement does not come over with the deep sense of personal tragedy that is the essence of Orwell's "Homage to Catalonia". Nevertheless, for those who wish to study, in nice, easy "black and white" stages, the road that led to the gas chambers and soap factory of Auschwitz, this book can certainly be recommended.

Like Thomas and Orwell, Werstein stresses the broad socio-political spectrum of support that the Republican Government enjoyed throughout the world. By 1938 it was wide enough to accommodate Stalin at one end and Churchill at the other. This widespread support was one of its greatest weaknesses. It is possible that Brecht recognised this when, in his poem "The United Front", he writes "The liberation of the working class is the job for the workers alone". One could hardly expect Roosevelt or Churchill to agree with this.

The different political hopes for the future of Spain were held together by a common hatred, and not by a common



love. It wasn't love of Republican Spain, but hatred of fascism, that united them. This was not enough to withstand the horrors of total civil war. Whilst their own countries were not directly menaced by fascism, the Western democracies were unwilling to commit themselves totally.

Germany, Italy and the U.S.S.R. paid lip service to the principle of non-intervention. Britain and France, despite massive efforts by the political left, looked on and did nothing. France's anxiety about the possibility of a 2nd front across the Pyrenees manned by Hitler's brother-dictator proved to be unfounded. The ravages of this bitter civil war had made certain that Franco's aid to the Axis Powers would stop short of invading France. George F. Kennan, U.S. ambassador in Moscow at the time, suggests that the most far reaching effect of Britain's and France's equivocation was to convince the U.S.S.R. of the lack of interest of Chamberlain and Daladier in joining an anti-fascist alliance. As a result in August 1939, the Molotov-Ribbentrop Pact cleared the way for World War II.

The needed unity was to come piecemeal and almost too late. In fact, for Spain it was too late. Ironically, those that first opposed fascism are now the only ones in Western Europe still under its rule. But is this the last word? As Werstein points out: "Decades after the Civil War, the cauldron of social unrest again boils in Spain".

The growth of a Berkshire village

Once a small village with almost all its inhabitants working on neighbouring farms, Charlton is now a dormitory town with its residents travelling daily to centres of employment in and around the district.

IN her book *Reflected in Wantage*, Kathleen Philip suggests that the name Charlton is derived from the Saxon "Cherlton" or "Ceorlton," meaning a settlement of *Churls* or *Ceorls*. These were free peasants who worked their own plots of land as smallholdings and they were an important group in any Saxon community.

Although they owed some agricultural service to their lord they had a number of privileges, particularly as to the way in which they cultivated their land. By about the 11th century the inhabitants of



the community known as Charlton, to the north-east of Wantage, were thought important enough to be regarded as a separate entity.

Like many villages in Southern

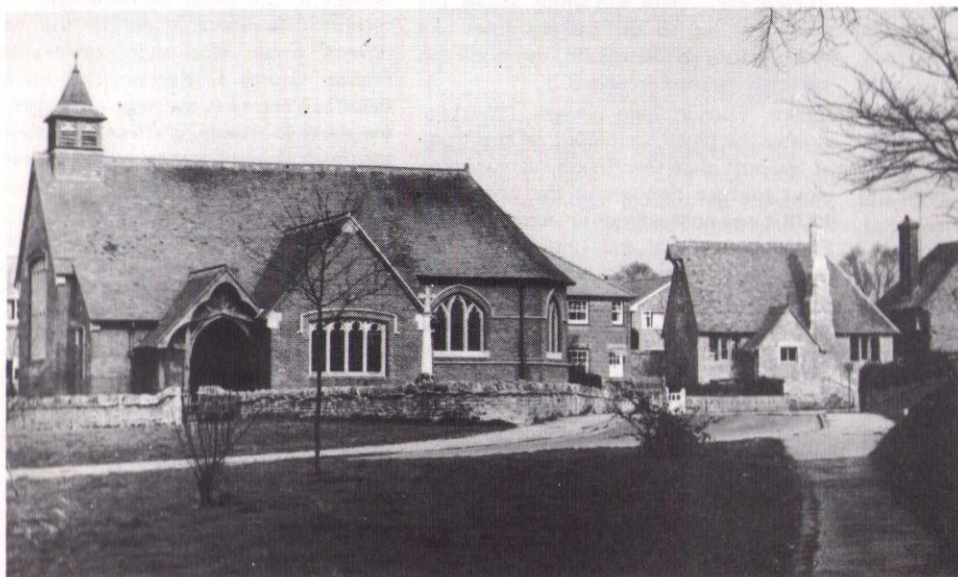
Written and illustrated
by Reg Wilkinson M R C

England, dependent on farming for their existence, Charlton remained a separate entity and changed little over the centuries. Gradually however the boundaries of Wantage expanded and in time the houses built along Charlton Road joined up the town and the village. Charlton was eventually absorbed into the administrative area of the Wantage Urban District

Council sometime between the two world wars.

An Ordnance Survey map of 1883 shows Charlton as the centre of an agricultural community with farms in and around the village. These include Barnards Farm, Home Farm, Parsonage Farm, Truelocks Farm and Whitehorns Farm. Charlton Park, with Charlton House at its centre, separates the village from the town of Wantage. Parts of the house dated back to the 17th century, but unfortunately it was burned down about 1920.

Charlton is mentioned regularly in Kelly's Directories of Berkshire, usually at the end of the section on Wantage. A typical example in the 1931 edition described Charlton as a "township," with a chapel of ease built of brick in the Early English style. The area of Charlton is



Above: Home Farm —shown on an Ordnance Survey map of 1883 and still prospering. Left: Church of the Holy Trinity, Charlton, with the old church school on the right.



The shopping centre on Charlton Heights Estate, comprising a newsagent's with post office, a general store and a small supermarket.

By permission of "Buckinghamshire and Berkshire Countryside"

Part of Charlton House Estate, built in 1946 for the employees of the Atomic Energy Research Establishment, Harwell.



given as 1,881 acres of land and three of water, with a population of 335.

Now Charlton is no longer an agricultural community although a couple of farms still prosper. The area around the original village has become a dormitory, in the form of housing estates large and small, for people who travel daily to centres of employment in and around the district.

The first of these estates was started in 1947 when the government of the day began building houses for the workers of the Atomic Energy Research Establishment at Harwell, which is about seven miles from Charlton. Initially houses were built overlooking the Humber Ditch, a small stream which ran through the grounds of Charlton House to join Letcombe Brook.

Because of its location the estate was named "Charlton House Estate" and it was built with plenty of open spaces between the houses, most of which were provided with gardens of reasonable size. The elm trees which were a feature of the area were left virtually untouched and most of them are still in existence today. In addition the Atomic Energy Authority

planted many more trees, notably horse-chestnuts.

The next estate was built at the south-western corner of the village. A compact estate consisting of a mixture of bungalows and conventional houses, it was named "Palmers" after yet another farm. The original farmhouse stands in the middle of the estate and has been converted into a private dwelling.

"Charlton Heights," the last estate to be built in the area, was started about a decade ago and it contains some 300 private houses and a small shopping centre. A number of streets on the estate have been named after the farmlands which they now cross. Barnards Way and Truelocks Way are typical examples.

In addition to the estates a small number of private houses and police houses have been built on small plots of land. Fortunately the original village has escaped being completely surrounded by the continued existence of the Wantage Cricket Ground and the fields of the two remaining farms along its southern boundary.

The old school at Charlton is the most interesting building of any age in the

village. Built in 1858 its presence has probably had more influence on the inhabitants than any other building in the district.

The school was erected by the "National Society for Promoting the Education of the Poor in the Principles of the Established Church." This society started building schools in 1811 and although they were generally referred to as "National Schools," the one at Charlton is known locally as the "Church School."

On a wall inside the building are painted two rolls of honour listing the names of pupils who were awarded the Diocesan School Inspector's Yearly Prize. One complete roll runs from 1881 to 1891, and the other, which is incomplete, runs from 1892 to 1903.

Although it has not been used for the purposes of full-time education for more than fifty years the old school is still an asset to the community. In the past few years it has been used by a Sunday School, a playgroup, the Brownie Guides, and members of the Wantage Silver Band for their Saturday morning practice sessions!



◀ LEFT:
GEOF. CONSTANTINE,
M.P.D.
▼ ROSEMARIE
EDGERTON,
DIRECTORATE

SPOTLIGHT

Photos by G.P. Walters, Wantage



◀ AMONG THE LADIES:
HUGH EVANS, MET.
▼ RIGHT:
JOHN COOK, MET.

A RECENT PRODUCTION
which included HARWELL staff

WANTAGE OPERATIC SOCIETY'S
"WHITE HORSE INN"
— in which success was due to
teamwork





E. RUSHMORE COGLAN

'I CAN'T HELP THINKING ABOUT ...

TODAY

For this purpose, it doesn't very much matter which day you take, they are all basically the same: twenty-four hours' worth of minutes, each containing sixty seconds. If you think about it, that adds up to quite a lot of seconds, 86,400 to be exact; not the kind of number you are likely to remember unless you have that sort of mind, and difficult for the metrickation maniacs in their conversion to the ten-hour day.

TOMORROW

Perhaps you hadn't heard of the ten-hour day. Well, it won't be long now; once you have got used to appreciating the female form in terms of 91-56-86 and are no longer alarmed when your speedometer tops a hundred (kilometres per hour of course). Mind you, if just at the moment of truth you happen to be busily engaged in both appreciating the female form and exceeding the hundred, the ten-hour day is unlikely to register with any significance, but if I may inject a word of caution, please make sure you have your priorities right.

One of the benefits of the ten-hour day will be that the working day will come down to about three and a half hours, which perhaps sounds better than it should since the ten-day week with its two-point-five-day week-end will, in fact, mean more working days. Then again, the five-week month and the ten-month year will stretch out the time from Christmas to Christmas and between one summer holiday and the next. It will also muck up the seasons something terrible, so that fairly quickly it will become difficult to distinguish summer from winter; not that that will be much of a change. At least there won't be any more leap years to confuse things. It will take some getting used to, starting school at three, starting work at perhaps twelve, retiring at forty-two and living on borrowed time after the age of fifty. Still, that's metrickation for you.

Converting 86,400 seconds per day to something measurable in tens and hundreds will probably bring a day of 100,000 seconds, with 100 seconds to the minute and 100 minutes to the hour. The new second will be a bit shorter than at present, but not much. You may, however, notice an increase in your telephone bills because the Post Office will charge the same for the new seconds as they do now; well, you would not expect them to do otherwise, would you?

Of course, our present clocks and watches will not be very much use, though with new faces and the minute hands removed they will give a rough idea of the time on a five-hour dial, depending on whether it is day or night. If your watch is one that tells the date, you can write that off or buy a new watch.

For once, I am in on the ground floor of the investment business; I have cashed my 1939 series Savings Certificates and bought shares in Timex, Ingersoll and, just to play safe, the Sundial Division of Amey's Concrete. I reckon that should see me comfortably through my old age.

While I was busy calculating the effects of New Time on the working week, the leave year, my next birthday and one or two other relevant aspects, I realised that this was Administration Year. If you are a scientist you may already have no doubt about the truth of that observation, but yours is perhaps not a properly reasoned judgment, based only on monetary evidence. Consider the examples of Halley's Comet, Kohoutek or even Marilyn Monroe if it will make you feel better. All these heavenly bodies are visible at various regular intervals of time which are predictable and can be guaranteed to be shown on your television screens, with or without Patrick Moore. Therein lies my evidence for calling this 'Administration Year': 1974 being exactly divisible by 329,* an event that will not occur again until the year 2303. By then I confidently predict that pay will no longer be a problem for the scientists, not the present generation at least. So when you think about it, this is indeed a momentous year. And in case you are interested, it also happens to be the centenary year of Winston Churchill's birth.

Today, in a looser sense than I have been using, there are happenings that would have outraged our grandfathers (I'm not sure about Grandma, mine at any rate) and would certainly not have amused the Queen. Mayhem at football matches and elsewhere is now commonplace, but worrying for all that. Something equally illegal, not violent and really quite comic is 'Streaking', which

* Harwell's Bldg. 329, of course!

has not got off to a very good start because it was introduced at the wrong time of the year. A thin drizzle is hardly conducive to a successful sprint in the altogether, and the highest initial principles are vulnerable to goose pimples. Paradoxically, after streaking down the High Street, a spell in the cooler is probably quite attractive to the ice-bound exhibitionist.

YESTERDAY

'Streaking' reminds me that I have claim to a record not likely to be found in the Guinness Book, where it could have stood for thirty years or so and is not now in danger of being challenged. I do not have the exact time as I was inadvertently without my stop-watch, but clad only in underpants I covered the two flights of stairs of the Harrogate Labour Exchange from top to bottom and back again in less time than it takes to say 'Electrocardiography'. The object of the exercise was to boost my heart beats for the benefit of a sceptical National Service medico who listened to my 'At school I was excused games because of a weak heart' with the demeanour of a man meeting a duck-billed platypus for the first time. To add to his disbelief, once up and down the stairs did absolutely nothing for my pulse rate, so I was ordered to cover the course again. What my faster-than-light, subliminal image did for the pulse rates of the folk I passed on the stairs I shall never know, but it dawned on me at some stage that mine was not the only heart being put to considerable strain. I doubt if the General Medical Council of the B.M.A. would approve of that test method, but you have to bear in mind that the optical part of the examination consisted of making sure you had the full complement of eyeballs.

That episode reminds me of another practical approach used by the Forces to resolve the problem of having men and women in the same camps in large numbers. The answer was to put bromide in the tea, or at least to noise it abroad that the tea contained bromide; it was usually so powerful a brew it could have contained almost anything. As an earlier wit than me has said, but only recently, I think the bromide is at last beginning to work.

SOMETIME, NEVER

Thinking about it, the metricaters and decimalisers must find the human design very frustrating in terms of suitability for their attentions. True, most of us have a convenient number of fingers and toes, but, those apart, we are so randomly equipped with one of that and two of those that standardisation on tens or even fives is going to take years and years of selective breeding. I guess there is hope for us yet.

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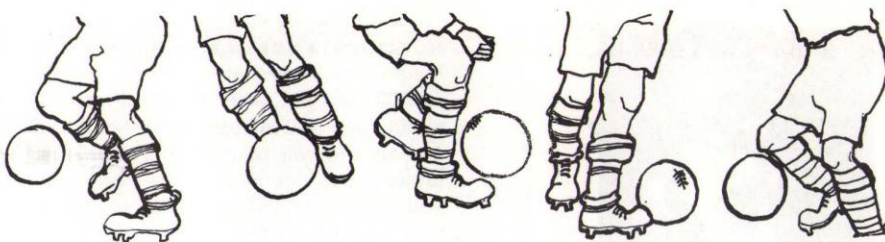
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SPORTING ACTIVITIES



With so many, varied sports clubs at Harwell, each actively engaged in its own particular pursuit, we thought it might be appropriate to offer some facts, and maybe advice, to the participants.

TRAINING is both a physical and psychological process, designed to bring body and mind into an optimum competitive state.

GENERAL TRAINING is simply a toning-up of the mind and body to improve co-ordination and condition of various organs and systems.

SPECIFIC TRAINING tones and improves the working of muscle groups involved in the particular sport.

OVER-TRAINING, a major problem of intensive training, produces sudden loss of physical and psychological form.

Symptoms are complex and progressive, and may include loss of appetite, dyspepsia and loss of weight, also the increase in heart rate and blood pressure following exertion is excessive and prolonged, breathlessness is more marked and takes longer to subside. Anxiety, depression, loss of will-power and concentration are also symptoms. The muscles become more susceptible to fatigue.

FATIGUE. Basically the feeling of fatigue is useful, as a signal to rest and rebuild strength. At best it manifests itself as a feeling of tiredness which passes quickly and without ill-effects. At worst it produces full-scale exhaustion and involves the risk of permanent injury. Fatigue does not only affect the muscles. It also makes demands on internal organs, particularly the liver, and can disturb the nervous system, the endocrine glands and the mental outlook.

TREATMENT. Adequate rest is probably the most important treatment in sport, both in general and in dealing with specific problems. Training sessions and periods of rest and relaxation must be sensibly alternated; they will vary with

the individual, his capacity and his outlook.

As the physical demands of training may alter the body's requirements of nourishment, a careful check should be kept on physical condition and steps taken to ensure an adequate intake of such things as glucose, fructose and vitamins, particularly those of the B complex, B1, B6 and B12.

DIET. Calorific value of the diet should meet the energy consumption, avoiding excesses, which can be a hindrance. Energy consumption varies, both with the individual metabolism and with the size of the body and, since diet must provide for non-sporting activities also, it is rarely possible to calculate how much food an individual needs. As a general example, however, daily energy consumption in athletics is not particularly high and calls for approx. 3,000—5,000 calories per day. Higher levels (no pun intended) are needed for mountaineers and skiers, amounting to something over 6,000 calories for a man of average size and build. Commonsense and your own body are your best guide.

As a footnote—do not forget that the St. John Ambulance is almost always able to turn up at sports meetings to render First Aid, if required. One point we would like to make clear, though, is that all our equipment is bought from funds, or sometimes our own pockets, so that, except on a few occasions, we are not able to supply items such as crepe bandages, liniment or salt tablets. After all, we are First-Aiders, not General Practitioners: please bear with us when we have to say "No" to certain requests.

If you would like our services at your sports meetings, please contact me, Margaret Snowdon, B465, Ext. 2191. We will do our best to help you. ■

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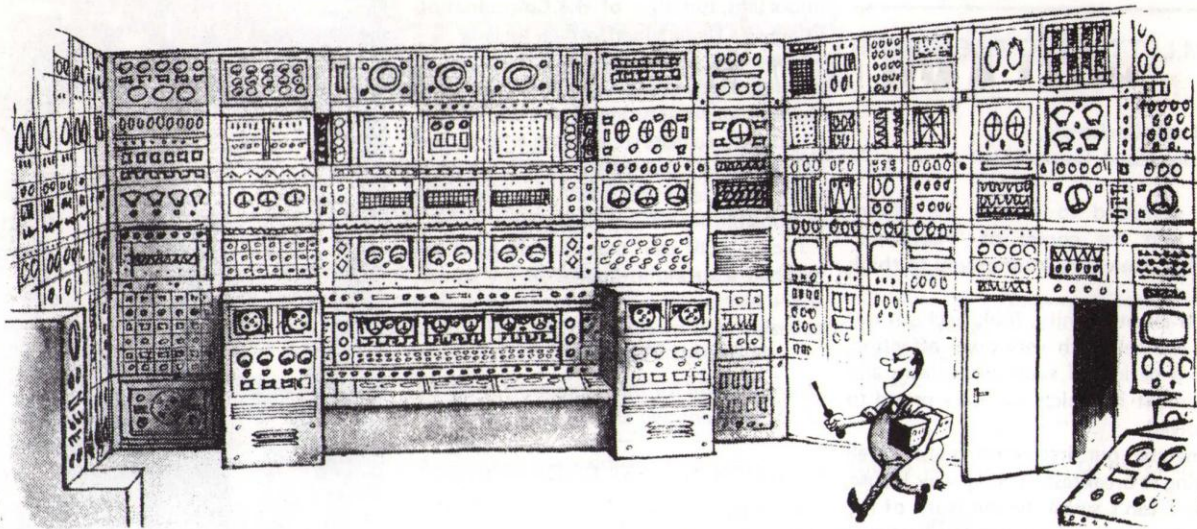
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A HARWELL PROGRAMMER LOOKS AT COMPUTERS



I think I've found a new illness for the psychologists to get worried about. It's called 'Computeritis'. It's quite complicated, as it has different effects on the various people who come into contact with computers. You can divide these people into three groups—programmers, their bosses, and the 'man in the street'—whom I shall call 'Joe Bloggs'.

Firstly, what are the effects on the programmer? If you see someone with glazed eyes and a massive pile of computer output, then leave him alone. Attempts at verbal contact may well be hopeless, but a good kick might produce some response. Probably his program has just 'fallen off' the computer (things always 'fall off' computers, for some reason unknown to me), and he has at least 50 pages of incomprehensible figures to look at. Appropriately, this output is called a 'dump'.

At night the programmer tends to dream in some computer language or other, perhaps even wandering around the house at 3 a.m. leaving flowcharts on odd bits of paper, all of which he loses. This is quite an advanced stage of programmer's Computeritis, and the only cure is over-exposure to his beloved machine.

Most of us, including the programmer, have bosses. Often, however, the programmer's boss is not a computer expert himself. Obviously he has no time to get too involved with computers, but he probably appreciates that a computer could replace a lot of unskilled labour, and therefore must be a Good Thing. It's just unfortunate that once he has his computer it's got to be kept going by a small force of highly-skilled systems and electronic engineers. I sometimes wonder if these, together with the maintenance

or rental of the machine itself, cost more than the labour replaced.

Some people tend to get a computer because 'X' across the way has just got one. I've seen this happen in the scientific world. If they don't know anything about the wretched machine, then some other person, 'Y', who is qualified to punch cards and do little else, may well find himself pitchforked into being a programmer overnight. This may not be a very pleasant experience for him, and may result in some rather awful programs.

Well, so much for the programmer and his boss. What about the man in the street? Recently, my insurance company 'went over' to computers. Previously their payment forms, with a seven-character code number, were comprehensible. I now get a new form, designed for direct input to a computer, using Optical Character Reading, with a 28-digit code number. I find the new form much more difficult to fill in—but, of course, if I want to write to a human being at the company, I must quote the 'old' seven-character code number.

Even worse was my experience with a certain professional society which got itself computerised. I was sent a yellow form on which I had to write my name, address, etc., in little boxes. Some of these were labelled with strange hieroglyphics like \$ and &, with many complicated notes explaining what to do with the various boxes. It took me at least an hour to fill in. This would be funny if I wasn't a programmer myself.

What bothers me is this: if I, a reasonably experienced programmer, have trouble with other people's computerised forms, how does Joe Bloggs get on? Why is it

that, as soon as someone gets computerised, communication goes out of the window? Perhaps we've gone in for computers a bit too fast. I'm sure we've forgotten that computers interact with people, and that the computer is just a highly efficient moron. Its only brains exist in the people who program it.

Maybe there has been a shortage of good programmers. Yet the programmer himself merely codes what is wanted by his employer. At some stage Joe Bloggs is forgotten. Perhaps the fault lies at a higher level of management, who may have a totally ignorant but overawed approach to computers.

So what are the solutions? Programmers will always tend to go around with glazed eyes in a little world of their own. A good programmer is just made that way. The man in the street, of course, should be protected from court action if a computer doesn't get paid its bill for £0.00, and he should at least be able to understand the computerised forms he receives.

I'm going to suggest, humbly, that those who decide to 'go over' to computers should think a little bit about the effects of Computeritis, not only on their programmers, but especially on the Joe Bloggs's of this world. Let's remember that any computer system has three components: hardware (the electronics), software (the programs), and what I like to call liveware, i.e. Joe Bloggs and his friends. Let's also realise that Joe and friends are the most important.

After all, it's *people* who design and build computers, *people* who operate or program them, and *people* who are affected by them. Which is more important—man or machine?

FRED

"HARLEQUIN", G159, Bldg. 77,
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FROM LETTERS TO THE EDITOR

From Lady Cockcroft,
Grange Road, Cambridge:

I was delighted to receive the photographs and the copies of "Harlequin" yesterday. How very kind of you to think of me.

I, and all my family, look back on our life at Harwell with very great affection. It was a period of such enthusiasm and achievement in which we were proud to be involved.

I remember our first morning at Harwell and going to breakfast in Ridgeway House, though I can't swear to the truth of my husband's search of an early cup of tea!

With my best wishes to AERE and all who work there.

Yours etc, E. Elizabeth Cockcroft

From Mr. C. Ward, now a Director,
Western Detail Manufacturers:

Thank you very much for sending me a copy of "Harlequin" and an invitation to Dennis Mettrick's retirement presentation.

I owe much to D.M. for giving me an opportunity in the fifties which changed my career's direction. It was a distinct improvement, and I enjoyed more than ten years with him. His quality of leadership and wise counsel helped when I was

rather impetuous and very inexperienced in liaison with scientists and engineers, an important function of the Co-ordination Engineers Department, which he led.

Our association continued when he became responsible for setting up the Outside Manufacturing Group at Harwell. I had the privilege of growing with it, and enjoyed the confidence which I gained from the technical and administrative responsibilities delegated to me.

I can truly say that Dennis Mettrick has had a strong influence on my career, and I feel privileged in knowing him as a colleague and friend.

Yours etc, Chic Ward

We are grateful for this expression in words of a sentiment we share with many—Ed.

SOLUTION TO LAST CODEWORDS

1 E; 2 D; 3 N; 4 I; 5 B; 6 R; 7 U; 8 L;
9 O; 10 C; 11 S; 12 T; 13 M; 14 H; 15 P;
16 A; 17 Y; 18 V; 19 F.

John Branson, winner of AERE LTC Men's Singles season 1973, holding the cup, is seen here with finalist Peter Sanderson after winning a hard-fought final, two sets to one.

"Almost a double" describes John's other success at squash when he lost a closely contested handicap final in the fifth game to Brian Philips but worthily took the Squash Captain's prize for the most improved player of the season.

Whilst squash is currently expanding a change in the habits of club tennis players has occurred at AERE.



Playing sessions for club members are held on Tuesday and Thursday evenings from 6.30 p.m. and Sunday afternoon from 2.30 p.m., but attendance during the past two seasons has been extremely poor and is still well below capacity, albeit club membership is as high as ever!

For players who wish to indulge in lighthearted or social tennis with other club members, the above sessions could be your forté. See the notice board in the window of the Ridgeway Pavilion or contact any committee member for further information.

PROPOSED NEW SYSTEM OF GRADING FOR ANNUAL CONFIDENTIAL REPORTS

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PERFORMANCE FACTOR	Far exceeds job requirements	Exceeds job requirements	Meets job requirements	Needs some improvements	Does not meet requirements
QUALITY	Leaps tall buildings with a single bound.	Must take running start to leap over tall buildings.	Can only leap over a building with no spires.	Crashes into buildings when attempting to jump.	Cannot recognise buildings at all much less jump.
TIMELINESS	Is faster than a speeding bullet.	Is as fast as a speeding bullet.	Not as fast as a speeding bullet.	Would you believe a slow bullet?	Wounds self with bullet.
INITIATIVE	Is stronger than a locomotive.	Is stronger than a bull elephant.	Is stronger than a bull.	Shoots the bull.	Smells like a bull.
ADAPTABILITY	Walks on water consistently.	Walks on water in emergencies.	Washes with water.	Drinks water.	Passes water in emergencies.
COMMUNICATION	Talks with God.	Talks with the angels.	Talks to himself.	Argues with himself.	Loses those arguments.

(The Editor is indebted to an unknown source for this fresh look at Annual Reports).

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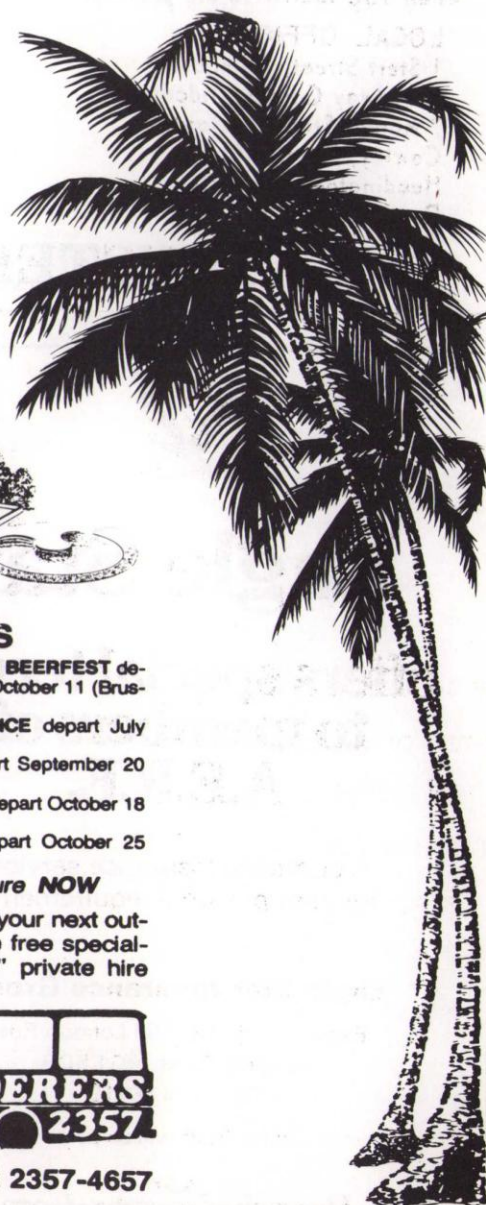
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- TOUR CE3 — **NORMANDY**, France 4 days depart July
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- TOUR CE4 — **SPAIN/FRANCE** 10 days (Bilbao) depart
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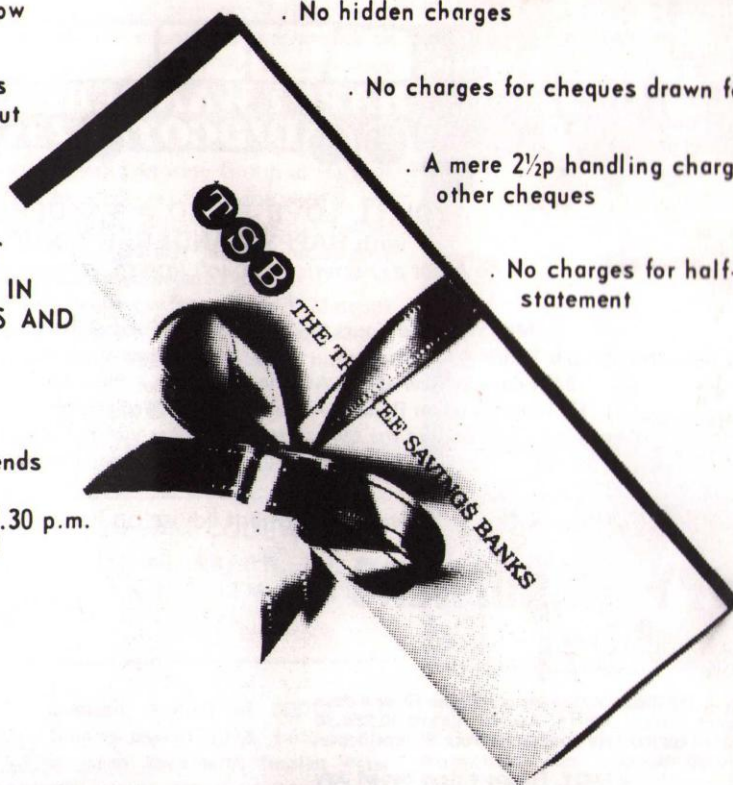
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