careers



UNION NEWS PULL-OUT SUPPLEMENT

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UNIVERSITY OF BIRMINGHAM

FACULTY OF SCIENCE AND ENGINEERING

The following courses, at postgraduate level and leading to the qualifications indicated, will be held during the academic year which commences on 3rd October, 1966. The normal entrance requirement for these courses is an appropriate Honours Degree or equivalent qualification. Courses marked with an asterisk are also open, with special requirements in certain cases, to suitably qualified non-graduates who, on successful completion of the course, qualify for the Diploma in Graduate Studies.

DEGREE OF M.Sc.

Applied Genetics Applied Geophysics

Biological Engineering
Brewing Science
Chemical Engineering
Clinical Biochemistry (Two-year course)

Comparative Neuro-Sensory Physiology and Behaviour

Electrical Machines and Automatic Control Engineering Production and Management Studies Foundation Engineering

Highway and Traffic Engineering

Highway and Traffic Engineering
Immunology
Industrial Metallurgy (Science of Founding)
Information Engineering (including Air Traffic
Engineering as an optional variant)
Mathematical Statistics
Meteorology and Climatology
Mineral Chemistry
Minerals Engineering
Operational Research

Operational Research Physics of Solids Pure Mathematics

Quality and Reliability Engineering

Radioactivity and Reliability Engineering
Radioactivity and Radiation Technology
Radiobiology (This course, which begins three weeks
before the beginning of the session, is primarily a
preparation for a Ph.D. research course)
Reactor Physics and Technology (including Reactor
Road Materials and Construction Engineering
and Neutron Physics as an optional subject)
Solid State Electronic Engineering

Solid State Electronic Engineering Thermodynamics and Related Studies

Water Resources Technology Transportation and Traffic Planning

Work Design and Ergonomics

DIPLOMA

Mathematical Physics Petroleum Production Engineering

Enquiries regarding these courses should be addressed to the Assistant Registrar (Science and Engineering), The University of Birmingham, Birmingham 15

THE NEXT STEP ... INTRODUCING CAREERS

By Mr. O. H. DICK, Secretary of the University Appointments Board

A NOTHER careers supplement! Why do Union News and other papers think it worthwhile to produce these supplements from time to time? There are probably two main reasons. First, the great majority of students come, sooner or later, to consider the question of what they are going to do after they graduate. Secondly, employers of all types are anxious to attract the attention of qualified people or of those about to qualify, and to an almost surprising extent the employers are prepared to support careers supplements or to spend money on expensive advertisements.

Even the traditionally restrained British Civil Service does not now hesitate to take a full page in the Guardian to attract potential admini-

strators and diplomatists.

It is, of course, encouraging that there is in general a buoyant market for graduates and that employers should look to the universities for recruits with brains and character. But the flood of careers booklets and pamphlets and the barrage of advertising, makes it more, not less necessary, for students to consider the opportunities in a critical and realistic manner.

This is where University Appointments Boards come in. Between the Wars the Boards were concerned with missionary work to extend the field of graduate employment, but in the last decade the Boards have developed into departments which aim to provide a comprehensive advisory and information service about all aspects of graduate employment.

The Leeds Board has, at its office at 38 University Road, a wealth of information available about fields of employment, about individual employers and about post-graduate courses of an academic or vocational character. Students of all years are welcome to use the careers library.

But the main efforts of the Board's Officers are directed to seeing students individually and discussing with them any questions which they may have about employment or careers. Following this, students who are likely to be in the market for jobs can meet some of the many employers who visit the Appointments Office during the second term of each session.

If you want information about a particular field of employment or if you want a general discussion and advice about the opportunities which may be open to you after taking a first degree (or after some form of post-graduate study or training), the first step is to call at 38 University Road and make an appointment to see one of the Board's Officers. It is for you to make use of the service which is available.

DRAMA

Play's the Thing

"DON'T put your daughter on the stage, Mrs. Worthington." Even today the theatre is not the safest of professions to enter. But for those with a burning desire to work on the stage, and who like to live dangerously, the theatre can be spiritually (if such considerations shall enter into the choice of a career) if not always financially rewarding.

Nonetheless, in the past two years several Leeds graduates have carved themselves niches somewhere in this relatively small world. including the present producer of Coronation Street.

Many students also on to nost-orad courses in drama both in this country and abroad.

Training

The universities of Bristol and Manchester both have Departments of Drama which officially provide "vocational training." But in actual fact qualifications of this sort are little regarded in the circles of the professional theatre.

Weathered troupers who learned their trade before these centres were opened, tend to look down on upstarts who come into the theatre full of bright, impractical theories.

But perhaps the only reason is that these academic courses are in their infancy and still have to prove their worth.

Schools

Of more importance at present are the Drama Schools such as RADA, the Guildhall School of Speech and Drama and The London Academy of Music and Dramatic Art which provide "bit" parts parts for local rep.

But for the more fortunate who rise to the London theatre world (or higher) either from rep. or straight from drama school, life is still very dicey.

Few stay at the top for long.

Perhaps for the really talented actor who is not in the game

fame, work with a repertory company is most rewarding—and there are signs of a provincial revival.

New theatres are springing up in the provinces—at Nottingham, Coventry, Scun-thorpe and Rotherham -and the older-established companies, such as Birmingham and Bristol, where Peter O'Toole trained, are also involved in what is fast becoming a movement to breakdown the exclusive centralisation of theatre in London.

Among other exciting adventures are the Cannon Birmingham Hill Project and the Theatre. Victoria Stoke-on-Trent, which is one of the few theatres in this country to use theatre in the round.

Actors

Actors in rep. are usually paid a basic minimum wage which is supplemented according to the parts they are taking in the various productions.

Today the system of advancement in the

merely for the profit or theatre (as in so many other professions) is delicately graded on the basis of a specifically professional training both artistic and technical and which are highly regarded in theatrical circles.

By Paul Adrian

Most of the young actors in the West End, in films, television and radio, and in local rep., including well-known figures such as Albert Finney, Tom Courtenay and Vanessa Redgrave, passed through these schools.

Race

The most common way to enter the professional theatre is to join a provincial theatre company, usually after attending a drama school. From then on it's a rat race to the top.

And the unfortunate thing is that so many competent actors are just non-starters. Surely nothing could be more soul-destroying than to spend one's life "knowing playing "knowing people" and making contacts.

THE NEXT STEP ... Helping people

SOCIAL SERVICE

On this page we look at two aspects of help in the communitysocial work and psychology. We don't pretend to exhaust these subjects or the possibilities of help in the community. After all, that laudable subject so often snorted at, Teaching, is surely of supreme importance to the community. More students are needed every year to educate the nation's children and keep the country not only in the forefront of knowledge but also civilised—that's what helping others is about.

AS the welfare state continually extends its responsibility for the individual, the role of the social worker becomes increasingly important in modern society. Social work is not an easy job
— demanding a high level of practical and theoretical training, yet also a basic concern with

Most candidates are expected to have a degree — perhaps the most suitable is one in the social sciences, but other graduates are not debarred. In almost every case, the degree must be followed by a course of specialised training, including a considerable amount of practical work. It can last from nine to eighteen months, depending on the particular course. Having passed this, the social worker can enter his or her chosen branch of work.

Social work is a general term for a large variety of jobs, with many different functions. Two broad divisions are found — individual casework and group organisation. The former consists of personal investigations into the problems of individuals, working through interviews, visits to families and close contact with the person in need of help. Group workers are more concerned with integrating the individual into the community at large, and thus organise such things as youth clubs and community centres.

Broad generalisations

Within these two broad generalisations are many specialised jobs. Each year large numbers of deprived children come into the care of local authorities. Individual arrangements for these

By ANN ROBERTS

children are made by the child care officer, placing them in children's homes or with foster parents and, where possible, consulting parents. A more specialised branch of work with children consists of the variety of jobs connected with approved schools. Family casework is the most comprehensive and least specialised of all forms of social work. The family caseworker is a member of a team, in touch with other social workers.

The Probation Officer deals with both adults and children. When an offender is brought before the court the Probation Officer investigates the full circumstances and home background so that a fair decision can be reached. His judgement is all important. He also sees regularly any person on probation, acts as a conciliator in matrimonial disputes and undertakes after-care of released prisoners.

Close co-operation

The Almoner is concerned with medical social work, in close co-operation with the doctor. She attempts to assist discharged patients to return to normal life, or adjust to disablement, and frequently deals with the financial worries that sickness brings. Psychiatric social workers are specifically trained to help people who are so mentally and emotionally disturbed that they can no longer conduct their lives adequately. They work closely with the psychiatrist, in hospitals, child guidance clinics and home visits. Most prospective psychiatric social workers are required to have had some experience in other forms of social work.

There are many varied branches of social work and all the specialised forms of welfare work, community work, etc., cannot be covered here. Each branch of social work is governed by a central council, which runs the specialised training courses necessary for qualification in that branch. Exact details of course requirements and length can be obtained from these authorities, and addresses are found in "Choice of Careers" pamphlet "Social Workers," which also provides a good overall picture of opportunities in this expanding field of employment.

PSYCHOLOGY OF A JOB

By KATHLEEN LANG

WHAT are psychologists? Do they, as is the opinion of a certain neurology-studying Medic, who shall, for his own safety, remain nameless, live in a world of their own unrelated to present-day actualities?

The fact is that an increasing number of school-leavers are attracted to the prospect of studying for a degree in psychology, but opportunities for full-time employment not numerous. Reading for and obtaining a degree is not adequate in itself.

Personality plays a cess or otherwise of this career. A sympathetic, yet scientific, analytical and objective mind is necessary; emotional maturity is essential.

The Psychiatrist, as distinct from the psychologist, has almost always a degree in medicine, but there are branches of the profession open to the Committees for work medically unqualified in therapeutic work psycho-analysis, diagnostic work at certain mental hospitals or in out - patient departments of general hospi-

Employed

The Educational Psychologist is employed in the School Psycho-logy Service of Local Education Authorities. work involves assessment of a child's personality, organising classes for the maladjusted, the physically and mentally subnor-mal, in fact all mental health aspects of educa-

Qualifications required are an Honours degree in Psychology, three years' work with normal children, and a special post-grad-training in Educational Psychology for one year. The demand for Clinical Psychologists is greater. They are generally employed by Hospital Management

in mental hospitals, rehabilitation and neurosis centres; they often do a good deal of research into psychological disorders.

Occupational The Psychologist deals with matters affecting workers and working conditions, for example, the appointment of staff, incentives, equipment design, time and motion. Few firms, however, employ a full-time psychologist in this role. Vocational guidance is another special aspect of this type of work, as is Youth employment.

Civil Service

The Home Civil Service requires psychologists in the Admiralty, the War Office and the Air Ministryusually Occupational psychologists. They are concerned with the application and validation of testing techniques, methods of training and so on.

These, then, are just a selection of the possibilities for psychologi-cal work. There are, of course, others, for example in social work, which is an ever-widening field now that it is recognised that many social problems do arise from psychological diffi-

Requirements

Apart from the basic essential of a degree, the main requirement for any type of work in psychology is experi-ence. In many cases, a few years' work in industry or teaching is even preferable to postgrad. training.

It is a long course of study; we must hope that the tales of undergrad. emotional difficulties which issue forth from the mysterious realms of the Psychology department (did I hear a whisper of two cases per term?) are exaggerated, and that the embryonic Adlers and Freuds of Leeds "make it."

including English Electric Marconi **English Electric Valve Company** Marconi Instruments Napier Dorman

will be visiting here on 25th FEBRUARY, 1966

They will be able to discuss opportunities and arrange for visits to one of their Works or Laboratories where you can meet people already active in fields of your interest. Offers will be made to suitable Graduates who will probably have studied:

Electrical Engineering, Mechanical Engineering, Electronic Engineering, Aeronautical Engineering, Mathematics, Physics, Metallurgy, Economics or Arts subjects for Management Services, e.g. O & M, Accountancy and Material Purchasing Department.

Our handbook 'Graduates in the English Electric Group' is available from your Appointments Secretary, who will be pleased to arrange a definite time for a discussion. Otherwise, complete the coupon below and we will send you direct a copy of our handbook.

To: R.S. Wignall, University Liaison Officer, English Electric House, Strand, London, W.C.2. Please send me a copy of 'Graduates in the English Electric Group.'
SGD
NAME(Capital letters please)
ADDRESS
UNIVERSITY
SUBJECT OF STUDY0015Y

THE NEXT STEP ...

money

Advertising maybe

IT must be recognised that advertising, in its essentials, is a means of communication between a manufacturer and his customers. It is an extension and a refinement of the procedures for selling his goods. It follows that a graduate, to succeed in advertising, must be genuinely interested in the challenge and problems of selling, since advertising is to selling what mass production is to manufacture. Its strong attraction as a profession is that it depends, unlike other parts of industry, almost entirely on human rather than mechanical

A career in advertising will often appeal to those men and women who possess a lively curiosity, a quick inventive intelligence, who are outward-looking in their personalities, and easily establish sociable relations with a wide variety of their fellow human beings. The profession also needs, of course, a further group of people who, in addition to possessing these qualities, show a flair for writing in a brisk and entertaining way, or a marked capacity for analysing and drawing conclusions from statistics. Posts in advertising agencies are of many different kinds, but those most likely to appeal to graduates would include accounts control, copy-writing, media planning and market research.

The accounts executive holds a key position in any agency and may be described in a phrase as the business man of the advertising world. He is his agency's contact with the client whose views and interests he represents to his colleagues, while at the same time putting at the client's disposal all the resources by way of ideas, information and finished work that the combined talents of the agency can provide.

Advertising agencies do not normally themselves advertise for trainees beyond making a general statement in some of the periodicals and handbooks that are read by students and others of their age group. The expectation is that men or women likely to be of highest value in agency work will themselves take the initiative and approach their future employers. Guidance will be given on the choice of agencies to contact and the type of opening it would be realistic for you to pursue. As a final word, competition, which is the keynote of all industrial employment, is seen in some of its fiercest forms within the agency world. Progress in both salary and status may come quickly, for this is essentially a young man's province of work. But to survive and prosper ultimately one needs to be tough as well as shrewd and clever.

Managing today. There would be latter in turn means primary concern to

THE world of shops and stores and the generally have better prospects to offer men and women graduates than the latter often

only thirty-five years wider effects yet in a invoicing, the art of or so, to the last dec- second generation. ade before the war for example, we should have found the typical High Street in an Eng- scale business, and no sizes, brands, qualiplace from what it is and more, and the counts, are all of

small private shopkeeper, local family grocers and outfitters and fishmongers than we now find. The trend of developments Perhaps there is an in retailing seems historical reason for almost certain to conthis. Looking back tinue and to have of selling and display,

local business have

far more signs of the central control, scientific management, bulk distribution, and natfirms in business as ional advertising and promotional campaigns.

The graduate will start, of course, in the sales departments of stores. The routines dealing with custom-Family business and ers (whether easily satisfied or difficult), given way to large learning to cope with

Yet this preliminary ence is unlikely to delay an ambitious man or woman for more than a brief period.

It is hard to be precise about how long trainees may spend on routine sales work, but the period is likely to last at least six months and might be as long as two years, and beginners must lish town a different doubt will do so more ties, prices and dis- expect an apprentice-

Razor

WILKINSON Sword. Q What Research is done? You read the name and what do you think A A wide range of subjects are studied which of? Razor blades? Coninclude Glasses, Semi-conductors, Metals, gratulations. What else Plastics, Mechanical and Chemical Processes, does this magic name Instrumentation and Electronics. conjure up in your

Q What science subjects are involved?

Q What is the above device?

of Companies.

A The emblem of the Wilkinson Sword Group

Q But is there still a demand for swords?

minute fraction of our business.

Q What else does the group do?

Q How large is the group?

A 8,000 are sold each year but this is only a

A It manufactures Razor Blades, Garden Tools,

Kingdom, Germany, U.S.A., Canada and

Australia all of which are backed up by selling

and servicing subsidiaries throughout the world.

Equipment, Fire Detectors and Extinguishers.

Lawn Mowers, Explosion Protection

A It has production units in the United

A Metallurgy, Chemistry, Physics, Statistics, Electrical, Electronic and Mechanical Engineering.

Q What are the opportunities for Arts and Science Graduates?

A Most graduates are engaged by the Research and Development Divisions to join our teams of Scientists and Engineers but opportunities also exist in other Divisions e.g. Production, Marketing and Administration.

Q From whom can I obtain more details?

A By writing to:- Administration Director, Wilkinson Sword (Research) Limited, Povle Mill Works, Colnbrook, Slough, Bucks.

Wilkinson's research lab-oratories in Colnbrook last eleven is just one of the month, you won't have the many civil and military air-month, you won't have the many civil and military airmonth, you won't have the faintest idea of the work that Wilkinsons engage in. In fact, they are the foremost researchers and man-

tion equipment. Wilkinson 'Graviner' If you're as wise as I automatic fire detection was when I went down to equipment is in world-wide

ufacturers of fire protec-



Experiments at Wilkinson Sword in novel methods of detecting overheat.

craft that use Graviner fire systems.
Of course, fire detection

must work hand in glove with fire extinction, and Graviner are certainly not lagging behind in the fire extinguisher field.

The new Graviner Swordsman' extinguisher is the first appliance using to receive official approval from the Fire Officers

I've made little mention Wilkinsons' famous stainless blades up to now. Of course, razor blade research at Colnbrook has to be pretty intensive so that the company can continue to compete with people like Gillette. Electron miscroscopy and

blue light inspection are among the techniques used to test and improve the blades! Perhaps the most critical of all tests is undertaken in the test-shaving room, where numerous

each day. They use the shaving cream of their choice. Blades are masked and cannot be identified. The men shave and then mark a card, giving their

It's pretty self-apparent, then, that if you're a scien-tist or technologist, Wilkinsons can offer you a job.
The company has for a
long time set great importance on its research organisation, from which a great measure of its success has stemmed. A large proportion of the

staff hold high qualifications in their respective fields. The Research Unit is already housed in a modern laboratory block at Colnbrook and a building to improve and expand the facilities of the develop-

The social atmosphere is excellent, and by selective recruitment based on personality as well as academic achievement Wilkinsons hope to preserve the spirit of friendliness and co-operation which now exists.

careers in commerce

Evening work

At certain times of the year indeed bank staffs will be found working into the evening. Each day's work in the branch of a bank is, so to speak, self-contained.

A balance must be For a start, the illu-struck daily to emsion still survives that brace all the transacbank officials work in- tions that have taken credibly short hours place. Your cheque to in a day-less even pay, say, a bookseller than schoolmasters!— in another town has

what the public see official hour of closing. holds his account.

The larger banks

have a long tradition

Banking all that cash

of employing men and women of good education, and most are now concerned to increase the proportion of graduates on their staffs. They have good financial arrangeto their training.

Fair chance

judging by the times to be passed with most matters for a profespeople in their teens age" ability.

MANY readers of when a bank is open others to a clearing sion which still needs and early twentiesthis article will for business. In fact, house, either local or to rely heavily on a banks almost never already have some of course, the day's distant as the case school leaver intake as "buy in" top talent familiarity with banks work in a bank begins may be, so that the well and must plan as some industrial at least an hour before money finds its way career development in employers do-makes only from the angle of the counter is open to appropriately to the such a way that all for certain peculiar customers. But, as in the public, and con- bank and the branch entrants have a fair features in a bank so many other cases, tinues well after the where your payee chance of promotion official's employment. according to displayed professional ability and not merely in line Starting salaries with the qualifications tend to be adjusted to

Profession

Salaries

they bring at the age, each bank having its own scale, though these are closely similar. At first sight the Moreover, although scales perhaps appear one speaks of banking rather low compared made efforts to secure as a profession, it is in say with industrial fact the case that a starting salaries, but ments for them, and man or woman usually one has to remember give special attention stays with the same that the scale quoted banking firm through- in the bank's publicity out a career. This fact, is a basic one applying taken with a system to school leaver enof recruitment that trants and those These are no easy confines itself to assessed as of "aver-

Selling security

and their functions, if

and know of banking

from their occasional

chats with a bank

manager about the

state of their balances,

or their periodical

visits to the local

branch to deposit or

withdraw, is a pretty

poor guide to what

really happens.

INSURANCE as a business activity presents a number of features in common with banking, but there are significant differences too, some of which we will mention, and these make for a working atmosphere that is peculiar to itself. Both banks and insurance companies are large scale investors of the public's money and both probably derive a greater part of their income from this than from the amounts paid to them for their services to individual clients.

They also present a similar type of organisation in the shape of home and overseas branches serving the public locally. These resemblances however are more superficial than the features that divide the two professions. The Joint Stock Banks are scarely a dozen in number, and everyone has heard of "the Big Five." Insurance companies on the other hand number a hundred or more, but the general public would probably find it hard to name even half of the "top twenty-five."

pivot as we have written on the local branch manager. In insurance, however, there are also functional splits running through the profession and dividing it into departments which specialise in life, fire, marine or accident classes of business.

The large general companies may cover all or most of the fields mentioned above, but there are plenty of insurance companies—and some of these quite big ones—that limit themselves to, e.g., life or marine interests only. The branch manager in insurance is indeed a responsible official in his own area, but in this profession we meet a good many other key figures too: the insurance broker, the actuary, the claims adjuster, the inspector, the under-

All of these are specialists with a role calling for a good deal of independence and personal judgment. As a last general point of difference between banking and insurance there is the fact that while banks in the main rely on their past achievements and traditions as well as judicious advertising for business to come to them, an insurance official constantly needs to take the initiative.

Indeed, people working for insurance companies, whatever their nominal function and almost regardless of the level they have achieved, are pretty constantly engaged in explaining to individuals and firms the need Again, the activities of banks for insurance and how it can best be obtained.

> It is important for them therefore to understand the benefits which insurance gives to all whose lives or work bring them into risk or danger, and that means virtually everyone of us, and to be able to convince others about these matters. Insurance is a service which has to be sold to the public, while banking by and large is not to the same extent.

Could you say this just six months after graduating?

filter drew to a close, and by that time I had acquired a firm knowledge of the plant. This now meant that I was able to look at the whole problem of glass-dissolving in a wider sense, and was able to start developments in a number of sections. I was now faced with my first real management task —that of ensuring the co-operation of the foremen in modifying a over the years and which to them satisfaction from it."

CAFTER two months the work on the seemed the correct way to do the job. This task was difficult, and I learned a tremendous amount from tackling it. Technically, the work I had begun was successful, and although the filtration trials did not meet with any measure of success, modifications to the process enabled the plant to achieve economies in steam amounting to some £40,000 per annum. This, of course, was a team effort, but I was conscious of technique which had been built up my own contribution and derived great

Extract from an account by a Unilever graduate trainee of his early days in the business.



The experience our graduate describes took place three months after he joined the Unilever Companies' Management Development Scheme. Graduates in many disciplines are meeting a similar challenge, and finding similar satisfaction early in their training for management in production, marketing, finance, buying, transport and a number of other important functions.

If you want to know more about careers in Unilever, ask your Appointments Board for information, or write direct to:

R. T. F. Wainwright, Personnel Division, (Ref. PD.122), Unilever House, London, E.C.4.

THE NEXT STEP ... The future looks bright

CHEMICAL Engineering students will naturally be concerned not only with deciding the field in which they want to begin work, but also with the type of work, e.g. fundamental research, development, design, technical service, contracting, consultancy or production. When considering this question, students should bear in mind the qualifications required for the various types of work available.

Research or design work normally call for at least a good secondclass honours degree and while many employers will take suitable men at first degree level, it may be an advantage to have a higher degree. For work in production, contracting, technical service or technical sales, a good degree is of value, but employers also place stress on good personal qualifications.

For example, in tech-

nical service work it is important that a recruit should be able to express himself clearly and easily, particularly when talking on tech-nical points to customers who may not be technically qualified. It is also necessary for such a man to be able to mix easily with staff at all levels.

COMPETITION

It should be noted that in some types of employment (such as technical sales or production work) chemical engineers may be in direct competition with graduates in other scientific and technical subjects and occasionally with arts graduates. In such cases high personal qualifications and a broad background of interests are especially important.

Students who are likely to do well in fundamental research will probably find that, at the appropriate time,

will encourage them to follow this interest. Others who may be drawn to research work while at the University may find later that work on the production side of industry offers more opportunities of advancement, particularly for the supervision or co-ordination of the work of others, i.e. management.

For this reason there is much to be said for joining an employer who can offer a variety of experience and whose staff arrangements are sufficiently flexible to allow men to move from one type of work to another.

Many firms can offer post - graduate training courses for graduate chemical engineers, which are approved by the Institution of Chemical Engineers, and are designed to lead to membership of the Institution. In general the purpose of these

their professor or tutor apprenticeships is to enable graduates to gain first-hand experience of various processes of chemical manufacture and of the design, costing and operation of both pilot and full-scale

COURSES

Apprenticeship courses may be adapted to suit individual needs, but the courses usually last about two years and during this time a graduate in chemical engineering may expect to spend a number of periods of three to six months each gaining experience of different types of chemical engineering work.

At the end of the two year course the graduate should have gained sound practical experience and should also be able to make up his mind which branch of chemical engineering is likely to offer him a satisfactory career.

page for **PHILIPS Scientists**



Engineers

Though the advice will help students in general

You can get more information from the Appointments Board

ENGINEERING TRAINING SCHEME

for ELECTRICAL ENGINEERS MECHANICAL ENGINEERS PHYSICISTS!

engineering operations.

Pay During Training: 1st and 2nd class conditions and prospects. honours degrees, £875 in the first year and £950 Careers for Engineers are available within first year, and £850 in the second.

Two Years Post-graduate Training: For Why Choose C.E.G.B.? Because it is an those with honours degrees, this will be a expanding, essential and progressive industry. general engineering training, including one year The demand for electricity is doubling every with a manufacturer, basic workshop training eight years. With constant new developments in and experience in all aspects of the Board's all parts of the country, involving a capital investment of over £400 millions a year, prèsent plans include a 4,000 megawatt power station, Those with other degrees can be trained in 660 megawatt supercritical generating units, generation, transmission or design and construc- 400kV transmission lines, nuclear power stations tion, with 6 months spent with a manufacturer. and research into magnetohydrodynamics. There are excellent, progressive salary scales,

in the second year. Other degrees, £800 in the C.E.G.B. in generation, transmission; design and construction or research.



Central Electricity Generating Board

Further information is available from:

W. H. F. Brooks, Recruitment and University Liaison Officer, Sudbury House, 15 Newgate Street, London, E.C.1

The Board's representatives will be visiting this University on JANUARY 21, when they will be pleased to meet you to discuss career opportunities. Further details obtainable from your Appointments Officer.

NORMALLY research work calls for at least a good second-class honours degree, and many employers will prefer a "special studies" to a "general studies" graduate. Most employers take suitable men at first employers take suitable men at graduate. degree level, but for some types of research work it is often an advantage to have a higher degree. For production work, technical service or technical sales work, a good honours degree is valuable, but employers also place a great stress on personal quali-

It is worth while noting that in employment such as production work, physicists may at times be in direct competition not only with graduates in other scientific subjects, but also with arts graduates. In such cases high personal qualifications and a broad background of interests are especially important.

Personal

Students who are attracted to manufacturing industry are often concerned about whether they should seek work with a large or a small firm. The choice depends almost entirely on personal references. The large firms are eager recruiters of graduates, and can offer attractive starting salaries, pleasant conditions of work, and a wide variety of experience. But the graduate who joins a large firm is only one amongst many, and competition for posts of responsibility is keen.

The small firm offers much to the man who enjoys "running his own show" and real responsibility may

come more quickly than in a large firm. In a small firm, however, a graduate must be prepared to be a "maid of all work" and (particularly on the research side) there is little opportunity for specialisation. In addition, if it is a very small firm, the graduate may be something of a novelty, and may require both tact and a thick skin in order to make his

Guide

It should be remembered, however, that the number of employees is only a guide if something is known of the type of industry concerned, e.g. a plastics firm of five hundred employees is a "large" firm for that industry, a firm employing five hundred in the light electrical engineering industry is "small."

Since the demand for physicists has in recent years exceeded the supply, the tendency has been for starting salaries to increase. A number of firms quote starting salaries in the booklets to which reference is made in the notes, but students are advised to look at the prospects which a job holds, and to its intrinsic interest as well as to the starting

In any type of employment salary increases have to be earned and are sooner or later dependent on how well a man does his job. It is a mistake to suppose that by entering one particular type of employment a graduate can ensure that he regularly earns more than he would have done in another type of work.

THE NEXT STEP ... By FRANK VOGL So you want to write

THE brown trilby hat, the white 'Maigret' mackintosh, the unlit Woodbine, the thick well-worn brown brogue shoes and of course ballpoint pen and notebook; these are all things which the layman associates with the newspaper reporter.

Of course the layman generally thinks that the newspaper reporter is always flat broke, has an assortment of ragged looking women and is a confirmed alcoholic. This sort of image has been created by television and the cinema AND IS COMPLETELY FALSE.

Unlike many careers, journalism does not involve having to pass entrance examinations, nor does it involve having any type of paper qualifications. Whether you have got a degree in Fuel Science or in Philosophy or in Chinese Studies, or only two 'O' level G.C.E. passes you start in journalism on a fairly similar basis. John Young of the Daily Express once told me "All you need is good shorthand, ability to write and good health.

From my very little experience in the real world of journalism (five weeks in Fleet Street to be precise) I have found all of what John Young said to be very true. A journalist today gets most of his stories over the telephone from contacts, from press hand-outs by Public Relations Officers or from making notes at Press Conferences.

Very rare

This at least is the case in Fleet Street itself. But journalism is by no means confined to London alone and it is very rare for a person to go direct from school or University onto a big national paper housed in the capital. Generally you will start on a local or a provincial paper.

The National Union of Journalists run a two year graduate apprenticeship scheme, which involves spending two years on a provincial paper

But maybe you want to take pictures

RAVISHINGLY beautiful birds, a revolution in Latin America and a Silverstone pile-up have little in common unless you happen to be a photo-journalist.

If a trigger-happy life appeals, and you see little prospect of a degree in the future, then this could be the job for you. But before you jump in tripod first, be warned, this is not by any means the easiest profession to get into.

You should, first of all, decide what sort of pictures you intend to take. At one time there was only one type of press photographer, and he took the usual sort of news pictures to be printed in the usual sort of newspapers. Things have changed.

New vogue

With the coming of Colour Supplements and the greater awareness of pictures in the "glossies," a new vogue has been established. Colour is now used extensively demanding new tachniques and ideas for the That demanding new techniques and ideas for the photographic medium. This is the rather precarious world of the photo-journalist. Some of the material published in the Supplements is the work of free-lance teams, the rest, articles assimilated by the newspaper's own photographic

How then, do you enter the profession?
You could by the back door, send up an illustrated article, and who knows, it could be accepted for publication, and a commissioned assignment may follow. The more secure, but by no means any easier, way of starting out would be to join the staff of a suitable publication. For this a qualification in photography, or a definite flair,

is almost certainly essential. Not a very encouraging prospect, is it? But remember, no budding Cartier Bresson would ever need to ask how he might get in. He would know. By this very token he would make a good photo-journalist.

and in that time having a chance to see all sides of journalism as well as learning shorthand and typing. After two years you are completely on your own feet, if you are good and ambitious enough then there are even chances of getting to Fleet Street direct from your first job.

Some newspaper concerns, the Daily Mail in particular, believe in training graduates themselves. In such cases you would start in a regional office of the paper, generally Manchester or Edinburgh and your progress from there would solely depend upon your ability.

Journalism is not really one of those professions where your progress is dependent on the

Union News editor, Frank Vogl, writes about the possibilities of a career in journalism. Union News itself is a great stamping ground for budding journalists and provides the opportunity to meet all kinds of newspaper work before going onto a paper. A number of past members of staff have in fact become journalists and reached Fleet Street.

person above you retiring or dying. So in many ways it is a rat race and there is no getting away from the fact that such things as useful contacts and making certain that the right people know who you are matter a great deal when it comes to promotion.

Journalism is a career for only a certain type of person. A person who is able to get on with other people, who is resourceful and can make decisions and above all who instinctively knows what is really a news story and what is a "non-story."

Today there is an increasing amount of specialist work being done in the news field and a paper can no longer ask a reporter who knows nothing about medicine to write a medical article, or ask a person who doesn't know the first thing about engineering to write an article about a new type of machine. Demand for trained specialists, especially people with scientific and technological interests is steadily rising. And there is little doubt that a science graduate can go just as far, if not further in journalism, than can a person with an English or Social Studies degree.

Little doubt

There can also be little doubt that the scales of pay are generally higher than in most careers. For example the basic rate of pay for a person over 24, whether male or female (there is no differentiation in pay scales between sexes) in Fleet Street is £25 a week. The maximum pay is just impossible to guess at.

But although the pay may be good the strain and worry of journalism can be great, for a journalist must learn to write to order, both in a sense of style and matter, according to the traditions of a particular paper, and must also be able to write under pressure with one eye on the clock, the other on limits of space.

Journalism is a hard, different sort of life. Many people enter the profession every year, few ever get to the top, but even half way up it can be adventurous, interesting and remunerative.

FORD MAKES THE MOST OF **GRADUATES**

Industrial management has become the profession on

Industrial management has become the profession on which our country's economic future depends. We ask you to give earnest thought to it when choosing your career. Few callings make such demands on intellect and personality and few offer such rewards.

This Company makes cars, trucks and tractors, and markets them through an international organisation. It is a world leader in this highly competitive business. In 1951 output was 170,000 vehicles. Last year it hit 600,000. Over half of our production is exported. These are the elements of a succes story of national importance. importance.

Of greater importance to you personally could be the Company's graduate training schemes. They offer an excellent start to your career, because our courses are designed in the knowledge that it is often difficult for the graduate to decide exactly what he wants to do. They aim to provide the sound basic knowledge and the careful career counselling to enable you to make this decision, and to set you firmly in the direction in which you will progress fastest

Ford training is rapid, for it takes your intelligence into account, and you could be settled into your first job within six months of joining—a job which will carry real responsibility and scope. There are three principal types of training scheme for graduates:

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J. S. SMALE, Room 1/178, University Liaison Officer, Recruitment and Placement

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FORD OF BRITAIN

THE NEXT STEP ...

Where there's land there's money

By JOE BRADSHAW

NEXT to juvenile delinquency and bringing up Babies, property seems to be a subject on which everybody has an opinion. After all, we all live in houses. So if you take up the career of Auctioneer, Estate Agent and Valuation Surveyor you will find no difficulty in communicating with your fellows—even at

a cocktail party.

The work entails the selling, purchasing, letting, management, survey and valuation of property—real estate as the Americans call it. Letting and management can be interesting and profitable if it is in the field of commercial property, i.e. office and factory premises, but the management of residential property, particularly that which is rent controlled, can lead to more kicks than ha'pence as a result of your becoming a buffer between landlord and tenant.

On the purchasing and selling side the capacity to make keen realistic valuations is vital. You will be predicting what is the lowest price a willing vendor will accept, and when valuing for sale, what is the highest price a willing purchaser will pay. Of course, if in the latter case you are absolutely bemused you can always try to persuade the vendor to put the property up to Auction and let the purchasers decide for themselves, but even here the vendor will most likely expect you to advise on a reserve figure.

Figures

Properties similar in respect apart their location every from command vastly different figures. Prices paid even a year ago will often be no real guide. So to be successful the Auctioneer and Estate Agent needs to have his finger on the pulse of the market, and take a keen interest in current affairs, for both National and Local political action can seriously affect property prices.

Valuations are also done for probate purposes, i.e. to give a that does not often see the light of day in a University, Estate Agency and Valuation requires a good business sense as well as technical training. If you want to make a good living and take some risks, perhaps this is the answer to your dreams of becoming a property tycoon.

But remember, it's not worth being left in your old age with a pile of sparkling flats in Pudsey and the most caustic ulcer.

hypothetical figure for use in the assessment of death duties. They are also done as a guide for Building Societies, who want to know what security they will have for the money advanced on mortgage in the event of the borrower's default. Many Building Societies employ staff surveyors (valuers) but others employ independents. Surveyors have been known to carry out over twenty surveys of residential properties in one day at an average fee of £5 each.

Those who are quick at figures will no doubt now want to know how they can join the rush for qualifications. The Royal Institution of Chartered Surveyors is the only professional body which caters for all those whose business it is to measure, value and manage. But there are over half a dozen other relevant bodiesaddresses of which are obtainable in libraries. Each run their own written examinations. The extent of the examination will depend on previous qualifications but in all cases practical training is required in addition.

After studying the information the professional body for-

wards, it is a good plan to arrange an interview with one of the partners of the busiest and most successful practises in your locality, and ask his (or it may be her) advice. When deciding which is the busiest and most successful, don't be misled by the one with the longest list of properties for sale—the list is obviously of the properties which they have not sold.

Firms of Auctioneers, Estate Agents and Valuers are invariably run on a simple partnership basis—not as Ltd. Co.'s. As the members of the profession give advice on which their clients are entitled to rely, it is felt that their liability for damages should not be limited. Firms are responsible for handling large sums of clients' monies and for this the partners are personally responsible.

Partnership

The way into the profession therefore is first of all to acquire the necessary qualifications and secure a post as an assistant where the possibility of gaining a partnership is real.

If you feel that you haven't the time nor patience to acquire the qualifications, but nevertheless have a flair for business and selling, there is no law to stop you simply setting up in business by announcing to the world that you are an Estate Agent as many have done before you.

Of course, Estate Agency is often but the prelude to bigger things. The sense of the mentioned market earlier can put one in a very advantageous position, and though we won't give them further publicity here, it is well known that many property tycoons and Building Society chairmen started their climb to fame and fortune as humble Estate Agents, Auctioneers and Surveyors.



LET'S make no bones about it—the budding T.V. commentators have got it tough these days. You know the type I mean, the kind of bloke who's not particularly trained for anything and has just got the idea he wants to work in television—like you, or me. And the best thing with an idea like that is to forget it, for a few years at least.

The possibilities of entering television straight from university are, to say the least, pretty slim. Even for the vast technical side of productions the opportunities for even the most highly skilled of men are small.

Television companies much prefer to choose someone for one specific job from some closely allied field of industry or entertainment.

If, however, you are mad enough to consider that you're just the kind of bloke most TV companies are absolutely dying to recruit, there is a faint spark of hope for you yet.

Studio management

The BBC runs some trainee entrance schemes for the fields of production, studio management, engineering, and, a very recent innovation, graphic design.

Naturally the competition is intense, and the most popular of these—the General Trainee Scheme, for graduates only, concerned with the production of both sound and television programmes—attracted over 1600 entries last year for eleven

places. OK, you've got a first—so what?

Grim as it might sound the possibilities for entering Independent television straight from university are even more remote.

For the fifteen august bodies (including ITN) that comprise the Independent Television Authority there is as yet no training scheme whatever. Any chance of entering these is up to your own personal initiative, to the point of writing to each individual one and asking them if you might be suitable for any of the vacancies they've got going.

No more vacancies

As the fifteenth letter arrives saying that they have no vacancies, and are not likely to have any, you begin to lose faith a little.

Recruitment for television rests almost entirely on advertisements of specific vacancies asking for people already trained in some aspect of entertainment or broadcasting work, and for people already qualified to fill these individual vacancies.

fill these individual vacancies.

Don't give up the ghost yet though, if your wish to enter television is that strong it will last a couple of years newspaper or advertising work, when your qualifications for entering are incredibly increased, and the likelihood of their wanting you much more a possibility.

But this, of course, leads on to the next point—the budding William Hickeys have got it tough these days...

JOHN WILLCOX.

If all else fails, you could make this THE LAST STEP...

failing that, you could even try joining Union News staff!

