



# THE AURICLE

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## RAG REACHES £10,000 MARK

It is learnt from an unofficial but reliable source that Rag has thus far raised the gross sum of £10,000. All things considered this is a praiseworthy achievement. One must remember that the Rag Committee were all along fighting against the tremendous odds of the Festival and the most abysmal student apathy.

We are informed that a total of 54 Medical students took out Collection boxes. These figures prove that people will donate, provided there is someone to collect the money. The limiting factor is collectors, not donators.

## RUGBY INTERVARSITY

The Wits 1st XV will this year do battle with Tuks at Loftus Versfeld Grounds on June 4th. Wits will be striving to make it three in a row, and unless there is another spate of injuries there is no reason why they should not achieve their aim.

Intervarsity day is THE sports day in the Wits calendar and it is up to each and every student to be at Loftus on June 4th to cheer the 1st to victory.

Tickets on the grandstand are at a premium and if the first few sing-songs are any indication, many people will not be sitting in the singer's stand. There are only 850 seats available on the main stand in addition to about 300 on the open stand, so attend the sing-songs every day otherwise YOU are liable to be sitting out in the open.

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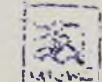
Fourteen - A report on the successful Arch and Anthropol Meeting featuring Mr. Robinson.

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## THE AURICLE

### N.U.S.A.S. Conference.

It might surprise many students to learn that the Annual N.U.S.A.S. Conference is to take place in Johannesburg in July. For all the publicity there has been at Medical School one might have thought that N.U.S.A.S. was some private club. For example, a few people have been approached privately to read papers at the Conference. Yet the vast majority of students know nothing of this. One small advert outside the Refectory is not our idea of a whole-hearted attempt to acquaint students with the importance and scope of the Conference.

We trust that vigorous efforts will be made, in the little time that is left, to right what has been a most unfortunate omission.

### General Meetings.

This week notices appeared outside Medical School announcing a General Meeting of students to hear a report on the Fort Hare situation on the same day.

This was a meeting of some considerable importance, yet students were given less than five hours' notice. As a result it was rather poorly attended, especially by Medical Students. Matters were not helped by the contravention of an S.R.C. ruling by the Jazz Society, although one feels that they were not entirely to blame. The primary fault rests with the organisers of the General Meeting in not giving sufficient notice to students.

### Mr Caunter.

We were very sorry to hear of the illness of Mr Caunter, technician of the Surgery Department and previously for many years Senior Technician of the Physiology Department. We all wish him a speedy recovery.

The Auricle hopes to publish, in the near future, an article by Mr Caunter on his many interesting experiences both at this University and abroad.

## MUSIC AND FILM SOCS. WED

The Music Society with kind co-operation of the Film Society will hold a film-show in the Harveian Lecture Theatre on Thursday 2nd June. The films will consist of:-

- 1) Instruments of the Orchestra - Malcolm Sargent
- 2) Beethoven Sonata - Myra Hess.

Students are requested to watch the trees for notices of "live artist" recitals. Marie Therese Fourneau has been approached and may give a lunch-hour recital to which members may come free of charge.

### MUSIC QUIZ NO.1

(1) What was the correct name of Figaro in Mozart's opera?

(2) Why are Bach's Brandenburg's so named?

(3) Which famous composer (not British) wrote a work dedicated to Dickens' Mr. Pickwick?

(4) Where in England is there an old monument showing the Siegfried of whom Wagner wrote, complete with his sword Nothung and the Woodbird?

(5) Who, famous in music, was also an engineer noted for building lighthouses?

### ANSWERS

(1) Raffaello

(2) They were commissioned in 1721 by Christian Ludwig, Margrave of Brandenburg.

(3) Debussy - Homage to S. Pickwick Esq.

(4) In the grounds of Leed's Parish Church, on an ancient Saxon cross unearthed early in the 19th Century.

(5) Sir George Grove (1820-1900) initiator of Gove's Dictionary of Music.

### RECORD ANALYSIS

Schubert: Symphony No. 9 in C (Great). Halle Orchestra (Sir John Barbirolli) HMV ALP 1178.

Magical playing of the evocative opening horn solo sets the tone for this very fine performance of the much-loved symphony.

Barbirolli gives a thoroughly romantic interpretation, lacking the drive and sheer virtuosity of Toscanini's on ALP 1120 but one which compliments rather than quarrels with the other.

The engineers have done a really good job, although the sound has the hollow resonance that suggests a large (and empty) concert hall, there is ample warmth and clarity.

## EXPLANATION

Sir,

Arrangements were made in June 1954 for 4 Leeches to be printed this year. The Paediatrics was scheduled to come out early in January, the Research and Review Leech in April, followed by the Pregnancy Leech in May - the last Research and Review Leech to appear in September.

This is a new scheme and it was necessary to print in 1955 a Leech which should have appeared in 1954.

1955 is an exceptional year but by next year we hope all will be well under way. Anyhow it does not detract from the merits of the publications, even if the numbers follow in rapid succession.

We must also report that our subscribers in the Cape, O.F.S., Transvaal and as far a field as Sydney, are most impressed with the effort.

Yours etc,

(Miss) N. Baumslag  
Chairlady of P.C.C.

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# POGONOTOMY — A true science

As I watched my friend Pheidippides striding into the distance towards Athens and Marathon on that winter's day of 490 B.C. (Auricle 16th May), little did I realise that it was the last occasion on which I was to see him on Earth. Nor did I realise, as I busied myself pulling from the frozen rivulet the chariot in which I had (woe is me) accepted a lift, with the charioteer whose reckless driving had caused the accident to happen, sitting by the roadside strumming his lute and drinking hot nectar out of his Thermo-pylae (Auricle May 16th), that in the year 1955 (A.D.) I would be writing a scientific Treatise in support of the practice of pogonotomy. I became a convert to pogonotomy as I crashed to my death through the windscreen of the chariot as we passed through the village of Balforum, a conversion that was rather late, 'tis true, to benefit myself, but not too late to benefit all of mankind and all medical students from 1955 A.D. onwards by taking up the challenge of Pheidippides (Auricle May 16th) and contributing a scientific treatise on Pogonotomy. I trust I have fore-stalled any learned (or unlearned) professor who might wish to accept the challenge.

The comfort of your modern pogonotomy is in distinct contrast to the pain and discomfort of the operation even as recently as a century ago. Three battled scarred (or was it bottle scarred or battle scared) generals of great reputation in the mid-nineteenth century once said in exclusive interviews to the Press over the pogonotomy controversy: "Taking cold steel to whiskers was work for heroes"; "An attack on the whiskers or a pitched battle took equal courage"; and "Let me tell you, you would be just as whiskery yourselves, if shaving was still as laborious, dangerous and expensive as it was in my day".

Why is the 20th Century world clean-shaven, and what has made shaving comfortable and safe? To answer these questions, I must proceed to break into your 20th century jargon, which I have managed to master by a few midnight intrusions into the Medical School library at a time when even the unshaven end of the year swotters (whose facial appearance abhors me no less than it abhorred Pheidippides) have gone to bed or wherever they go between swots. Let it not be thought that I have not still a hankering regard for the full-blooded beard!

The art of 20th century shaving is based upon the application of well established scientific principles. Excluding for a moment consideration of the electric razor (about which more later), shaving is divided into two chief phases - the phase of preparation which aims at softening the hair, and the phase of actual shaving.

## THE PREPARATORY PHASE:

In composition, hair is chiefly keratin, ( $\kappa\epsilon\rho\alpha\varsigma$  = a horn) which is insoluble in water, but which absorbs water. This absorption of

water causes it to become stretchable and lessens its hardness. A dry hair cannot be stretched appreciably; a well wetted hair, however, increases by fifty per cent of its dry length when stretched by suspending it with a weight on its free end. In carrying out hair-stretching tests, a weight of 16 kg. per sq. mm. of cross section of a long scalp hair is used,

the cross section of a scalp hair being from 0.055 to 0.063 sq.mm. diameter (facial hair varies from 0.091 to 0.230 sq.mm. cross section). The hairs are tested for stretch after various softening materials have been applied at various temperatures. The hair is surrounded at and near its growing end by sebaceous matter, which retards water absorption by the hair; the excess of this sebaceous matter should be washed out by ordinary soap and water before the shaving lather or latherless cream is applied.

These hair stretching tests show that warm water and soap solution are bet-

ter than cold water and no soap solution, which confirms common knowledge. When hair becomes grey or white, it becomes much less stretchable and softenable.

The softening medium of soap lather emulsifies the sebaceous covering of the hair and makes it more wettable. Plain water cannot get at the hair to soften it until the sebaceous material has been removed. Lather also acts as a supporting medium for the hair during the shaving, and serves as a lubricant for the razor.

Menthol in a lather cream by its cooling effect causes gooseflesh by stimulating the erector pilae muscles, and increased damage to the skin results during the process of shaving.

By the use of hair stretching tests, it has been found that the optimum period of lathering is 3 minutes using water at 120 degrees F. The colder the water and the greyer the hair, the longer is needed for the softening process.

Latherless cream also softens the hair, but takes longer than lather. It tends to clog rather than lubricate the razor. Latherless cream has its best softening effect if the face is first washed with soap and water which is not washed off before the application of the cream. Latherless cream is convenient for travelling pogonotomists, but is less efficient than lather.

## THE SKIN IN RELATION TO SHAVING.



The skin forms a yielding base for the hair. Father's contortions in the bathroom aim at stretching the skin and making it less yielding. Overstretching of the skin leads to greater skin trauma as proved by measuring by the centrifuge test described in the recent paragraph, the relative amounts of skin and hair removed at shaving.

That skin trauma takes place during shaving, even when there are no gross cuts, is well known. If the debris of shaving is treated with a lather solvent and is then centrifuged, the hair sinks and the skin stays on the surface. The amounts of skin and hair can then be measured by inspection in the centrifuge tube. The damage consists of the removal of the horny layer of the epidermis, maximal at the follicular hair shaft openings.

Skin trauma, measured objectively in the above manner, is increased by the use of a new sharp blade drawn across the face at an obtuse angle (more will be said of the "effective shaving angle" later), by inefficient preparation (poor lather, or lathering for under three minutes), by excessive stretching of the skin, by shaving against the grain of the hair (of this, more later), shaving over the skin more than once, increased razor pressure, and "cooling" applications in the lather, such as menthol, which causes goose flesh, the tips of which are removed by the razor.

The angle of the hair to the skin must be considered in shaving. The flatter the angle between the hair and the skin the less effective the shave if the razor is drawn in the direction that the hairs slope. The flattest hair is under the chin and jaw. On the chin itself the hair stands at  $90^\circ$  to the skin, the average angle on the face being  $30^\circ$  to  $60^\circ$ . Shaving against the grain gives a cleaner shave but does more skin damage.

The number of hairs per unit area of skin affects shaving to some extent, the

greater the density of hair distribution, the greater the "pulling" effect. On the lower cheek the number of hairs per sq. c.m. is 20-40, on the upper 40-80, and on the upper lip and on the chin centre 80-120.

The rate of growth of hair and the thickness of hair are not influenced by shaving. The length of the shaven hair 24 hours after a close shave is 0.02 inches (0.5 mm.) The rate of growth averages 11-12 mm. a month.

#### THE RAZOR BLADE.

Both for a cut-throat and a safety razor the same principles apply:-

(a) The blade should be sharp. Its sharpness can be inspected microscopically - there should be no serrations on the edge when viewed in profile with a 4 mm. 0.85 numerical aperture objective. A blunt razor is a common cause of an uncomfortable shave, but is no more common a cause than inefficient preparation.

(b) The effective shaving angle (ESA) is of prime importance. The acuter the angle, the less effective the shave, the less skin damage, and the less "pulling". The more obtuse the angle, the cleaner the shave but the greater the skin damage and the more the "pulling". The optimum angle is  $28^\circ$  to  $32^\circ$  - this is the optimum ESA, and gives the cleanest shave with the least skin damage.

The safety razor more or less automatically provides the optimum ESA by its construction, and at the same time is safe. The cut throat in the expert hands of the barber (who never uses a safety razor) gives the best shave because the experienced barber can vary the ESA according to the tautness of the skin, the number of hairs per square millimetre, and the direction of the growth of hair and the angle between the hair and the skin.

#### THE TIME OF DAY TO SHAVE:

If the weight of hair re-

moved at a shaving session is a gauge of the effectiveness of the shave, then, according to certain hair-weighing experiments in which the 24 hour period between shaves was started at varying hours in the course of the day, the least weight of hair was removed when the 24 hour test period extended from immediately after rising in the morning, and the greatest weight during the 24 hour period starting an hour after getting out of bed. Presumably during the night some oedema of the face develops and "buries" the hair slightly, this oedema disappearing within an hour.

#### THE ELECTRIC RAZOR:

The principle of the electric razor is similar to that of the electric sheep shear. There are two thin grids of steel, the external one remaining stationary and the internal one moving rapidly to and fro at 1500 oscillations per minute. The hair enters the external grid openings and is cut off by the to and fro movement of the internal grid.

The hairs should not be softened by lather, or other preparation, as the softened hairs pass through the external grid less effectively. Washing the face rapidly with soap and water before using the razor removes desquamating epithelium and excess sebaceous material and allows the hairs to enter the external grid more effectively.

Owing to the variation in the hair-skin angle on different parts of the face and neck, the razor must be passed over the skin several times from different directions. The motion should be that of a pencil eraser.

The razor must be held vertical to the skin surface to allow the hairs to enter the grid, and the skin surface must be moderately stretched with the free hand. This also allows the hair to enter the grid, and prevents skin damage. If too loose, the skin is caught up in the grid.

The electric shave is less efficient than shaving with a blade and lather, but

Continued page 5.



under certain circumstances the electric razor is advantageous. It is speedy, as no preparation is required, is convenient for travellers, is safe for the hand that is unsteady due to vehicular motion, to old age, to neurological disease and to a night of alcohol. It is safe for the hand of the blind or for those with defective vision.

There have been numbers of reports of dermatitis due to the use of the electric razor. This dermatitis appears to be due to skin trauma due to repetitive passing of the razor over the same skin area, and possibly due to the grinding in of the hair clippings to the mildly traumatised skin. Such dermatitis clears up in a few days after abandoning the electric razor.

The electric razor is not to be used for preparing patients for operation, as it cannot be sterilised adequately and conveniently.

IN SUMMARY:

The bladed razor, to give a comfortable and effective shave requires:

(i) Adequate preparation which consists of washing the face first to remove the excess of sebaceous covering of the hairs, and then lathering for 3 minutes with warm water. Grey hair demands a longer preparation. Latherless cream is less efficient.

(ii) A sharp blade.

(iii) An effective shaving angle of 28° to 32° of razor to the skin.

(iv) A knowledge of the direction of growth of hair on various parts of the face, of hair diameter, of numbers of hairs to the square millimetre, all of which decide variations in ESA and the number of times a part is to be shaved over and in what direction.

The electric razor has its uses, but is inferior in shaving efficiency to the bladed razor.

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So now you see that there is a lot to shaving, and perhaps you can understand why I have become a convert

to regular daily pogonotomy. That frightful crash through the windscreen would never have happened had I been clean shaven at the time.

POGONOMEIDES

## NURSES & MEDICS-Q view

"NURSES ON THE WHOLE don't mind Medics, even though sometimes they make us wild - on the other hand, Medics are sometimes the only reasons we stay on." These words are straight from the horses mouth, figuratively. Yes, you've got it; here is an article written by nurses about us.

Grievance 1). You're great on professional etiquette, you walk into the ward, say "Good morning," you're greeted by "Hi, babe!"

Grievance 2). You're right Arnie, on the whole we don't mind Medics; only now and then they do get a bit much, especially when you're rock bottom junior in a ward, and your main duty is keeping the place tidy! My main objection is the mess they make. Few realise that the nursing staff is there for the benefit of the patients, not for the future members of the Medical Profession.

Tact is also often not their strong point with many students. I'll never forget the student who asked a lady why she hadn't tried to have any children for the last two years, and she replied that her husband had died three years ago!

Then we had a student who asked four times where the baumanometers were kept, and the fifth time I said "I've told you four times where the sphygmomanometers are kept!" He said in exasperation "I don't want one of those, I want a baumanometer."

One also finds the "little boy" students who comes along and says "Nurse please give me a sterile blood syringe" You say "Can you hang on a minute, they're boiling up now." "No, I must have it now." "Well, you can't." "But I want one." O.K. little boy, I'll make one!"

Now we come on to more types of different students.

For example, the type

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who wants to be mothered. He comes into the kitchen at six o'clock, pleading that he had been in the ward since 4 o'clock, and "will be there till 8 o'clock, and haven't you any ice-cream left please nurse?"

The perverted sense of humour type. You walk along, you've had it up to here, and he gives you a clout on the back that nearly kills you, smiles beatifically and says "Cheer up, Flo! Brighter days ahead."

Then the creepy, crawly ones, who, leech-like, drag themselves closer and closer, finally finish up just about wound around you, and asks, "Who is the latest incomplete?"

Well, I learnt my lesson the first week in the ward, never to assist in putting up a drip, because a) 4 needles came out - I was accused of pulling out each one. b) Blood shot out all over the place, and c) I spent the whole afternoon cleaning up the unholy mess and washing the sheets.

In conclusion - I adore Medical Students!!!!

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# —HISTORY OF MEDICINE IV—

Birth Control may be defined as the voluntary control of the Birth Rate. Methods of birth control can be divided into two main groups:

a) Birth control by prevention of Conception, i.e. contraception.

b) Birth Control by the premature termination of a pregnancy.

Before considering the opinions held at the end of the last century by an eminent physician, let us briefly consider some modern views on the subject.

## a) CONTRACEPTION

There is no doubt that, firstly, contraception is the commonest mode of birth control, and secondly that its use is practically universal. Today many methods of contraception are employed in both marital and premarital sexual intercourse; they include coitus interruptus (withdrawal), condoms, caps, chemical spermicides, douches, safe periods, sponges and many other less commonly used methods. Although, many of the methods used are extremely unreliable, they are nevertheless used by a large proportion of individuals.

The careful study of Dr. Lewis Faning into the problem of contraception has shown that even uneducated classes understand that the size of the family, can be brought within voluntary control. Most of the general public have been found to consider the limitation of the size of families highly desirable. Perhaps the commonest cause of such feelings is the high cost of living in western civilisation. As it is deemed desirable by most to limit the size of families, one must either abstain from sexual intercourse or use some other form of contraception.

Intercourse is considered to be a normal biological drive, and if it is to be suppressed, some other mode of sexual outlet should be substituted such as masturbation or petting. Such forms of sexual outlet are in fact more desirable prior to marriage than in marriage. In married couples the strain of abstinence is great and uncalled for. Chemical and or mechanical contraceptives are considered to be the more desirable modes of birth control in marriage.

Religions such as the Roman Catholic Church consider that sexual intercourse should only occur when procreation is desirable and that mechanical and chemical contraceptives are to be condemned. Slater and Woodside in their study of the marriage relationships in Urban Working Classes maintain quite rightly that the Roman Catholic must choose between conforming to his church or else conforming to the social standards of the environment. They feel that the Roman Catholic Church is fighting a losing battle on contraception especially in the urban areas. Marie Kopp in her survey of the New York Birth Control Clinic found that 26% of those who came for advice were in fact Catholics.

It is pointed out by Henderson and Gillespie that contraception is regarded by the unthinking and vulgar minded as a means of affording unlimited sexual expression without the fear of parenthood and as pondering to the selfishness of the individual. This is by no means the case, as it is the method of preventing conception when sexual intercourse is going to take place anyhow. There is perhaps some truth in the concept that chemical and mechanical contraceptives will tend to increase the incidence of premarital and extramarital sexual relations without the dread of pregnancy resulting, but so far the scientific study of contraception has found that

there is in fact no perfect method of preventing conception other than abstinence. Therefore, the possibility of conception with the use of contraceptives is still present, and the fear of conception in premarital and extramarital intercourse will still occur and tend to limit such relationships.

An extremely important function of contraception is to diminish the number of unwanted children both in and out of marriage.

## b) ABORTION

It will suffice to state that the premature termination of pregnancy is illegal unless the life of the mother is endangered.

Let us now consider the views of a physician some 50 years ago on the subjects of Contraceptives and Abortion.

a) Contraceptives: The only method desirable in birth control is abstinence. Numerous devices are adopted by both married and unmarried for the purpose of defeating the natural results of sexual indulgence, the nature of which it is unnecessary to notice here. It is sufficient to say that all these methods are detrimental to health. Thousands of men and women are suffering today with curious and varied forms of nervous and other disorders the real cause of which is simply addiction to this sexual vice. The penalty resulting from the use of contraceptives is disease, sooner or later.

b) Abortion: Among the moral evils resulting from excess marital and premarital sexual relations, must be reckoned the heinous crime of criminal abortion. A woman finds herself the unwilling mother of an unborn child, the very thought of which fills her with repugnance and disgust. She argues, "Why should I be made to suffer the pains of pregnancy and

Continued on page 11



# THE HOLLOWAY REPORT V-a commentary

IN THE LAST ISSUE we discussed the Commissions findings regarding proposals for the establishment of two or more additional University institutions for Non-Europeans. Let us now try to analyse the Commission's findings in regard to partial segregation and also relating to the establishment de novo of a single large University for Non-Europeans.

The report firstly makes mention of a system of segregation "whereby Non-Europeans would attend the same lectures as Europeans but at the same time be separated from Europeans by partitions or some similar means in the halls in which instruction is given". The Commission considers any further discussion of this proposal superfluous.

The Commission devotes some attention to "a scheme whereby, at the Universities of Cape Town and the Witwatersrand, a) separate academic provision would be made for Non-Europeans in the case of each course in which the number of Non-Europeans should exceed some stipulated number and b) non separate provision would be retained as long as the number of Non-Europeans did not reach the specified limit".

The Commission makes little mention of the moral issues involved in such a scheme, although it does deal with the considerable practical difficulties. To create a situation within a University where both the system of segregation as well as non-segregation is practised, could only create an air of tension amongst students. Dealing with the practical difficulties, the Commission reports:

"These difficulties arise especially from the following circumstances:-

(a) The number of Non-European students taking a particular course can be expected to vary somewhat from year to year with the result that the number may in one year be above the prescribed limit, and in a subsequent year quite possibly be below that figure. Such courses would then either continually alternate between segregation and non-segregation or, the "limit" would have to remain on a very loose footing,

which would entail a most undesirable state of uncertainty.

(b) Curricula which have to be followed for the acquisition of degrees or diplomas consist for the most part of combinations of courses in particular subjects. The scheme under discussion would, therefore, in many cases result in the same Non-European student having to take some of his courses separately and others non-separately. As can definitely be expected, this duality will, cause at least considerable difficulties.

"It is hardly superfluous to emphasize that the scheme will also involve considerable additional costs according to the extent of segregation introduced."

"The establishment de novo of a single large university for Non-Europeans." Dealing with this suggestion the Commission reports:

"The establishment De novo of such an institution will undoubtedly involve a considerable capital expenditure which, however, could be spread over a number of years according to the growth in number of Non-European students and the accompanying development of the university. If (1) such a university were gradually organised with a view to the future in order to cater eventually for, say, 2,500 Non-European students, (2) Provisions were made there for the usual faculties, including inter alia Medicine and Engineering, and 3) the quality of the facilities provided was equivalent to the average standard of that at existing South African Universities, the capital costs would be of the order of 2½ - 3 million pounds."

One can but wonder if the Commission is serious about suggesting training in Engineering for Non-Europeans.

Surely they do not think that the government would for one moment give any thought to such a suggestion. Past evidence in the difficulty newly qualified Non-European medicals have experienced in obtaining internships is ample proof of the difficulties which would face the Non-European Engineering graduate.

The Commission goes on to say that capital expenditure could be considerably reduced by concentrating all Non-European students in Durban and at Fort Hare. As a point in favour of such a scheme the report mentions the abundance of Non-European clinical material available for Medical training of Non-Europeans at Durban. Typical of the many vague statements appearing in the report is the following: "The total weight of Non-European babies born in the King Edward VIII Hospital alone amounts to 20 tons per annum!"

The Commissions findings in respect to enlarging facilities at Durban and Fort Hare is not only vague but difficult to follow, and in many parts appears to be contradictory.

First year students are informed that the excess S.M.C. Fees which they paid will be refunded during the month of May.

They are requested, however, to contribute the sum owing them, to A.M.S.T.F.

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# RESEARCH IN SURGERY DEPARTMENT

(We have been requested to reprint an article which appeared in the Auricle last year concerning the Research work being done in the Surgery Department.)

"We have four main teams engaged in Research at the moment," said Professor W.E. Underwood, Dean of the Faculty of Medicine and Professor of Surgery, when interviewed by an Auricle reporter.

"These four teams" added the Professor "although at the moment engaged on individual problems of Research, have however, a common pattern of research and are working towards an ultimate intergration of their findings.

The units were namely,  
1) The Nuffield Cardiac Surgery Research Unit which is sponsored by £2,500 Nuffield Foundation Grant.

This unit is at the moment working on the surgical treatment of mitral valve disease. With modern surgical manoeuvres, although mitral stenosis can be treated surgically, mitral regurgitation has not as yet been found to be readily amenable to surgery.

However, the Wits unit is now engaged in the manufacture of artificial valves with the ultimate goal of using them in cases of mitral incompetence.

These, went on the Professor were not made out of dead tissue - like polythene for instance - but were actually fashioned out of living tissue, mainly using pericardium. Hence the replaced valve would have all the properties of normal living tissue - including of course the very necessary property of elasticity.

Comprising the Cardiac team are a Cardiologist, a Surgeon, and Anaesthetist and an Anatomist, all duplicated incase any of them should for some unavoidable reason be unable to participate on a particular occasion.

"Secondly", added Professor Underwood "there is what we will call the Refrigeration Team". At the moment techniques available to surgeons for lowering body temperatures for operative procedures, require the freezing of the entire body. This has proved not only a difficult procedure, but also a very tedious one, taking many hours to perform.

Now a Wits unit headed by an anaesthetist and a surgeon have designed an apparatus which is capable of low-

ering the patient's temperature quickly, NOT by freezing the whole body, but by specifically cooling the patient's blood.

"This" said the Dean "is a unique bit of research work. Indeed the results hereof are being eagerly awaited overseas, in view of the great advance and speed-up it would bring about to what are at the moment very laborious procedures."

As a subsidiary of this unit, there is a group studying the ill-effects of freezing, histologically.

At this early stage, the team had already established that the ill-effects of freezing, appear to be produced by direct cellular action, apparently acting through intracellular enzyme systems.

"This work may well prove of international importance" was the way Professor Underwood summed up this branch of the work.

Thirdly, there is a team perfecting the Artificial Heart. This comprises virtually the entire Department of Surgery, with invaluable co-operation from the Department of Electrical Engineering where the guidance of Professor Bozzoli has been stimulating.

The unit was working mainly to perfect the technical side of the artificial heart.

The fourth pillar in this quite outstanding project was concerned in the preparation of a storage bank of blood vessels - both arteries and veins - for vascular surgery. Headed by two surgeons, they are also actively working out Replacement techniques to employ in their Tissue Banks.

This then is the enorm-

ous project undertaken by the Department of Surgery.

Let us get a glimpse of how far they have progressed in their work:-

An operation on an animal was performed whereby it was possible to perfuse its Coronary Arteries with WARM OXYGENATED BLOOD. The stenosed part of its Coronary Artery was caniculated so that the area of HEART TISSUE it supplies did not undergo necrosis.

An hour had elapsed by the time the operation was complete and the heart restarted, but apparently incredibly by special means elaborated in the Department, the beating of the heart was again restored; and via the Defibrillator - a machine invented through the joint efforts of the Departments of Surgery and Electrical Engineering - fibrillation was overcome and Normal Sinus Rhythm set in.

The Professor then went on to show that it was thus feasible to prophesy that when the linkage between the four units was sealed, all four teams could participate in one operation. If the Cardiac team required the heart to be opened for say 2-1 hour to perform a valvuloplasty - which incidentally has NEVER previously been done - then the freezing team would come into action and cool the patient's blood, and hence by lowering the B.M.R. thereby allow a longer period within which the operation could be safely performed.

Here the artificial heart team would join in and ensure a Blood Supply to vital organs like brain, liver and kidney.

Finally the Vascular Team would provide the Tissue Bank for replacement of a patient's diseased tissue,



where it was deemed necessary  
 "Let me, however, conclude  
 on this note, namely that  
 all our work is still in the  
 experimental stage, and much  
 remains to be done before  
 our techniques are perfected"  
 concluded Professor Under-  
 wood.

The above cursory glimpse  
 into the Surgical Departments  
 Research Programme, should  
 be a sufficient eye-opener  
 to students to perceive of  
 the outstanding research be-  
 ing conducted on our door-  
 step. Although Professor  
 Underwood is silent on this  
 matter, it is clear that his  
 direction, encouragement and  
 actual participation have  
 provided the stimulus for  
 this research, which we feel  
 sure will in the not too dis-  
 tant future yield the expect-  
 ed high dividends and revol-  
 utionise the treatment of  
 Cardio-Vascular Disease.

D.R.

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in order:

An amoeba named Joe and his  
 brother

Who were drinking toasts to  
 each other;

In the midst of their  
 quaffing

They split themselves  
 laughing,

And now each of them is a  
 mother.

*Maus*

## THE INNER EAR.

THE APATHY for which this school is notorious has  
 raised its ugly head again. On Wednesday week ago, the  
 Arch. & Anthropol. Society presented Dr. J. T. Robinson  
 in the Harveian. Dr. Robinson is the late Dr. Broom's  
 successor, and probably  
 knows more about Ape-Men  
 than any other man alive  
 ("The Significance of Ape-  
 Men" being the subject of  
 his talk) and there were  
 just 103 people present.  
 However they were a most  
 enthusiastic audience, and  
 most of them were 2nd Years.  
 Which is a little encourag-  
 ing. Dr. Robinson's lecture  
 is one which we will always  
 remember, not only for its  
 simplicity and clarity, but  
 for its virility and presen-  
 tation. (A few lecturers  
 at this school could learn  
 something from Dr. Robinson.)  
 Professor Dart proposed a  
 vote of thanks, and the  
 Professor's short address  
 was as interesting as Dr.  
 Robinson's longer one. It  
 is significant that Prof-  
 essor Dart was the first  
 person to describe an Ape-  
 Man, the Taungs child in  
 1925.

Later at the small tea  
 party, Prof. Dart said  
 "The limit to Man's  
 possibilities is his  
 imagination".

In contrast to the above  
 meeting were the series of  
 films presented during  
 the lunch-hours of Pregnan-  
 cy Conference week. These  
 films were packed out. Last  
 week we mentioned the mor-  
 bidity of the lay public.  
 Well, these films bore out  
 those observations. For  
 we noticed students from  
 the faculties of Engineering,  
 Art, and Architecture at  
 these films, and hence the  
 crowds. These people who  
 have no right to attend  
 films of this sort were not  
 there for the purpose of  
 gaining further knowledge  
 of the process of child-  
 birth, but were there more  
 out of morbid curiosity.  
 And the result was that  
 Medical students coming in  
 from the wards had to spend  
 most of the session stand-  
 ing against the wall.

We have heard that during  
 the Festival, certain stud-

ents from Mens Residence  
 presented themselves at  
 the dressingroom of the Air  
 Hostesses taking part in the  
 "Queen of the Air" contest,  
 and claimed to be Auricle  
 reporters. Having thus  
 gained admittance, they  
 spent an entertaining half-  
 hour "interviewing" them.  
 More details are unavailable  
 from these gentlemen.

In the department of  
 Anatomy is an African tech-  
 nician, John Tshabalala,  
 whose father used to produce  
 Stone-Age type implements  
 in the fashion of his fore-  
 fathers for the last half  
 million years. He used  
 to chip stones to produce  
 spear-heads and arrow-heads;  
 and here is his son who  
 articulates skeletons for  
 the department - everything  
 from small rodents to gir-  
 affes - with an accuracy  
 and knowledge of osteology  
 that certainly no student  
 can approach. He is not  
 only able to side the bones,  
 but can tell to which animal  
 they belong. And that ain't  
 hay. Surely this is excel-  
 lent evidence that the Non-  
 European mind is as capable  
 as the Europeans'?

With Intervarsity now  
 only two weeks off, the  
 traditional raids between  
 Tukkies and Wits have begun.  
**WANTED:** One general with a  
 knowledge of modern warfare  
 tactics. Apply Cottesloe  
 Mens Res.

We hear that Dr. Brian  
 Hudson is returning soon  
 from London where he attend-  
 ed further courses in Path-  
 ology. Dr. Hudson was on  
 the staff of the Department  
 of Pathology. He has worked  
 at the National Heart Hosp-  
 ital, Hammersmith, Brompton  
 Chest, Queen's Square, St.  
 Mary Abbott's and others.  
 We will be happy to welcome  
 Dr. Hudson back to the Union.

In view of the recent  
 Conference, we feel that  
 the following few lines are

CONTD. BOTTOM OF 1st Column



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 Attending Orthopaedic Surgeon, Hospital for Special Surgery,  
 Associate Professor of Clinical Surgery (Orthopaedics)  
 Cornell University Medical College.

This review is intended to illustrate and to discuss, briefly and systematically, the principal features concerning the diagnosis and treatment of fractures. It has been written for the student, the houseman, and the general practitioner.

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childbirth merely to gratify the animal propensities of another. She transfers the sense of injustice which she rightfully feels against the author of the wrong to the helpless creature which is the consequence of it, and allows her feelings to grow into actual vindictiveness, when she is ready for almost any measure which will free her from the incumbrance, and willingly resorts to the use of drugs or instruments by which the purpose may be accomplished.

Fearful indeed are the consequences of this terrible crime; often enough the mother's life is sacrificed or her health forever shattered. No one could be more wretched than the woman who has brought upon herself the physical woes resulting from this unnatural crime. The violence done to the delicate tissues of the womb often sets up most terrible inflammations, the results of which can never be wholly effaced, if the sufferer does not pay the penalty for her crime with her life. Sometimes the most persistent efforts to compel the womb to give up its treasure do not succeed, although the foetus may be mutilated so that at birth the human form can be scarcely recognised. This may be fairly considered as the cause of some of the terrible MONSTROSITIES which have sometimes been attributed to some demoniac agency, and which may still be charged to motives that are certainly something less than human—may we not say devilish?

The idea held by many that the destruction of foetal life is not a crime until after "quickening" has occurred is a gross and mischievous error. No change occurs in the developing human being at this period. The so-called period at which the movements of the little one becomes sufficiently active and vigorous to attract the attention of the mother. Long before this, slight movements have been taking place. As soon as fertilisation of the ovum takes place, a new life comes into existence, possessed of its own individuality with its own future, its possibilities of joy, grief, suc-

cess, failure, fame and ignominy. From this moment of time, it acquires the right to life, a right so sacred that in every land to violate it is to incur the penalty of death. How many murderers-murderesses have gone unpunished! NONE—but God knows the full extent of this most heinous crime but the searcher of all hearts knows and remembers everyone who has thus transgressed, and in the day of final reckoning, what will the reckoning be? Murder?—MURDER, child murder, the slaughter of the innocents, more cruel than Herod more cold-blooded than the midnight assassin, more criminal than the man who slays his enemy,—most unnatural, the most inhuman, the most revolting of all crimes against human life.

But let us not condemn alone the weak, half-crazed woman who has been compelled to become a mother against her will, simply to gratify the sensual male. Who will lay upon her more censure than upon the man who is responsible for the sin in the first place? He deserves at least an equal share of condemnation. Let the male sex weigh well this fact and act accordingly.

## JAZZ SOCIETY

Jazzsociety attempted to tap the almost unlimited resources of West Coast Jazz on 20th May when a programme of Mulligan and Brubeck music was presented. Owing to a last-minute decision of the SRC to hold a general meeting on that day, the audience was smaller than it might have been, but the 70-odd students present seemed especially to enjoy the Brubeck "Oberlin concert".

On June 7th Jazz in South Africa will have suffered a tremendous blow with the departure for England of Dave Lee. For a long

time it has been evident that Dave has developed into too great a musician to continue in the comparative obscurity of a Johannesburg night-club, and the door has now been opened for him to rise to the top of the Jazz ladder in England, and ultimately the United States. We have little doubt that a great future overseas lies ahead for Mr. Lee, but while wishing him success, we cannot help realising what a tremendous gap in the Jazz scene he is going to leave in South Africa. In appreciation of what he has done for Jazz at the University and Medical School, the two Societies gave Dave Lee a presentation on May 27th in the Great Hall, at a rousing farewell concert.

For the month of June Jazzsociety has planned 3 further record recitals and a live concert. The first of the record recitals will deal with the place of Swing in the Jazz picture. The music of Glen Miller, Bennie Goodman, Duke Ellington and the other giants of the Swing Era will be featured. Full information on the subject will again be distributed on the day of the concert.

FIGHT THE STATUTE!

KEEP STUDENTS FREE!

ctd. from page 12

to pull his game out of the fire.

The match was extremely successful and it is hoped that this will become a yearly event. It was mooted that a league be formed consisting of Coronation, Resdoc, Baragwanath and Medical School and if this comes about it is hoped that students will support it.

PLAY SQUASH AND KEEP FIT.

Squeezy.

(The Sports Editor's thanks go to "Squeezy" for this contribution. He is a prominent member of the club and is in the first team.



## — Inter - Class Golf —

On Thursday May 12th the 4th years met the 5th years on the C.M.R. golf course in the first interclass golf game of the year. The organizers of the event are to be commended and it is hoped that during the year more such games will be played, involving also the staff. The players are to be complimented on resisting the lure of the 19th before the completion of the matches.

The match was won by the 5th years by 3 games to 1.

In the two-ball Stan Javett of 5th year, plus fours and all, beat veteran Hilton Falcke two up. The solitary 4th year victory was registered by Bill Duckworth, of tennis and ballroom fame, and Gerald Gilchrist over Clive Prowse and Shalom Rummel. This in spite of some mighty driving by the latter. Joe Bakst and Ralph Yodaiken were two up at the sixteenth hole over Mendy Wulfsohn and Alf Ordman when the Clubhouse was sighted and that was that. Buddy Miller and Nathan Levine ended two up over Simon Sonik and Peter Christianakis.

### RUGBY

On May 14th, seven Wits rugger sides were in action - Under 19 A B & C and all the open sides with the exception of the 1st XV. Fortunes were varying - the Under 19's won and the only successful open side was the 3rd XV.

The first team at last won a match on Wednesday 18th. This was a Grand Challenge Match versus Pirates at Milner Park. The 'Varsity team showed some changes from the one which had played against Natal University one-and-a-half weeks previously. Ian Scott, a civil engineering post-graduate student recently transferred from Wanderers was at fullback, Ulyate in place of Tev Pienaar at stand-off, Lou Kaminer at centre, Murphy in place of Wheeler (crooked), Cumming for Higgs (crooked) and Bertie Rosenberg for Lowenthal (dropped).

The game opened at a cracking pace with both sides playing delightfully. Within minutes Ulyate dropped a magnificent goal.

Later in the first half the skipper, Lombard dived over for an unconverted try. Pirates reduced the leeway with a penalty. Thus the half-time score was 6-3 to Wits. The second half opened on the same scrappy note on which the first half ended and for the rest of the game the standard remained uninteresting. The final score was 9-3 to Wits, Scott kicking a penalty. The latter made a brilliant debut.

The second victory within a week occurred last Saturday when Diggers were beaten by 2 tries and two penalties (12 points) to 9 (3 penalties). The only change in this team was Pienaar for an injured Ulyate. In this game Tev was one of our outstanding players, the others being Derek Playford, Frank Lucas and Ian Scott. Wilf Rosenberg's passing has gone off so much that some tries were thrown away due to poor passes.

These two victories are just the tonic Wits Rugby requires for the Intervarsity on June 4th. Hopes are now rising that UP bites the dust once again at Loftus Versfeld.

The Wits Rugby Club will be fielding seven open sides and 4 Under 19 sides at Intervarsity. One of the open sides is a Medical one so parttime Medical Rugby players start limbering up now!

### STASIS IN INTERCLASS SPORT

With the winter sports season already one-third over not one soccer, hockey or Rugby interclass game has taken place. This is a shocking state of affairs and time that the All Sports Council members for the sports concerned ging-

ered up the class sports representatives. Class representatives might see to this matter as well.

### DOCTORS-STUDENTS TIE THREE ALL AT SQUASH

In a thrilling finish, the students managed to win the last three matches of the evening to tie the squash match with the doctors at three all.

Outstanding performance of the evening was Benjamin Goldberg's (BDS II) 3-2 victory over the ex-varsity champion Dr. David Whiting. Goldberg retrieved brilliantly after being down 2-1 in games to take the last two games 9-7, 10-8 and the match. Dr. Whiting was severely handicapped by an injured knee, but despite this showed touches of his brilliant court-craft and kept Goldberg on the run throughout the match.

In the top match of the evening, Len Cohen beat Dr. Ollie Charlton by three games to two. Technically this was the best game of the evening and Cohen did extremely well to beat a player of Charlton's experience.

A. Ordman (4th Medicine) had an unexpectedly easy victory over a very (as usual) unfit Dr. Lennie Sash. Sash has given a solemn undertaking to be fit for next year's encounter. Ordman played with his usual determination.

Eric Furman (M.B. II) coming in as a last minute substitute played well in losing 3-2, and may have done better had he not donated blood shortly before. Eric's lady-friend was in the gallery but despite this inspiration he just could not make it. One wonders whether the combination of blood, sweat and tears was not too much for him.

A. Cohen (M.B. II) who has impressed everyone with his keenness, narrowly lost 3-2 in a hard fought game. B. Edelman (M.B. III) lacked the little bit of experience



# THE LIBRARIAN SAYS ~

## Be a Delegate to M.F.C.!

The Annual Conference of the Medical Faculty Association of NUSAS, takes place this year in Johannesburg. Delegates from the various Medical Schools, come together to discuss problems affecting Medical students, such as Curriculum, Internships, etc. In addition, papers of scientific interest to medical students are presented.

Usually these papers are the works of students themselves, particularly Medical Science and Honours students. It is hoped this year to arrange tours to places of interest as well.

Students interested in attending the Conference as official S.M.C. Delegates are asked to hand in their names to the S.M.C. Office by Monday 30th May.

There are only 5 official delegates from each centre, but all students are welcome and indeed the success of the Conference depends on the number of students present.

The times of the Conference, which takes place during the period July 3rd - 14th, will be published in the NUSAS Brochure.

Are Medical students uncultured, uncreative savages? It would appear so from the response we have had to our appeal for short stories, poems, crosswords, articles etc.

We will be grateful for all contributions, all of which will be favourably considered for publication.

"Out of old books, in good faith,  
Cometh all this new science  
that men learn".

(Chaucer)

The history of Medicine includes, of course, the history of Anatomy, Physiology, Pathology and other branches of the subject, and each of these has its own historians. Anatomy has a venerable background and well deserves separate study. Two books which give brief but readable accounts of the origins, struggles and successes of the study of human anatomy are Anatomy (Clio Medica) by G.W. Corner, and The Evolution of Anatomy, by C. Singer. A better appreciation of the subject can be obtained by adding to these some of the translated works of the first investigators such as Galen, Vesalius, Fabricius and William Harvey. A good account of the difficulties faced by anatomists before the passing of the Anatomy Act in 1852, is found in "Sack-'em-up men" by J.M. Ball. Other interesting reading is provided by the biographies of anatomists, such as Andreas Vesalius, by J.M. Ball; Leonardo da Vinci, The Anatomist, by J.P. McMurrich; Leonardo da Vinci on the human body, by C.D. O'Malley and J.B. Saunders (Beautifully illustrated), and John Hunter, by S. Paget.

Physiology may be considered a more recently developed study, as the early explanation of the functions of the parts of the body were based more on philosophy than on observation and experiment. Singer's book on the evolution of anatomy includes some account of the development of physiology, and this may be supplemented by Physiology (Clio Medica) by J.F. Fulton, and Lectures on the history of physiology during the 16th, 17th and 18th centuries, by M. Foster. Interesting biographies include Olmsted's Life of Claude Bernard; The personality of William Harvey, by G.L. Keynes, and Some

## CLAUDE BERNARD Society

Present

DR. H. B. STEIN

who will address the second meeting of this society on:-

### THE CLINICAL ASPECTS OF COAGULATION

in  
HARVEIAN LECTURE THEATRE

on  
Wednesday 8th  
at  
8.15 p.m.

All students (Medical, Dental, Nursing) and Medical practitioners welcome.

Cont from  
previous column

apostles of physiology, by W. Stirling, a collection of biographical sketches with a fine set of portraits.

.....  
As a contrast to the old and historic aspect, students may be interested in the following new books, recently received. The second edition of Harrison: Principles of Internal Medicine, somewhat intimidating in size, may prove a very present help in trouble to those students who cannot find what they need in the more compact textbooks of medicine. The latest yearbooks to arrive are those of Medicine; Eye, Ear, Nose and Throat; and Urology, all containing abstracts of articles published in 1954-55. Advances in Paediatrics, vol. 7, 1955 is a collection of review articles.



# APE-MEN - THEIR SIGNIFICANCE

Last Wednesday night, Arch. and Anthropol. presented Mr. J. P. Robinson, of the Transvaal Museum, Pretoria, who delivered an excellent address to an enthralled audience of over 100. The subject of his talk was "The Significance of Ape-men".

Starting with a description of how the first primitive humans reached the places in Western Europe, Africa and even China, Mr. Robinson then drew comparisons between these primitive types and showed how different and how similar they were.

Beginning with a comparison of brains he showed that the brain of the Australopithecine was larger compared with the general body structure, than that of Paranthropus. Dealing with the differences in brain size, Mr. Robinson pointed out that the gorilla had a larger brain than Australopithecine, 600 cc. to about 700 cc. Paranthropus, however, had a capacity of about 700 cc.

Then, dealing with teeth, Mr. Robinson pointed out the extreme importance of these, in determining the species, and the part played by teeth in the formation of the skull.

The skull plays an important role in determining the position of fossils, in the chronological order of evolution. Here, the position of the foramen magnum is of vital importance. The farther forward the foramen is, the more humanoid the fossil is considered, because it indicates that an attempt was being made by the animal to assume an upright posture. Again, referring to the skull, teeth play a large part in determining the shape and structure. The larger the teeth, in the more primitive types, the more powerful the masticatory muscles, especially temporalis, required to move the mandible. Then, from this a large sagittal crest, as in the gorilla, was developed. As evolution progressed, and man developed his latent ability to manufacture tools and stone implements, however primitive, there was less need for large teeth, which were needed for defensive purposes; these became smaller. Therefore the muscles did not necessarily have to be so large, therefore they no longer pro-

duced this large crest which then disappeared; a definite sign of more advanced evolution.

The curves of the spinal column also have bearing on evolution. The human today has four curves, whereas the primitive types have only one or two. The pelvis too, is important in determining the position in the evolutionary scale. Here the angle of the pelvis is an important factor.

Mr. Robinson, in a most facile way, then went on to indicate the position of Ape-men in evolution. He dealt with the effects of environment, climate and the appearance of the more advanced types of humanoid. Discussing the cultural component, he went on to speak about the manufacture of implements, and discussed the disappearance of the more primitive types of man. He also gave a short indication of the types of earths and rocks in which the fossils and implements were found. Mr. Robinson concluded his lecture by showing a number of excellent slides, illustrating the points he had made in his lecture, concluding with one showing the memorial bust of Dr. Broom in the caves at Sterkfontein. Great credit must go to Mr. Robinson for the technical excellence of these slides. Questions were then answered by Mr. Robinson and, in answering them, he gave a very clear explanation of the modern methods of determining the age of fossils, by use of radioactive carbon.

Professor Dart then proposed the vote of thanks to Mr. Robinson, during which he spoke of the way

Mr. Robinson, then a young enthusiastic graduate of the University of Cape Town came up to Pretoria, to assist the late lamented Dr. Broom, of hallowed memory, the man who, inter alia, made South Africa really famous in this field, by his discovery of the famed "Mrs. Ples".

Mr. Robinson, following in the illustrious footsteps of his predecessor, then proceeded to make many important discoveries on his own account, at sites such as Swartkranz, and Sterkfontein. Professor Dart then went on the speak of the great opportunities offered by this country in the fields of Anthropology, Archaeology and Palaeontology, and pointed to Mr. Robinson as a brilliant example of a scientific mind in these fields. He concluded by saying how much he had enjoyed, and he was certain, how much the audience had enjoyed it, listening to this brilliant exposition of a most difficult subject, by so fine a lecturer.

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