

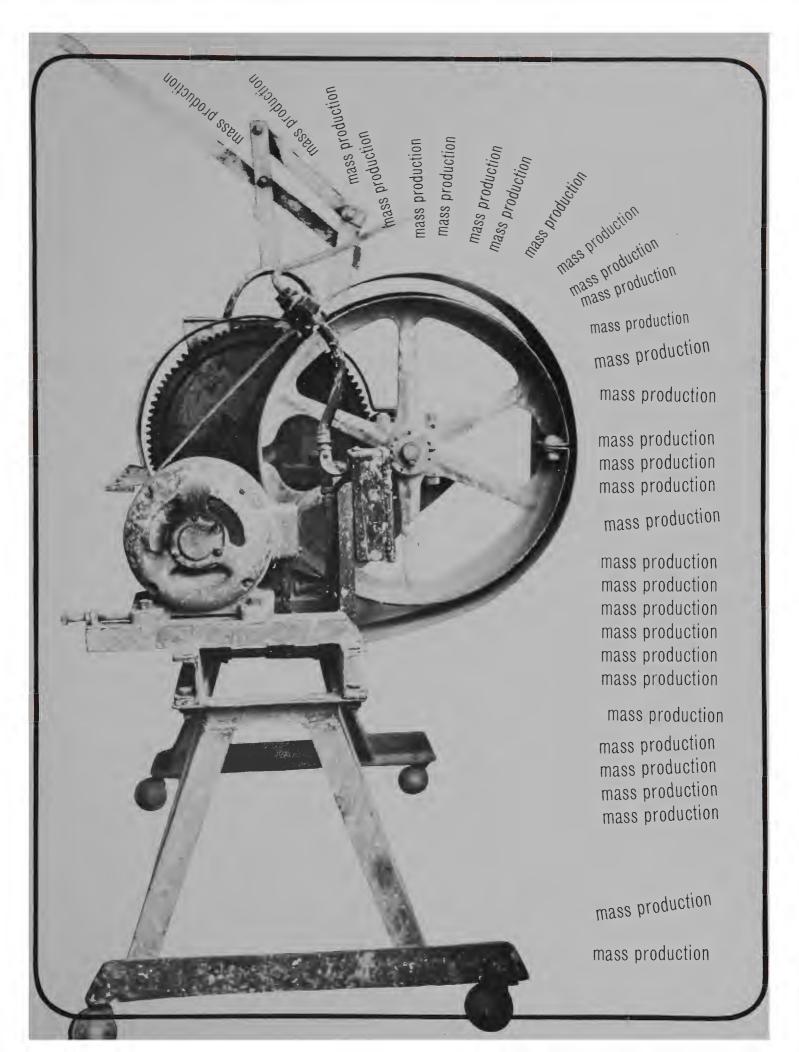


SWINBURNE SENIOR TECHNICAL COLLEGE MAGAZINE



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### Students and the World

"Swinopsis' is the annual magazine of 800 men and women, in their late teens and early twenties, who are studying full-time in the tapiddy expanding professional courses at swinburne senior Jechnical College.

propositional courses in surrounce senior Jechnical (1949 Our students vary tremendously in their origins and destinies. They come (with Leaving Certificates or higher qualifications) from scores of secondary schools (independent, high, or technical); from city and country; and some are from Asia. During their four years at Swinburne they train as specialists in one faculty: either Art, Commerce, Applied Chemistry, or Engineering. Arned with diplomas, they then begin careers in business, industry, the public services or education.

Despite their multifarious specialized interests, Swinburre diploma-holders do have one vital function in common: the spplication of systematised knowledge to the needs of society and man. a British professor of electrical engineering, Sir Willis Jackson, remarked during a recent visit to Australia: "Young people being prepared for careers in industry and commerce must have their minds opened to the sociological consequences of scientific and technical progress because these consequences will affect their technical and administrative thinking and decisions." And the British educationist Sir Eric (Ishly has observed: "Technology is inseparable from humanism. The technologist is up to his neck in human problems whether he likes it or not."

"Sumopsis, therefore, is designed as a synopsis (pardon the pun) of inter-faculty thinking on the relation tetween technology and society. This year our first five articles explore the theme, "Mass Production." This theme is appropriate because in the second half of the twentieth century we are experiencing an acceleration of technical advance in industry commerce and communications. In the view of our contributors this technical advance in industry increases in material well being and in less use opportunities, but it also creates new problems - how to use these lessings wisely, to the best advantage of the individual, the

. The lemainder of the magazine is devoted to topics which may help footer technical humanism among students in all faculties.

B. Barrett, humanities department



### The Extensions of Man

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A matrialistic technologist might reasonably catalogue man (including woman) as primarily a complex combination of heat engine, multi-purpose machine, chemical laboratory, broadcasting, system, photo-electric and thermo-electric cells, and self-instructing computer. This makes of the human being an impressively complete industrial system, which, however, would have achieved nothing more than the accomplishments of the most primitive sourage, had not the computing mind set about providing extensions of the human factory plant. plant.

By such recurring mental activity the rocket has replaced the me as a missile; the human voice has been channelled and amplified ston stone is it may round the world; body chemistry has been manipulated to cure disease, to prolong life, and to control birth; and man has been enabled to circle the earth in a few hours, leave it

has been enabled to circle the earth in a few hours, leave it altogether, or destroy in one tremendous holocaust all he has achieved since he emirged from his caves thousands of years ago. Paralleling such extensions of man's physical powers, and aded to some extent by them, have been his explorations of the past, and his conjuctures about the future and about his own nature. Recent history sees its heroes struct the celluloid and video tape stage; their immediate predecessors call to us from bakelike discos, and peer back at us from fading photographs. To familiarise ourselves with the writer, and before that again, to the buried city and to the investigated grave. Prediction of man's future is an uncertain exercise which nevertheless is inevitable. The components of such prophecy are a knowledge of history, an estimation of scientific and technological developments, and an understanding of human nature and human notivation. Must

history, an estimation of scientific and technological developments, and an inderstanding of human nature and human notivation. Must international jealousies and strife continue indefinitely? Is there no way of checking population growth? Can some way be found of eliminating the great gulf between the 'haves' and 'have hots'? For some reason the achievements of the technologist seem to have been misapplied. While a big proportion of the world's people live below subsistence level, a minority is in danger of being destroyed by over - population, combined with technological achievement which renders man unnecessary. Machines are producing goods faster than they can be consumed; things must not be made to last, or new ones cannot be sold. Psychology applied to salesmanship is inducing people to buu

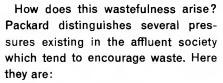
can be consumed; things must not be made to last, or new ones cannot be sold. Psychology applied to salesmanship is inducing people to buy what they do not need with the money they have not got. Scientflic discovery and technological progress cannot and should not be halted, but the human problems resulting from such progress must be anticipated, studied and solved. Discovering and applying such a solution may be as demanding of financial and mental resources as has been the space race. These are problems which which this magazine is produced, wither than buy my own. And they are problems which young technologists, such as the students of this college, should be aware. Moreover, as they will be contributing to the creation of these difficulties, perhaps they should give some throught the future. to their solution.

A. F. Tylee, director



Imagine the Throw-Away City of the future. Its factories are situated on the edges of cliffs. Whenever production becomes greater than consumption, the assembly-lines are simply reversed, so that they plunge over the cliff-edge. Will Western industrial civilisation end up like this? We hope not, but American writer Vance Packard in *The Waste Makers* (Pelican edition), warns that it might if present wastefulness continues.

Western civilisation, particularly America, is already entering the Throw-Away Age. The average American now consumes twice as much in retail products as before World War II. The U.S. now has more passenger cars than families, and the average family changes its car every three years because of obsolescence in style or function. The average American family throws away 750 empty cans a year. In all these fields, Australians are not far behind.



**Pressure 1—developing gluttony:** A family is expected to keep up with the Joneses. Ultimately this means two houses, three automobiles, a TV set in each room, a swimming pool, a power-boat, two washing machines. And so on.

Pressure 2—the throw-away spirit: If your old clothes are out of fashion, throw them away. Use paper working-



overalls; instead of washing them, you just throw them away. Canned softdrink (and squirtable whipped cream) saves you the bother of returning empty bottles. The latest idea is food that is sold already prepared in aluminium pans and trays; just heat and serve, then throw the trays away.

Pressure 3-planned obsolescence: What are durable goods? Packard's answer: "Durable goods are any products that will outlast the final instalment." According to Packard, there are three forms of obsolescence. Firstly there is obsolescence of function-an existing product becomes outmoded when a product is introduced that performs the function better. Secondly there is obsolescence of quality-it is planned for a product to break down or wear out at a given time. Thirdly there is obsolescence of desirability-a product that is still sound in terms of quality or performance becomes worn out in our minds because a change in style makes it undesirable.

(With planned obsolescence of function, repairman services now run into a booming, profitable trade. Washing machines, T.V. sets and automobiles now all need replacement or repairing.)

**Pressure 4—planned chaos:** Many forms of price-slashing and discounting confuse customers, especially women, encouraging them to buy more.

Pressure 5—buying on the "nevernever": Shoppers are encouraged to buy on credit or hire-purchase. Have fun now, pay for it later in life.

Pressure 6-hedonism for the masses: Why deny yourself? Be selfindulgent. Give way to your whims and desires. "Easter is a new pair of shoes." "Buy yourself a Christmas gift now."



Pressure 7—mass production of people: More people means more markets. In certain quarters, children are viewed as small "dollar signs". Teenagers now constitute the largest homogenous body of people, so the market-place is wooing the teenagers and promising them a good time.

What are the implications of this wastefulness for America and for other nations? Packard foresees two main dangers.

Firstly, wastefulness has made the American market more open to foreign goods. The growing reliance on promotion to sell goods is encouraging the rise of business oligarchies. And America's style of life is becoming increasingly commercialised.

Secondly, because of its vanishing natural resources, America is liable to change from a "Have Nation" to a "Have-Not Nation". Americans have used more of the world's resources in the past 40 years than all the people of the world have used in the 5,000 years of recorded history up to 1914. Man is becoming aware of the limits of the earth. America is beginning to face a crisis in the supply of metals, fossil fuels, (particularly oil), food and water.

Consider the case of metals. High-



grade ores of many metals in the U.S. are running out; U.S. mills are geared to high-grade ores. The amount of rich iron ore left in known deposits in the U.S. would not meet American needs for even a decade. Zinc and lead reserves have become extremely low. U.S. bauxite—basic metal used in aluminium—is of such poor quality that the U.S. imports three-quarters of its supplies from overseas. Copper deposits are almost non-existent.

Consider **fossil fuels** (i.e. organic materials, millions of years old). Oil, the chief source of the nation's energy, is now extremely low. With only one seventh of the world's reserves, the U.S. is clearly approaching depletion.

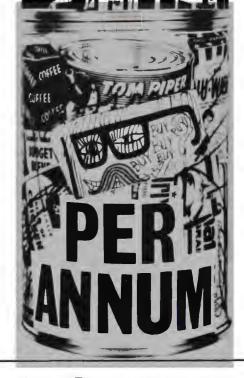
Consider **food.** The exploding population of the U.S. will greatly increase food requirements, while the same expanding population will swallow up millions of acres of farmland by covering them with homes, roads, shopping centres and factories.

Consider water. This is an urgent and immediate problem. The water needs of the average American citizen have doubled in this century. Industry is a heavy user of water. It takes 60,000 gallons of water to make a ton of paper or steel. In some areas, water is being withdrawn twenty times as fast as it is being replaced. In western New York State, tens of thousands of residents are paying a dollar for a five-gallon jug of cooking and drinking water.

Most remedies suggested (such as replacing steel with aluminium; using the energy of the atom instead of oil; and purifying salt water) are at the moment so impracticable and expensive that research is required to lower the cost; otherwise these methods cannot be used.

Having surveyed the problem, we naturally ask: "What are the remedies?"Packard suggests five remedies.

Remedy 1-restoring pride in pru-



dence: "The unorganised consumer must resist blind conformity to the group and to the commercial persuader. Education is central to his resistance."

Remedy 2—restoring pride in quality: "Manufacturers ought to agree to a set of rules about how good their products have to be."

Remedy 3—respecting the eternal balance: "The Wild West constituted the richest free gift that was ever spread out before civilised man. Never again can such an opportunity come to the sons of men."

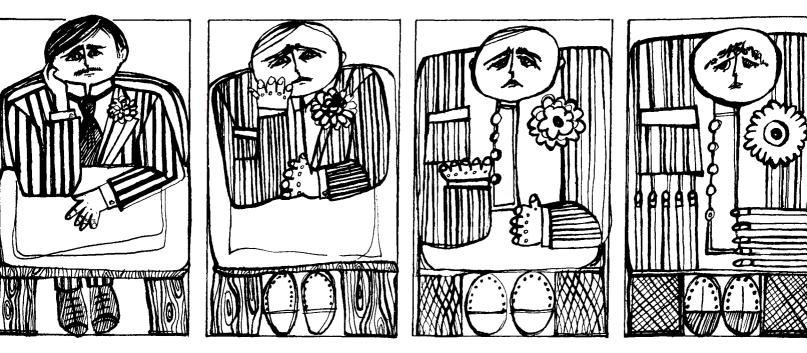
Remedy 4—facing the unmet challenges: "Bright new cars in sordid streets, ranch type or split-level homes beside garbage-filled gutters, the family picnic basket in chromium beside the polluted stream—these are symbols of a national pattern of expenditure in desperate need of redress."

Remedy 5—achieving an enduring style of life: "Americans are suffering from a surplus of happiness."

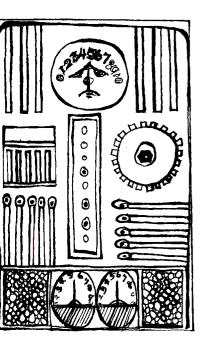
To sum up the situation as Packard sees it, the central challenge seems to be this: Americans (and people in other advanced nations such as Australia) must learn to live with their abundance without being forced to impoverish their spirit by being damned fools about it.

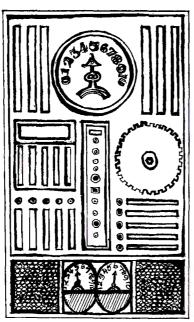
*The Waste Makers* is an excellent book. I recommend it to all students in all faculties.

**Graham Henderson** 









Many young people who hope to rise in the social scale by seeking careers as "white collar workers" in an office are liable to receive a rude shock: they may find themselves working, instead as white collar workers in a new kind of factory. The fact is that nowadays the application of scientific method to commerce (for example, in the form of automated office machines) is forcing larger offices to re-organise themselves into assembly-lines.

The white collar worker, as defined by C. Wright Mills in his book, *The White Collar*, is a worker who works for a salary and is usually able to work indoors (in an office) and in his ordinary street clothes. Hence the designation "white collar".

The white collar worker has appeared in western societies only since the 1890's and was only really first noticed to be appearing during World War I. Before the white collar worker dominated the industrial and commercial scene, social class structure was very different. The upper classes and the working classes were practically the same as they are today and therefore the main upsurge caused by the coming of the white collar worker has been in the middle classes.

The old middle classes consisted mainly of what Mills refers to as the "small entrepreneur". The small entrepreneur included shopkeepers, owners of one-man businesses, and farmers — in other words, independent businessmen in a small way. There were, of course, a few office workers who came under the modern definition of "white collar". The typical "office" consisted of the owner, the book-keeper and the office girl. Big companies as we know them today were virtually nonexistent and so was the vast office of today.

Big business as we know it today, and the white collar worker, were brought about by two factors which happened to coincide. One factor was a decade or so of prosperity before World War I, which brought about expansion in most businesses and even phenomenal expansion in some. The other factor was the advent of cheap and reliable business machines, notably the typewriter and the adding machine, which required specially skilled operators and therefore enlarged offices.

With this boom also came greater production of consumer goods and greater demand for them, thus creating a need for them to be sold. Previously the small manufacturer was able to do his own selling, but with the vastly increased production of his goods he was unable to handle this job himself and was forced to delegate it to sales representatives. Thus there arose the large retail establishment, such as Myers of Melbourne, creating the necessity for the owner to delegate his authority to others in the departments of both selling and buying.

As many businesses got bigger and bigger, their demand for white collar workers grew and so did their squashing out of the competition from the small entrepreneur. As more and more small business men were turned out of business by the big organizations, they, in turn, became employed by those vast companies in the same sort of work in which they had been previously engaged.

Another minor factor which contributed to the phenomenal expansion in numbers of the white collar worker was the increased mechanization in industry. Mechanization lowered the number of workers in industry who then turned to white collar occupations because these occupations represented a rise in status to the new middle classes while not requiring the capital pecessary for elevation to the old middle class of the small entrepreneur.

The result of this phenomenal growth in business was that the large office of the late 1920's was a vast room with row upon row of desks housing scores or even hundreds of white collar workers pushing pens. To the employers this meant vast payrolls for largely routine jobs, and they were soon wondering about the possibilities for the mechanization of offices since the routine jobs in industry had already been mechanized. The process of mechanization in offices was far slower than that in industry but this can be conceded to the fact that white collar jobs require more skill on the part of the worker.

Now, in the 1960's, office mechanization, notably electronic data processing, is in full swing, and it seems possible that within the next decade or so the typical office will be almost indistinguishable from a factory, requiring only machine operatives and button pushers. However, there may not be such a considerable lowering in the demand for workers as there was when industry became mechanized because business is ever expanding and, as the lesserskilled white collar workers may be the first to lose their jobs, they will be re-delegated to everexpanding industry.

In the 1960's many white collar workers can see what the future holds in store for them, and there is a vast status panic in order to get farenough above the industrial working-class level so as to be left out when the vast re-delegation into industry, and therefore lower status in society, comes their way. Many are trying to "buy" an advanced education for themselves or their children in an effort to get above the masses, but so high a percentage of the population is endeavouring to get a tertiary education that it seems possible that at some stage in the future some tertiary graduates may be unable to get jobs for which they are best qualified. However, this is a different problem altogether.

The fact is that the white collar worker has been born of the twentieth century and it now seems possible, but not necessarily probable, that he could die out within this century. Perhaps even the entire middle class will completely disappear, leaving only upper and lower classes of fairly even distribution. The more affluent white collar workers would have ascended to the upper classes; the poorer and lesser skilled ones would have descended to the working classes. Who knows?

Peter Neale

# PAPES WARFARE AND THE RISE OF THE PRESS

### **Kathryn Morrison**

To borrow a journalistic phrase, this article is a SWINOPSIS "scoop"— the "dramatic inside story" of the "spectacular rise" of the popular mass-circulation daily newspaper.

Until the late 19th century the press, in both England and Australia, was vastly different from that of today. Newspapers took politics as their main concern, and assumed that readers had a good education and income. Front pages were occupied by classified advertisements; there were no large headlines, no photographs; news was often months old and was buried in straight, lengthy columns.

Only a small number of copies was printed; publishers had little idea of boosting the circulations. They were dull papers, except when engaged in a political campaign, and were meant to be read only by the head of the family.

But after the 1870's, with the spread of free and compulsory education in England and Australia, and the change in the status of women, the circulations of the newspapers increased, and the readers changed.

Accordingly the papers themselves changed. Instead of being dull, heavy, and serious, written for the well-educated and prosperous gentleman, they became light, and scrappy, written for the working man, the working girl, the housewife, who could only find time to read a short entertaining article in the daily paper while drinking a hasty cup of tea.

These changes meant an increased circulation and competition. Competition brought, for the first time, selection and editing of articles. Previously, as papers were designed only to be read by men (and business men especially), no time or trouble was taken to include articles of interest to women. But as newspapers fell into the hands of women and young people, and newspaper editors saw the possibility of a bigger market, they began to public articles appealing to "the majority".

Changes in the newspapers led to changes in the way the Press had to be organized. The oldstyle newspaper was economical to run; its relatively small staff of reporters were enough to satisfy its needs. The invention of the telegraph and its application to news reporting in the 1830's, and the telephone in 1876, increased the speed by which articles could be transmitted, but it also added to the cost of producing a paper. Dry-plate photography came in 1873, and this proved to be so popular that it was impossible for editors to profitably publish a newspaper completely free of photographs. So the newspaper staff grew from a few reporters, and a machine operator to many journalists (each specializing in a particular field, e.g. sport, politics, literary criticism, etc.), photographers, engravers, printers, machineroom operators, interstate and overseas correspondents.

Not only does the modern newspaper need a bigger and more extensive staff, because of its wider coverage of features, but its wider circulation also makes distribution more expensive. The raw materials — paper and ink cost far more than formerly, and the cost of the printing plant (and its maintenance) has grown incredibly.

The modern newspaper is a business enterprise which must be prepared to run at a minimum profit, constantly looking for new material and themes to increase circulation, and relying solely on continual expansion for its success.

In the late 1930's competition for the large circulation, which had become so necessary to attract advertising, reached a climax in extravagant "gimmick" offers. Free insurance policies, gifts of books, suits of clothes, washing machines, etc., were offered.

Two main developments have taken place as a result of the "Big Business" nature of the Press. Firstly, newspaper editors and proprietors have increasingly taken 'reader interest" as their main theme in deciding what to include in the paper. While they are aware of the influence of the Press on public opinion, they have stressed the entertainment aspect of their papers, as against information, because entertainment sells more papers. Secondly, the number of newspaper companies has steadily declined, partly because of the impossibility of making a paper profitable unless it can secure a mass circulation, and partly through newspaper companies buying up their rivals in order to increase their own circulations and profits.

The Press is criticised today on several grounds. In English- speak-

ing countries, most papers support "free enterprise" parties in politics and oppose Labour parties. Newspaper proprietors claim that they have every right to attack in their editorials the political doctrines with which they disagree, provided they present fairly the news of what their political opponents are doing. Critics of the modern Press do not deny this right, but claim that the newspapers "slant" the news and give their readers a distorted view of the facts, by omission and by emphasis on unimportant details.

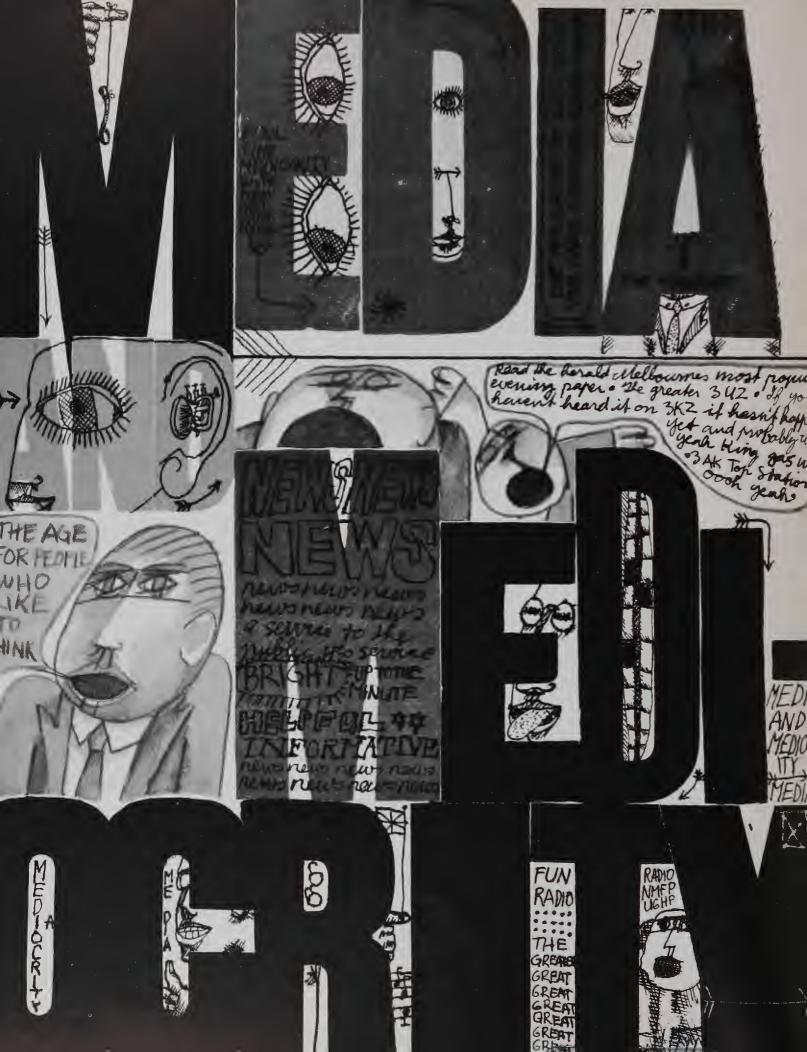
Newspapers are said to deal in sensationalism by their treatment of crime and violence; to elevate unimportant matters to prominence by their social columns and their pursuit of "human interest"; to encourage gambling and "spectatorism" by their treatment of sport and racing. The increased emphasis on comic strips, and the reliance on headlines, instead of details, are all said to divert attention from serious matters and induce a superficial knowledge and attitude in the community generally which will not help the development of an educated democracy.

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The problem is that newspapers must give the public what it wants, but there is not just one public. The community is composed of a number of publics differing in size, education, interests, background, and social position. What may suit one, may not suit another; and a newspaper which aims at a mass circulation, is compelled to find out what will suit the greatest number of publics, and adapt this to suit them all. It cannot afford to waste too much space on minority groups.

Whatever changes occur in the Press, it is reasonably certain that they will be related to changes in society, because it is a newspaper's job to please the public — the readers. If readers' tastes change, so, too, will the newspapers. When the newspapers of today are looked back on by future historians, an interesting picture of our society will be seen, just as the pioneering newspapers show us what 18th and 19th Century life was like.







**Don Jinnette** 

This article is about newspapers and broadcasting, and it examines the ways in which these mass media create news and create celebrities. I have adapted some of my ideas from Daniel Boorstin's fascinating Pelican book, "The Image".

There was a time, according to Boorstin, when the reader of an unexciting newspaper would remark on the dullness of the world. Now he remarks on the dullness of the newspapers.

The mass media are consuming news at an ever-increasing rate. A successful reporter, if he cannot find a news story, must create one. News nowadays is defined as whatever the editor chooses to print.

This insatiable appetite for news is bound up with technological innova-

tions which began in the mid-nineteenth century. In the 1830's and 1840's came the telegraph, in 1848 the American Associated Press, in 1870 the rotary press, in 1873 dry-plate photography, in 1876 telephone, in 1900 radio, and 1941 American commercial television. The public, eager for news of latest happenings, now expects news "every hour", with interviews and press conferences. Such "staged" news or "manufactured" news Boorstin calls "pseudo events".

Today's newsman's reputation depends on his ability to ask hard questions, to put the person being interviewed on the spot. The ability of certain film stars to give quick and witty answers to such questions can in itself make "news".

News can be divided into two categories — "hard" and "soft". Hard news deals with such items as politics, economics, international relations, social welfare and science, whereas soft news deals with scandals, gossip columns, comic strips, love lives of movie stars, and the latest murder. Some editors can even make news out of a film star's loss of appetite. Newspapers now tend to give larger and larger proportion of their space to soft rather than hard news.

Television has increased the supply of "soft" news and pseudo-events. Television presents mainly those incidents that emphasize the drama of an occasion. The audience is therefore deceived. At the telecasting of a pop concert television depicts not only the music but also the reaction of the audience. For example, it might show hysterical teenage girls clamouring to reach the stage, or someone who has fainted. These "add" to the occasion and make news for the next morning's papers.

Whenever in the public mind a pseudo-event competes for attention with a spontaneous event in the same field, the pseudo-event will tend to dominate. The following characteristics make pseudo-events over-shadow spontaneous events:

- Pseudo-events are more dramatic.
- Pseudo-events, being planned for dissemination, are easier to disseminate and to make vivid.
- Pseudo-events can be repeated at will, and thus their impression can be reinforced.
- Pseudo-events cost money to create; therefore they are advertised in

advance, and re-run, in order to get full value.

- Pseudo-events, being planned for intelligibility, are more intelligible and hence more reassuring.
- Pseudo-events are more sociable, more conversable, and more convenient to witness.

Let us now consider the celebrities, such as film stars, who figure so prominently in the news. Are they really "great"? There are, says Boorstin, four different classes of "great" men. They are: those born great, those who achieve greatness, those who have greatness thrust upon them, and those who hire public relations experts and press secretaries to make themselves look great. Today's celebrities tend to be in the last category.

Up until now fame did not mean "greatness' or heroism. A genuine hero is defined as a human figure who has shown greatness in some achievement. Gandhi is a good example of a genuine hero from the past.

On the other hand, the modern celebrity, such as the film star, is a person who is known for his wellknownness. His qualities — or rather his lack of qualities — illustrate our peculiar problems. He is neither good nor bad, great or petty. He is the human pseudo-event.

Anyone can become a celebrity just by getting in the news and staying there. The genuine hero is distinguished by his achievement; the modern celebrity by his image or trademark. The genuine hero created himself; the celebrity is created by the media. The genuine hero was a big man; the celebrity is a big name. In the past a private secretary was needed as a barrier between an important man and the public. Now he has a press secretary to keep him in the public eye.

Mass media can make or break a celebrity. The hero, such as Gandhi, becomes immortal after his death; the dead celebrity, such as a film star, is very soon forgotten.

As Boorstin says, the person with solid virtues, who can be admired for something more substantial than his well-knownness often proves to be an unsung hero; the teacher, the nurse, the mother, the honest cop, the hard worker at lonely, underpaid, unglamorous unpublicized jobs. They alone have the mysterious power to deny our mania for more greatness than there is in the world.  $\bullet$ 



## A MASSAGE FROM THE SPONSOR

#### **Judith Hedges**

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How many advertisements have you noticed today? Certainly dozens, perhaps even hundreds. Nowadays only the blind-and-deaf can avoid contact with advertising.

Advertising, as an established institution of western society, is analysed by Martin Mayer in the Pelican book, Madison Avenue U.S.A. Madison Avenue, which is in New York, is the headquarters of advertising firms in America. Mayer's figures and statements relate to America but advertising is developing in much the same way in Australia.

Most advertising, says Mayer, falls into the following categories: food and soft drink; soaps, drugs and toiletries; tobacco; electrical appliances; cars; liquor. Advertising is a three-cornered business, composed of CLIENTS (the manufacturing or marketing companies), AGENCIES (which prepare and place the advertisements), and MEDIA (the newspapers, magazines, broadcasting stations which carry the message to the public).

For an effective advertising campaign, you need to state a proposition which is unique and which sells. For example, many years ago Colgate was advertising "Ribbon Dental Cream — it comes out like a ribbon and lies flat on your brush". Well, that was a proposition and it was unique, but it didn't sell. An agency gave them "clean your breath while you clean your teeth". Every dentifrice cleans your breath while it cleans your teeth but Colgate was the first to say this about Colgate. And so Colgate "sold".

"Brand-image" advertising works essentially on the consumer's conscious mind in an effort to convince him that Brand A, technically identical with Brand B, is somehow a better product. All advertising edges its way below the conscious level in driving home its point, because consumers at the moment of purchase do not stop to analyse why one is better than the other and the loyalties established by brand images can be psychologically interesting.

Early in this century the central problem of advertising was simply to achieve recognition for

the brand names which were rapidly replacing unlabelled products. The necessity was a name easily remembered for associations (Dutch Cleaner), or for descriptive qualities (Cream of Wheat). Later came names that could tie to a joke or slogan (Squirt beverage! 'It's in the Public Eye'). Eventually, a simple sales argument (usually a rhyme) was attached to the brand name and often achieved complete identification with it.

Advertising media differ in various ways, as follows:

MAIL ORDER ADVERTISING was the first to demonstrate to sceptical manufacturers that it really paid to advertise: the actual result could be seen. The advertisement was put in the paper, telling people to clip the coupon and send it in with the money if they wanted the advertised product. Only a small range of products can be efficiently sold via mail order, i.e., books, records, drugs and cosmetics. Mail order advertising is one of the easiest advertisements to test for returns and, after constant testing by coupon returns, mail-order men have developed sets of rules and formulas to direct the writing of advertisements.

**RADIO AND BILLBOARDS** function today mostly as reminders, ways of calling back to the prospect's attention the idea of buying a product he already knows about. Both are used where there is no real selling argument, but a slogan or jingle. Radio is now the best way to reach some markets, e.g., teenagers mobilised with transistors.

**NEWSPAPERS** are the oldest advertising media and they are still, in grand total, by far the biggest. Though both must sell their local markets, the newspaper and the broadcasting station have different problems. A newspaper can make space for all the advertisements it sells; the broadcasting day, however, has specified limits. A newspaper audience is loyal, taking the same paper every day; the broadcasting audience flows in and out to the different stations, loyal to programmes rather than stations. **TELEVISION** is undoubtedly the greatest selling medium ever devised. The combination of the moving picture and the speaking voice, both in the consumer's home, gives the television advertisers something that is almost equivalent to a door-todoor salesman.

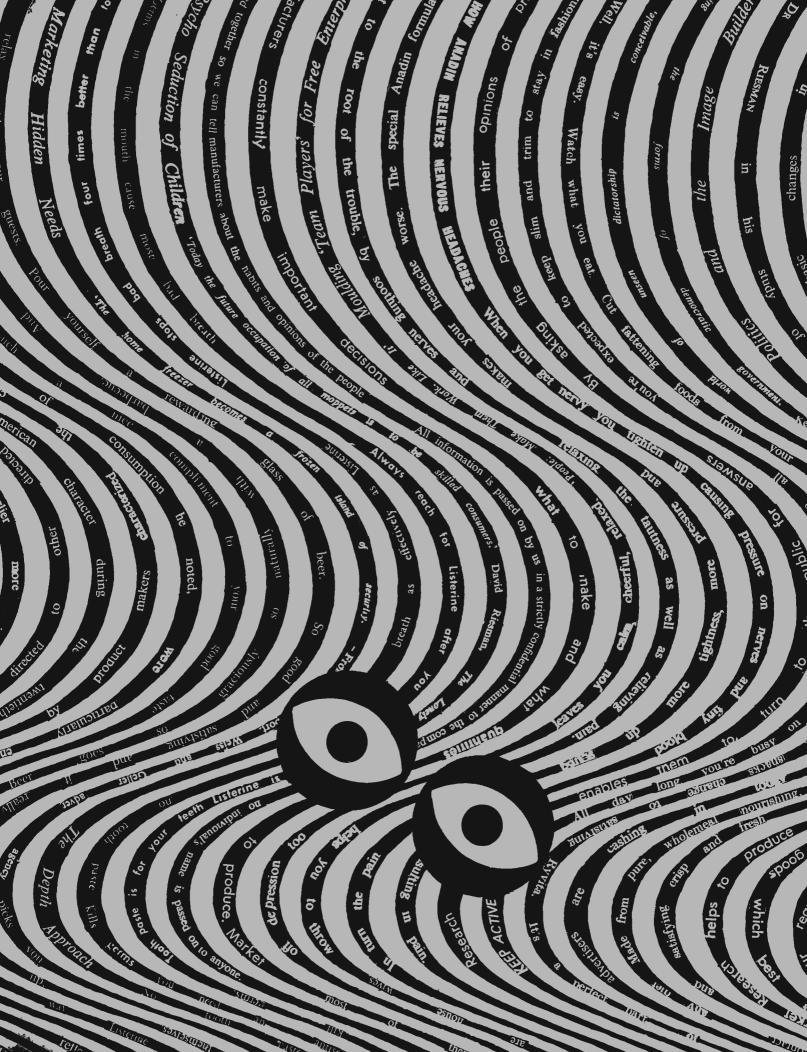
And what is the future of advertising?

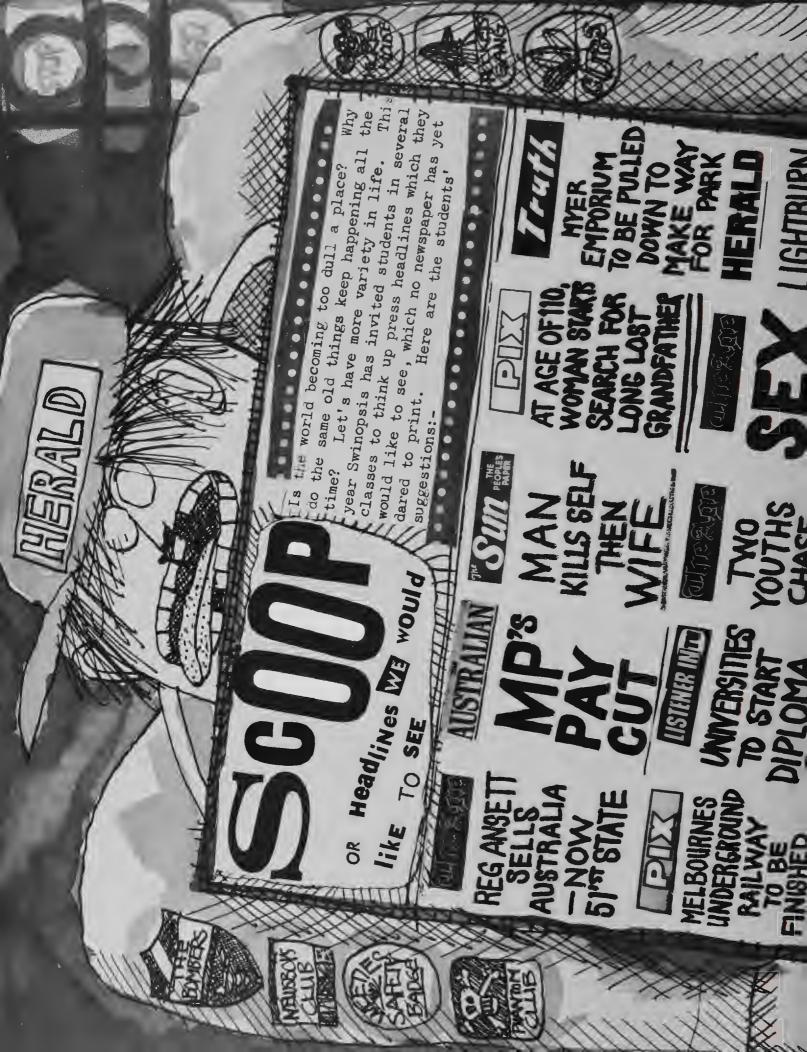
The growth of newspapers and magazines and the birth of the new media, ranging from the immensities of network broadcasting to the minutiae of match covers, has forced agencies to begin the careful analysis of the different audiences that could be reached by different placement of the advertisements. Each of these developments has added to the cost of advertising as well as to its complexity.

The importance of the advertising industry, and the tensions within it, have grown enormously. There is no question about the trend; business is rapidly eliminating the personal salesman at every stage of distribution, and advertising is rapidly becoming the primary tool in selling the output of our industries.

Advertising today operates throughout the distributive system, stimulating wholesalers, loading dealers' shelves and showrooms, driving the obscure social processes that create product acceptance and product wants within the community, even extracting the requisite cash from consumer pockets. A growing percentage of the output of consumer goods is sold in supermarkets, where the staff collects the money and looks out for thievery but hardly ever sells anybody anything.

The relative efficiency of advertising as a selling tool is arguable on the national scene and within specific industries. But advertising to the millions is unquestionably more efficient—less expensive per sale produced—than the old methods which saw individual salesmen working over individual customers. There can be no return to personal selling. The economy of western society, according to Martin Mayer's book, is finally committed to the intensive use of advertising.







Mr. Motorist! Please don't speak too harshly about Melbourne's trams. We have reason to be proud of our tramways system which, at least in bygone days, has been one of the foremost in the world. Let me trace for you the process of evolution from cable trams to electric trams, and then I shall entertain you with some reminiscences about the old cable-tram days.

Melbourne's cable tramways, like its

**Cliff Jones** 

# **EVERYBODY**

railways, began as privately-owned concerns. The first tramway company was the Melbourne Tramway and Omnibus Company, formed in 1878. Its first cable line was from Spencer Street to Flinders Street and then to Richmond. The first stage was completed on 11th November 1885. It was then extended to a total of forty-three and a half miles, becoming the fourth largest cable system in the world. The lease to this company expired in July 1916 and was handed over to the Cable Tramways Board, and was later taken over by the new Melbourne and Metropolitan Tramways Board, which absorbed many isolated independent cable tramways, and developed the electric system.

The first electric tram was from Doncaster to Box Hill, but this had a limited life span. Electric lines were formed in many outer suburbs but access to the city central was blocked by the cable lines, and the Melbourne Tramways and Omnibus Company extended its cable lines with horse trams.

The following Tramways Trusts constructed electric tramways before the advent of the M.M.T.B. in 1920 —

(1) The North Melbourne Tram and Lighting Company had seven miles of track from Flemington Bridge to Essendon and had a great deal to do with cables, was the development of passenger lifts in tall city buildings. The first passenger lift was proposed in 1885 by a holidaying American. It was built in a four-storey building in Queen Street, and was so successful that the building was made two stories higher. As soon as it was demonstrated that elevators would give safe uninterrupted service to upper floors, elevators became a roaring business. Thus the elevator business was one significant factor in the economic boom of the late 1880's.

However, let's get back to talking about Melbourne's cable tramways. They were once this city's pride and joy. It is worth quoting at length the following extracts from an article by W. C. Kernot, "Engineering Works of Victoria", published in the late 1880's —

"Cable tramways, as existing in Melbourne, are most massively constructed . . . Though the cars are of comparatively small weight, the rails are heavier than those for the largest and swiftest locomotives . . . Midway between each pair of rails comes the tunnel or trough in which the cable works. This is . . . large enough for a man to crawl along.

"In the tramway tunnels small pulleys of cast-iron, about nine inches in diameter, are placed at intervals of eleven yards, on



#### Maribyrnong River.

(2) Prahran and Malvern constructed thirty-three miles in 1910.

(3) Hawthorn constructed 12 miles in 1916.
(4) Melbourne, Brunswick and Coburg constructed seven miles of track in 1916.
(5) Fitzroy, Northcote and Preston began constructing six miles of track.

The M.M.T.B. in 1920 took over seventy miles of electric lines and carried out thirty-three miles of extensions, giving a total mileage in June 1955 of one hundred and thirty-four — the largest in Australia.

In passing, it is interesting to note that Melbourne, the city of trams, has created several other records in mass transport. For example, the first steam railway line in Australia was from Melbourne to Port Melbourne, built in 1854. As with tramways, these early railways were built by private companies, eight of which were later taken over by the state government to form the Victorian Railways. Another "first" for Melbourne, which

which the cable rests. At curves, which are introduced as rarely as possible, large drums on vertical axles are used. All these are rendered accessible by manholes with iron frames and doors level with the street, and are continually visited by men appointed to examine them and apply oil. At each terminus is a large pit roofed over with iron girders and plates, and containing a large iron wheel, twelve feet in diameter, round which the rope passes. The enginehouses are usually placed about the centre of the line, and are large and in many cases highly architectural structures, constituting very prominent features in the localities where they are found. In the street, in front of each engine-house, is a pit or chamber, containing a bewildering maze of huge pulleys . . . Entering one of them by a convenient passage or staircase, we find it brilliantly lit up with gas or electricity; we see cables passing in various directions, while over our heads the grippers of the cars pass, opening and releasing one cable, and closing upon another. As may be supposed,

it is a matter of the highest importance that the gripper should be opened and closed at the right points, and a comparatively small error on the part of the gripman may lead to great injury to the gripper, or what is far worse, to the cable or pulleys. To aid the man as much as possible, white marble blocks are inserted in the roadway, and illuminated in some cases by powerful lamps...

"When one tramway crosses another, as frequently occurs in the Melbourne system, one cable must pass beneath the other. The cars attached to the lower cable drop it before coming to the crossing place, run across the tramway by inertia, aided sometimes by a slightly falling grade, and pick up on the other side in the same way as they drop one cable and pick up another when passing an engine-house. This operation is rather a delicate one, and in the hands of a novice a mistake might easily occur and the cable be injured. So expert, however, do the gripmen become by constant practice that they pass over these square crossings without the slightest hesitation or trouble.

"The cars are small, pleasing in appearance, and very convenient. They run in pairs. The forward one carries the gripping apparatus in the centre, while all round are seats. It is roofed above, but otherwise open, and is very pleasant during fine weather. The second car has no gripper, but is simply towed along by the first, or dummy as it is called. This car is larger than the dummy, and is closed in, having doors and windows. It is intended for ladies, children, old people, and nonsmokers, smoking being allowed on the dummy. In fine warm weather the dummy will often be seen quite full, and the closed car empty or nearly so; while under opposite circumstances the gripman will have the dummy all to himself, the passengers seeking the shelter of the closed car . . .

"The system, as a whole, is a very satisfactory one, convenient, free from smell, smoke, or other nuisance, and neat in appearance. The only objections that can be urged are — firstly its great prime cost, owing to the massive and complicated construction needed; secondly, its unsuitability to small traffic, as it would practically cost nearly as much to run two cars as twenty on any of the Melbourne lines; and thirdly, the liability of a large system consisting of several miles of tramway, carrying twenty or thirty cars, being brought to an absolute stoppage by a slight accident or mistake on the part of a single gripman. The first two objections have little force in a busy, wealthy and popular city, while the third is felt less every day, as the gripmen become more expert in their work."

**MELBOURNE'S** 

UNDERGROUND

MOVEMENT

John Osborne

Melbourne so far boasts only one underground transport system — the network of canals and pipelines extending from mountain reservoirs, via suburbia, to the Werribee sewerage farm. For this method of "travel by tube", we are indebted to Melbourne's pioneers.

When John Batman chose his "place for a village" on the banks of the Yarra in 1835, the main reason for his choice was the availability of fresh river water. In those times you could scoop yourself a bucketful of clean drinking water even as far downstream as the site of today's Princes Bridge.

As the village became a town, water was either pumped from the Yarra, or pumped up from underground by means of windmills, or collected during rainy periods and run into galvanized iron storage tanks. In each of the above cases pipes of one form or another were used. Some pipes were made of clay, others of cast iron or steel and some of wood. The first public water supply system in Victoria was started in the year 1853, when the Melbourne Water Commission was formed to construct a reservoir north of the city. After much construction trouble a reservoir was built at Yan Yean and water was first piped to Melbourne in 1857. The reservoir was then thought to be the biggest of its type in the world.

Since then other sources of water have been constructed — the Silvan Dam, the Maroondah Dam, and the Upper Yarra Dam. Water from these reservoirs is brought to Melbourne in large concrete pipes approximately ten feet in diameter with smaller metal pipes being used for the reticulation system in Melbourne itself.

The supplying of clean water, although a huge task, is menial when compared with the job of removing sewage, and for many years this was left to the householder. Many householders had water closets which were flushed by a rainwater cistern and discharged into a deep cesspit by means of cast iron pipes. Kitchen slops were sometimes led into the cesspit, but more often than not, were led by means of pipes to the street channel. This caused much inconvenience to the public who resented having slops shoot out from a pipe in front of them as they walked along the streets, By 1850 Melbourne streets flowed with slops and the overflow from cesspits.

The following extract from the book "Australia's Home" by Robin Boyd describes the scene —

"From the south side of the Queen Victoria hospital in Lonsdale Street in 1855 there emanated a liquid discharge, the nature of which citizens hardly liked to guess, which travelled by gutter the entire length of Swanston Street. Contemporary reports stated that its odour was still present at Collins Street."

Fortunately this unsatisfactory system was superseded by the sanitary pan system, and pans were collected once a week by council employees who were known as nightmen or night-soil carters. Again in a lyrical passage Robin Boyd sums up the situation —

"Until the 1890's night soil collection was a flourishing public industry. In one year the service cost a city the size of Melbourne, whose area was then 85,502 acres, approximately £90,000. Every evening as dusk fell thousands of creaking, square-framed carts crept out of the municipal yards and rattled slowly past the doors of the polite houses. Dark figures hastened up the side paths, disappeared round the backs of the houses and returned at a more sober pace. One overseas visitor was outraged to meet a nightman on the staircase of a stately hotel, polluting the air with an abominable stench."

After an epidemic of cholera had threatened Melbourne in 1855, sanitary engineers and others tried without success to convince the public of the dangers of the many unsanitary practices concerned with the disposal of sewage and slops. A typhoid epidemic in 1866 caused Melbourne municipalities to hastily try to disinfect city drains. The epidemic started agitation by the public for a more healthy and convenient method of sewage disposal.

Nothing much was done to this effect until 1897 when pipes again came to the rescue and the Metropolitan Board of Works began to establish a sewage disposal farm at Werribee.

The underground network of pipes became so complicated in places that the design of houses had to be changed to accommodate the necessary plumbing. Plumbing now became a major business, and it was soon calculated that three per cent of the cost of a new house was the direct result of the plumbing. Builders became concerned at the appearance of the tall thin vent pipes which dominated their low-roofed houses.

Yes, indeed! During the last century, Melbourne's pipelines have come a long way.



### LANDMARKS OF OLD MELBOURNE TOWN

#### **Graeme Pike**

This year Melbourne has its 130th birthday. No "baby photographs" are available. Melbourne's infancy (from 1835 to the gold rush of 1851) was well before the advent of photography. However, you can still obtain some idea of the birth of the metropolis by wandering around the square-mile of what is now the city centre.

In 1835, both Batman and Faulkner landed in Melbourne. Batman built a small house on a hill by the Yarra, just near where the Spencer Street Bridge is today. Between our Spencer Street and North Melbourne there was once a beautiful lake and gardens, and just near the lake was the site of Melbourne's first race-course. The top of the hill, on which Batman had built his home, was later cut off for the building of the Spencer Street railway yards. The first crop ever grown in Melbourne was grown by Faulkner's men on a site near the corner of Flinders and Spencer Streets, and was taken over and harvested by Batman after a settlement over land boundaries.

In the northern part of the city, bounded on one corner by William and Latrobe Streets, are the Flagstaff gardens. The gardens got their name from a flagstaff which was placed in such a position so as it could be seen from Melbourne proper. A lookout was stationed there and his job was to notify the city by means of flags of the arrival of any vessel. A notice board was installed in the gardens so that the people of the city could be notified of any announcements, and later a weather station and observatory were built here.

The first Customs Building was built at the corner of Flinders Street and Market Street on the same site as the present one; in fact the old one is still part of it. It originally cost £7,000 to build and was built opposite a widening in the river in which the sailing ships used to unload. Above this area there was a barrier of rocks across the river, approximately where Queen's Bridge now is. This barrier was built by the convicts, and served as a barrier between the salt and the fresh waters. A charge was imposed on the unloading of cargo, and this financed the building of a wharf — now known as Queen's Wharf. Ferry services were provided between Melbourne and Williamstown, and Melbourne and Launceston, using the first two locally-built ferries.

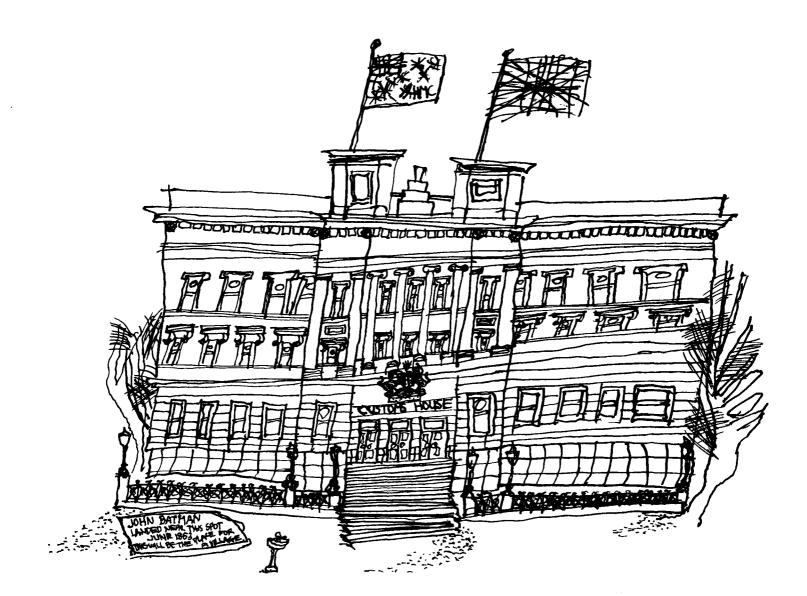
Elizabeth Street used to be a very wet street; in fact it was called the River Townshend because such a great volume of water flowed down it into the Yarra during wet weather. The water eroded away a deep channel down Elizabeth Street, and small bridges had to be built over it. It was stated that several people and a horse had drowned in it during one very wet day. The northern end of Elizabeth Street was well known for robbers who used to attack in daylight around the area of Brunswick. James Blackburn set up steam pumps for the provision of drinking water at the corner of Flinders and Elizabeth Streets.

Bourke Street provides some historical landmarks also. Between William and Queen Streets is Saint Patrick's Hall, the hall in which the celebration of independence from New South Wales was celebrated and where the first Legislative Council first met. At the eastern end is Parliament House. It was first built to a required stage so as to accommodate the first parliament in 1856, and it was finished in 1886.

The gateway to the city was Princes Bridge for it was along here that all visitors were brought for their entry to the city. A Hay and Corn Market was situated on St. Paul's site but this was later moved so that the cathedral could be built. There was originally a punt across the river here, but this proved unsatisfactory so a wooden and finally a single arch stone bridge was built on the exact site of today's bridge. In the early 1850's Melbourne's first railway ran from here, the corner of Flinders and Swanston Streets, to Port Melbourne (or Sandridge as it was known), a distance of two and a quarter miles. A second railway started up not long after and it ran from here to Hawthorn. Both of these privately-owned railways were taken over in 1878 by the new Victorian Railways Department.

Another interesting place is Jolimont. Jolimont is the small rise just near Melbourne Cricket Ground. Governor Latrobe purchased twelve acres of land in this area, shortly after his arrival in 1839, and built a weatherboard Government House. Latrobe helped in the foundation of the University, the public library, Melbourne Hospital, the Botanic Gardens and Melbourne's water supply. After Latrobe's departure, his house ceased to be the Government House and a new one was built in Toorak. His estate was divided into building blocks. His small wooden cottage remained in Jolimont until 1963 when it was shifted and rebuilt in the Domain, near the Shrine of Remembrance.

You can uncover more of Melbourne's historic landmarks by reading W. L. Williams' book, *History Trails in Melbourne*, or other books in the 994.5 shelf of the college library  $\bullet$ 



first five janet goodchild



Late sun, long shadow, Blinding water light sparkles, splashes. Bare feet, bright eye, excited freedom.

Run child, run ! Weave through the wind, Frenzy the waves, capture spirit, discard the limiting bog of body. Faster, faster ! Rise above the moment — You reach it ! You reach it ! Now collapse on the sand, rush in life, and bring hysteria.

Ah, child ! Do you not realise this age has no use for such experience?

N.

first five

24		Barriers,	
		What barriers?	
		Technology,	
		Creativity, Thought,	
		Pressure.	
		Intellectual scientists, Scientific intellectuals;	
		Superiority, Calculations and Computers;	
		Fountain pens and Brainstorms. Nonsense. Fanatical cries —	
		"The future depends on the scientist!"	
	Γ	Replies of equal fervour	
		"But man's sanity depends on the artist!"	
		Harmony, Understanding.	
		Barriers,	
		What barriers?	

Such industry, Such concentration. He builds his castle. Thoughtful, rationalising Every step. Mercilessly discarding Crooked blocks Broken corners, Losing self to final aim. And so he builds on And up — Eventually becomes A company director.

Press switch. Roar and hum and crash. Lift, push 🗆 🗆 🗆 pull — crush, 🛛 🗖 lift, pull, stack. One done.  $\Box \Box \Box$ Lift, push 🛛 🗖 🗖 pull — crush,  $\Box \Box \Box$ lift, pull, stack. Two done. 🗆 🗖 🗖 lift, push  $\Box \Box \Box \Box$ Why think?  $\Box \Box \Box$ No need to think  $\Box$ to eat and drink,  $\Box$ to enjoy luxuries; 🛛 🗖 cigarettes, television. No need to think  $\Box$ about the kids,  $\Box \Box \Box$ House-work can be done later. Out with the girls,  $\Box$ good lurk; 🗆 🗖 🗖 Nothing as stimulating as work. pull — crush,  $\Box \Box \Box$ lift, pull, stack. 🗖 🗖 🗖 Three done. **D** 

#### **Mass Production**

This river sweeps before it the drudgery of life. It pushes us on hell-bent wheels. We spin, we slow, we stop. We have not lived by spear and club for several centuries and now This river swells. This river rushes along constantly, Swift and with mighty force no dam of realisation can hold; no bank of vision, of insight can endure. Nothing can stop this flow. This river pours its all into the sea. The sea that is modern-day society. Upper, lower, mostly middle accepts chrome, and whirr and whine of mass sameness. Brainwashed individuality. · This river engulfs our lives and drowns the unaware. It does not ebb, cannot

meander, dally, slow. Unceasing surge which we created And mammon cult controls.

This river's social repercussions do not exist as far as some can see, But some are blind. One of the most widely-consumed products in today's world is popular music. I shall attempt to analyse this product and to estimate its value.

Pop music is nothing new. Throughout musical history, pop music has always existed side by side with classical or serious works. Pop music has always used the same recurring themes --- most frequently, love. In fact a song without allusion to love is a rarity. Another essential part is simplicity; it allows people to quickly learn the latest fashionable song, and this is responsible for a large proportion of its success. Not all pop songs are short lived; many gems of the past survive in the form of old ballads, folksongs, old music hall songs, and some from the twenties and thirties.

There is a logical evolution in the character of popular music; for instance the emergence of jazz at the turn of the century had an immediate effect. As jazz has changed, popular music has borrowed the new forms it provides. Rock 'n' Roll was never the invention of Tin Pan Alley, as many seem to think; it grew directly out of the music of the American Negro blues singers. What the new mass media did was to turn "rock" into a million dollar business. I say "dollar", because at this stage America was the leader in commercializing popular music.

The first Rock 'n' Roll was the standard twelve bar blues, electrified and commercialized with a few new words added to suit a wider audience. Ten years have passed since it burst into the pop music world. Where does it stand now? Well, contrary to the expectations of critics it is still with us and stronger than ever. After the first few years it began to fade slightly, only to leap back into life with the introduction of the twist, limbo, surf music and drag music -- all variations. Of course the young people following "rock" today were only babies when it first took hold, and to them it is still something new and modern.

The effect of mass media on popular music in the last ten years is inter-



Peter Cuffley

esting. The combined forces of recording, television, newspapers, magazines, films and radio launched Rock 'n' Roll in 1954 into the world of popular taste. To me, the only redeeming feature of this mass propaganda is the fact that "rock" has a long history and roots deep in Negro folk music and was not the creation of Tin Pan Alley, Of course, in most cases it was debased into an extremely inferior form of music. Elvis Presley, originally a blues singer, had the advantage from the viewpoint of the mass media of being young, good looking and not a negro; he was "discovered" and became, with the aid of mass media, the top in his field. Musically he has declined, becoming more sentimental as the years go by until today he is hardly a shade of the original wild singer; all the traces of the negro style he originally had have gone. Little Richard, the Negro who would not compromise on the true Rock style, was almost forgotten and neglected by mass media, and yet musically he stands head and shoulders above Presley.

While the publicity agents were using every trick they knew to keep the frenzied Rock 'n' Roll era going by introducing the twist and many other dance forms, most of which were short lived, a strange new movement was gaining momentum. This was a revival in traditional jazz and folk music.

In England the interest in jazz blues and skiffle grew steadily; added to this were the influences of the beatnik movement, and a strong new force was beginning to emerge. Here was a force that owed little to mass media and publicity agents. It was only natural that while delving into the early history of jazz, collectors became interested in blues. Blues steadily gained popularity. England's beatnik coffee cellars began to echo to the sounds of rhythm and blues. Electric guitars, harmonicas and tambourines became the popular instruments. While rhythm and blues and the beatnik movement were both American, they flourished in Britain, probably because the standard of living was lower. Out of the thousands of rhythm and blues groups, a beatnik cellar in Liverpool produced four longhaired and extremely talented boys who called themselves the Beatles.

When commercialism and mass media came into play, the Beatles were already a popular group. Their wise manager put them in smart suits, and, with some careful organization, they were launched to become the greatest pop group in history. Mass media is not necessarily a bad thing as in the case of this group. The Beatles were not made wholly and solely by publicity. They worked their way up by sheer hard work and talent. Mass media did a service by allowing the world to enjoy this talent. And no one would really argue that the Beatles were unpopular and only forced on to the public. The public loved them, and received pop music of a higher standard than had been heard for a long time.

The Beatles gave Rock 'n' Roll new life, because their rhythm and blues were the original ingredient, the one thing Tin Pan Alley had not tried in its efforts to keep Rock alive. Little Richard found his old style on top again.

To rhythm and blues, the Beatles added very effective harmony, using a number of voices, very competent guitar playing, plus bright, fresh and imaginative songs, a combination which makes them worth the top position. They really play their own guitars on recording; this is something previously rare (Elvis Presley always used somebody else). They also wrote most of their own songs. Someone commented that the Beatles are very much like the medieval troubadours.

Just at a time when Britain's morale was low, the Beatles with their healthy boyish vitality, charmed the masses of the western world and won admiration and dollars for their country.

Riding high with the Beatles came many other groups, all bringing with them a new standard in pop music, and heralding an era which will be remembered for years to come.

Mass media is powerful. It can project the good and the bad. It seems that the answer is not to worry about the lack of individuality in mass opinion that is formed this way, but to improve the standards of the ideas and entertainment that is projected to the world.



27



It's a pity that, when Noah was loading various creatures on board the Ark during the Great Flood, he didn't do us a favour by treading on the flies and mosquitoes. Today we are plagued with an insect problem, which only science (and common-sense) can solve.

28

At present the most usual method of killing insects is to spray them with insecticides. This is simple and quick, but (as pointed out by Rachel Carson, in the new Pelican book The Silent Spring) modern chemicals are so powerful that dangerous after-effects prevail. One such danger is that, besides killing pests, the modern sprays also damage and kill wild-life such as fish, bees and birds. For example, in South East Asia and India insecticide spraying against mosquitoes proves to be a tremendous menace to the milkfish which provides an important source of animal-protein to the rice-eating millions. In one such pond more than half of the 120.000 milkfish died after an aerial spraying.

Birds are subjected to a sim-

ilar fate. It has been found, in Clear Lake, California, that the fatty tissues of dead Grebes (fish-eating birds) were loaded with DDT in such high concentrations as 1,600 parts per million. This is quite extraordinary owing to the fact that the maximum concentration applied to the water was only one-fiftieth part per million. The only explanation is that the poison was picked up by the plankton organisms, passed on to the fish and finally to the fish-eating birds.

This new kind of fall-out over croplands, gardens and forests pollutes water supplies too. Even remote water sources separated by great distances from the areas of chemical dusting have been found to be contaminated by means of underground streams. Since all the running water of the earth's surface (with the exception of what enters the streams directly as rain or surface run-off) is at one time ground-water, the pollution of ground-water is, in a real and frightening sense, the pollution of water everywhere.

Indeed, one of the most alarming aspects of the chemical pollution of water is the fact that here - in the rivers. lakes or reservoirs or for that matter in the glass of water served at the dinner table are mingled chemicals that no responsible chemist would think of combining in his laboratory. There is always the possibility of the interaction of chemicals. Moreover, under the impact of ionizing radiation some arrangement of atoms could easily occur and could, consequently, change the nature of the chemicals in a way that is not only unpredictable but beyond control.

As it is hardly possible that the underground water could be poisoned without the soil becoming affected, the pollution of the soil on the earth's surface is just as serious a problem as the pollution of the world's water supplies. The fact that every meal eaten by the population carries its load of chlorinated hydrocarbons is the inevitable consequence of almost universal dusting of agricultural crops with arsenic



and other pesticides under trade-names without the slightest hint of their lethal nature. Meat and all the products derived from the animal fat which constitute an essential part of the daily diet contain the heaviest residues of chlorinated hydrocarbon which cannot be destroyed by cooking. There is evidence of DDT present in the human body fat, and investigations reveal that few if any foods are entirely free from DDT.

In view of the fact that heedless and unrestrained use of insecticides will prove to be a greater menace to mankind than to the targets, the time has come for a more diligent exploration of a less dangerous alternative. A new science of biotic controls based on the understanding of the organisms to be controlled promises many possibilities. Some of the most fascinating methods are those that seek to turn the strength of a species against itself.

The most spectacular of these approaches is the sterilization of the male insects by means of X-rays or Gamma rays and then releasing them to compete with the normal male insects, so that, after repeated releases, only unfertile eggs would be produced. Thus the species would die out. However, for obvious reasons, sterilization using electronics is difficult to accomplish, and research scientists are working on chemical sterilants which could be combined with a bait to be introduced to the natural environment of certain pests.

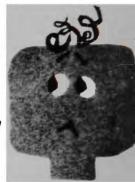
Working along these lines is the production of artificial lures or attractants very similar to that of the natural secretions of the insects. The Gypsy Moth provides an especially intriguing example. As the Gypsy Moth is too heavy-bodied to fly, she produces a secretion that attracts the male Gypsy Moths even from great distances. Such a synthetic attractant known as "Gyplure" has been successfully and economically prepared from a constituent of Castor Oil. This can be combined with selective poison, and can be confined to certain areas like squares of fibre wood which are unlikely

to be eaten by wild-life and are quickly dissipated and hence are not potential contaminants of soil or water.

Research in electronics has suggested an ultrasonic solution. Ultrasonic sounds can be used to kill mosquito larvae, and also to imitate the flight sounds of female mosquitoes, luring the male mosquitoes to an electrically charged grid.

Another method is the introduction of disease into the pests' environment. The interesting factor associated with the use of such microbial insecticides is that, unlike the chemical insecticides, they are harmless to all except their intended targets. But perhaps the most inexpensive of the biological controls is the introduction of suitable natural enemies into the midst of the pests. The advantages of this solution are the permanent results and the absence of poisonous residues.

Whatever the result of this pest-control business, the guiding principle of scientists in the future must surely be: "Insecticide, yes; homicide, no."



## "Parlez-vous Esperanto?"

30

The idea of a language to be understood by the whole human race is probably as old as the story of the Tower of Babel. It has been particularly prevalent in the last one hundred years, when about 150 attempts to create such a language have been made. The first that was actually used was "Volapuk" invented by a German clergyman in 1880, with English as its main foundation. Others included "Interlingua", an interesting attempt to adopt Latin roots to universal use, and "Interglossa", a relatively straightforward language having Greek and Latin vocabulary but Chinese grammar. Of all these, the most popular, but not necessarily the best is "Esperanto".

Esperanto is the international auxiliary language constructed by Dr. L. L. Zamenhof, a Polish eye doctor. The The language was introduced to the world in 1887 under the title, "An International Language by Dr. Esperanto". ("Esperanto" means "one who hopes".) The aim of Esperanto is to provide a second language for all an auxiliary rather than universal language, for it neither displaced the mother tongue of any people, nor interfered with the study of other languages.

Zamenhof's book was an immediate success. A number of enthusiastic followers in different countries started to correspond with him. Soon Esperanto Clubs were organized all over Europe and Esperanto magazines and text books were written. Although met by resistance from "Volapuk" followers, Esperanto soon became the accepted "international language". From time to time several improved forms of Esperanto, like "Ido", evolved but these did not succeed to any extent and soon died out.

Esperanto's popularity is due largely to its phonetic spelling and its relatively simple grammar. Esperanto uses the normal European alphabet, with the exception of Q, W, X and Y. (X, for example, is represented by KS.) However, six of the letters (C, G, H, J, S, U) often have to be written or printed with a circumflex accent on top of them. For example, the letter G by itself is pronounced as in the English word "good", but when it is wearing its circumflex hat it is pronounced as in the English "George". Esperanto's vocabulary is drawn mainly from the Latin-derived languages, with an admixture of Teutonic and Slavonic roots. To increase the ease of learning Esperanto, Dr. Samenhof denoted word-classes by adding distinctive word endings -- "i" for verbs infinitive, "o" for nouns singular, "oj" for nouns plural, "a" for adjectives and "e" for adverbs. Here is the Lord's Praver in Esperanto -

"Patro nia, Kiu estas en la cielo: Sanktu estu Via nomo: Venu regeco Via: Estu volo Via, kiel en la cielo, tiel ankau sur la tero: Panon nian ciutagan donu al ni hodiau:

"Kaj pardonu al ni suldojn niajn, kiel ni ankau pardonas al niaj suldantoj: Kaj ne konduku nin en tenton: Sed liberigu nin de

malbono: Car Via estas la regeco, la forto kaj la gloro, eterne, Amen.

Esperanto has been criticized on many grounds. Firstly the use of circumflex accents on six letters raises problems for printers, typists and telegraphists. (Esperanto was invented before typewriters, and typewriters normally do not have a key for circumflex accents.) Secondly, Esperanto was invented before the hevday of European domination of Asia, and sounds too foreign to Asian ears. (Esperanto's rival, Interglossa, caters for Asians by using Chinese grammar.) Thirdly, some experts think that Esperanto is not easy enough, in that it could have been simplified much more. Nevertheless, because it was the first such language to capture a fairly large public, Esperanto has so far survived these criticisms.

The Esperanto movement has been weaker in Australia than in European countries, the Far East and Brazil, because here the need for an interlanguage is not felt with the same acuteness. Even so, Esperantists are active in Australia. In Easter 1965, a complete church service at St. Mary's church of England, Morwell, Victoria, was conducted in Esperanto.

Anyone interested can find out more about Esperanto and other international languages by consulting encyclopaedias and library catalogue drawers.



Now that atomic scientists have learned to split time into fragments smaller than a billionth of a second, it is fascinating to look back at the long record of man's race against Time.

Calendars and clocks have not always existed. In the Old Stone Age man had no reason to want to measure time. He did not plant crops; he did not have to be at work at a certain time.

With the development of cultivation during the New Stone Age, primitive man found that he did have to consider time, though not as we understand the meaning of the word. The primitive attitude to time seems very strange to people living in our society, whose lives are regulated by time to such a high degree. Time can be regarded as a recurring cycle. Certain events repeat themselves in definite sequence. This sequence is a continuity without beginning or end, and thus without any clear distinction between past and present. The most important time sequences are seasonal activities and the passage of human life. Both these cycles are conceived as of the same kind by primitive people. For such thinking there is no chronology, and time is not measurable.

The simplest of all types of time-reckoning is that of noting direct correlations between synchronous natural events, e.g., when certain plants blossom or when rains come. These seasons were

### MAN VERSUS TIME AND VICE-VERSA

named, and followed one another in definite order, but the units of time described have no definite length. Primitive man measured time in many different ways, relying on weather, moons, stars, or even shadows. Primitive people may not have even thought of the yearly cycle as having any fixed duration at all. The counting of days was uncommon among primitive peoples probably because of the difficulties of maintaining a system of tallies for the large numbers. Primitive people did consider time, but mainly in relation to seasons. Time to them was a very general process, not exacting like our time. Life was centered around seasons, not minutes.

When the Bronze Age began in Egypt and Mesopotamia about 3,000 B.C., primitive ways of life gradually were replaced by civilization. Cities took form, knowledge increased, trade reached to far areas, and skilled crafts multiplied. Life became more complicated, and men began to seek better ways of telling time to guide their activities. There was a greater need to measure time more accurately.

Our division of the year into 12 months came to us from the Babylonians in Mesopotamia, who had separated the heavens into a giant circular band of 12 equal distances called the zodiac. Day and night were each assigned 12 hours in recognition of the power of the zodiac. The number of minutes in an hour was then set at 60, and each minute was subdivided into 60 seconds. The number 60 was chosen because it can be divided by more numbers than any other lower number.

The water clock appeared in Egypt at an early. date; it was later developed significantly by the Greeks, and in the same forms then achieved persisted through the early Christian period with little essential change. Supplemented by sandglasses and sundials, the water clock displayed a notable part in keeping time down to the close of the 13th century, and even after the appearance of the mechanical clock the older device, with some changes, continued in use until the 18th century.

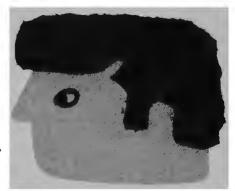
As the centuries passed, clocks were developed into more complex instruments; life became more regulated by time, and the general use of clocks spread. Before the Renaissance, about A.D. 1500, clocks were mainly used in churches to mark the time for certain rituals. During and after the Renaissance with more scientific inquiry and discovery, clocks were greatly developed and their general use very much widened. By the Industrial Revolution, in the 18th century, they were in wide usage and very much a part of life. Men, women, and children had to be at work at a certain hour; and they worked for 12 or more hours with a lunch break of a number of minutes. People under these conditions would have to get up and go to bed at certain times in order to have enough rest to stay alive. The lives of these people revolved around hours and minutes.

During the last few decades we have been concerned not only with hours and minutes, but seconds and fractions of a second. Most people still work from 9 a.m. to 5.30 p.m., but there are people who work by the minute. Some firms have clock-cards; at the beginning and end of a job, and all breaks in between, this card must have the time, to the minute, printed on it. After a person has worked a certain number of hours he goes on to time and a half, and after another number of hours he goes on to double time. These calculations are all done by the minute.

Mathematicians doing scientific work have to do calculations to parts of a second; otherwise millions of pounds worth of scientific research and equipment would be wasted. All of this may depend upon a tenth, a hundreth, a thousandth, or a millionth of a second.

With defence equipment that has been developed and is being held for the purposes of war, it is frightening to think of the damage that could be done in one second. One might even wonder could humanity survive.

What will the future bring in regard to time? •



THIS YEAR, 1965, IS THE TWENTIETH ANNIVERSARY OF THE END OF WORLD WAR TWO AND (WE HOPEFULLY ASSUME) OF THE DEATH OF ADOLF HITLER ID TO SAY THAT ONE MAN CAN CHANGE THE WORLD WOULD BE A GROSS EX-AGGERATION. IT IS CONCEIVABLE, HOWEVER, THAT A MAN WITH EXTRAORDIN-ARY POWERS CAN KNIT TOGETHER A POLITICALLY AND NATIONALLY FRAYED PEOPLE AND USE THEM AS A MACE TO, PERHAPS, PERMANENTLY MAR THE FACE OF MANKIND.

□ SUCH A MAN WAS HITLER. HE RAGED INTO GERMANY AND PLUNDERED HIS WAY INTO HIS INFAMOUS POSITION AS FUHRER OF THE "MASTER RACE". HIS OBVIOUS SKILL IN TURNING EVERY OPPORTUNITY TO HIS ADVANTAGE, HIS TALENT IN MASS PROPAGANDA AND HIS COMPLETE RUTHLESSNESS AND DIS-REGARD OF HUMAN DECENCY WERE THE TOOLS OF HIS PHENOMENAL SUCCESS. AND YET IT IS HARD TO ASSOCIATE SUCH SUCCESS WITH A MAN OF HITLER'S CHARACTER.

BORN IN AUSTRIA ON THE TWENTIETH OF APRIL, 1889, HITLER CANNOT EVEN BOAST OF COMING FROM A STABLE FAMILY. HIS SCHOOLDAYS WERE FILLED

<sup>32</sup> WITH FAILURE. HE DID NOT OBTAIN THE LEAVING CERTIFICATE EQUIVALENT. HE HAD VISIONS OF BECOMING AN ARTIST, BUT DID NOT POSSESS THE ORIGINALITY REQUIRED FOR THIS CAREER. THEN HE FANCIED HIMSELF AS AN ARCHITECT, BUT ALSO CAME FACE TO FACE WITH FAILURE. IT WAS DURING THIS PERIOD THAT YOUNG HITLER BEGAN TO SHOW HIS CHARACTER. HE DID NOT WORK, BUT ROAMED THE STREETS IN DISSATISFACTION. HE OFTEN WENT TO PUBLIC LI-BRARIES TO READ BOOKS ON HISTORY, BUT LIKE MOST OF HIS WORKS, THIS WAS DONE IN FITS AND BURSTS. AT THAT TIME THERE WERE MANY ANTI-SEMITIC VIEWS EXPRESSED IN NEWSPAPERS AND HE BECAME OBSESSED WITH HATRED FOR THE JEWS. THESE PREFABRICATED IDEAS HE SHOUTED OUT IN INNS, AND SOON PEOPLE BEGAN TO NOTICE THIS FANATICAL ORATOR.

□ BECAUSE MUNICH WAS TO HITLER A "THOROUGHLY GERMAN TOWN", HE SETTLED THERE. AFTER SERVING IN THE FIRST WORLD WAR, HE WAS BITTER AND ENRAGED, AND BLAMED "THE JEWS" FOR GERMANY'S DEFEAT. THUS HE BEGAN HIS POLITICAL CAREER. HE ACCEPTED MEMBERSHIP IN A SMALL GROUP CALLED THE GERMAN WORKERS' PARTY — THE NUCLEUS OF THE NAZI PARTY.

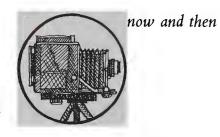
□ HE SOON GAINED LEADERSHIP AND BY 1923, WITH 27,000 PARTY MEMBERS, HE SAID IT WAS TIME TO SEIZE POWER IN GERMANY. AGAIN DEFEAT STARED HIM IN THE FACE AND HE WAS SENTENCED TO GAOL. DURING THIS CONFINEMENT IN THE CELLS HE BEGAN THE BOOK WHICH WAS TO BECOME THE POLITICAL BIBLE OF THE NAZI PARTY. IT IS STRANGE THAT HITLER WAS NOT STOPPED AS SOON AS "MEIN KAMPF" WAS PUBLISHED, FOR HERE WAS A BLUEPRINT FOR HITLER'S FUTURE ACTIONS, WRITTEN CLEARLY AND BLUNTLY.

DESPITE THIS, HE GAINED CONTROL OF GERMANY IN 1933 AND FORMED IT INTO A GREAT MILITARY CAMP IN PREPARATION FOR HIS "EXPANSION PRO-GRAMME". IN SEPTEMBER, 1939, HITLER CAME TO WAR WITH ENGLAND OVER POLAND. WE SEE HIS RUTHLESSNESS AS HE DROVE THE SO-CALLED MASTER RACE INTO OTHER NATIONS. WE SEE HIS BRUTALITY STREWN OVER THE RUINED POLAND AND A GREAT PATH OF DESTRUCTION INTO RUSSIA, FRANCE, THE NETHERLANDS, AND BRITAIN. SO MUCH SUFFERING BECAUSE OF ONE MAN'S FANATICAL BELIEF IN POWER, AND ULTIMATELY, WORLD DOMINANCE! THE SHAMELESS MURDERING OF SIX MILLION JEWS! OVER FOUR YEARS OF PAIN FOR COUNTLESS PEOPLE BECAUSE HE WANTED TO RULE THE WORLD!

Alwin Himan













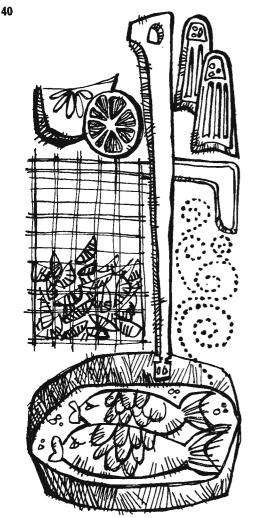








## piece of flake and shilling of chips



#### **George Farmakis**

In order to support myself while studying for my diploma, I help my parents run a fish and chip shop in Box Hill on Friday evening and Saturday.

The difference between fish shops in Melbourne and in Europe is that in Melbourne they sell fresh and fried fish and chips, whereas in Europe they sell only fresh. Unlike most other shops, the fish shop buys its fish from the Fish Market. A number of operations are carried out before the fish is sold in the shop. First the fish is cleaned, filleted and, if a large fish, cut into pieces for cooking; then it is fried with a layer of batter on either side.

Most fish shops make the batter with biscuit-flour, water and salt, but at our shop we add other ingredients such as eggs so the customer will be completely satisfied. The batter is not the only thing that makes a good shop for oil plays an even greater role. Many fishmongers buy good oil or dripping but they do not know how to use it properly, because in order to serve the customer quickly they burn it. The oil has to be changed frequently.

As well as the above, cleanliness plays another great role, for, if a shop sells good fish and chips but is not clean, the customer will not return, because when he is eating the fish he will remember the place where he bought it. If it was clean he will have a good appetite, but if the place was dirty he will quickly lose his appetite. A fish shop also needs a good refrigerator that can go from a little above freezing point on the top side and gradually work down to minus-twenty degrees.

Throughout Victoria the price of fish varies, chiefly because of transport and because the fish is bought by auction in the Fish Market. Fishmongers from all suburbs of Melbourne go to the market at least four or five times per week, but some go even six times a week. Fish comes in almost every day, depending on the weather. When it is fine, fishermen are able to catch more fish, and less fish or no fish in rough weather, and prices go accordingly in the market. When there is plenty of fish, in order that all the fish is sold it goes cheaper and when it is cheap everyone buys.

Fish shops throughout Victoria make about the same profit in winter as they do in summer because fish is usually cheaper in summer than in winter.

Trading hours in a fish shop are long. Some fish is prepared in the morning for lunchtime and then in the afternoon for the evening crowd. Thus a fishmonger has a couple of hours' break during the day. Also a fishmonger must remember, if he is to be successful, that the customer is always right; the person behind the counter must always do his best for his customer.



One of the most interesting things about football is its origin and development. Some authorities believe that football began in Europe as a kind of pagan ritual in the second century B.C. In the history of English-speaking peoples, the game first appears in the twelfth century A.D. when a writer, in an account of Shrovetide festivities, referred to "that famous game of ball".

From then until the seventeenth century most of the information recorded about football was in the form of prohibitions. Football in medieval and Puritan England was attacked for two reasons; firstly, it was regarded as a public nuisance and a danger to life and property; and secondly, until the invention of gunpowder, football's popularity was considered a threat to archery, so vital to national defence. The authorities, however, never really managed to suppress the game, and it survived in different forms in many areas.

In 1602, traditional football was described by Richard Carew in his "Survey of Cornwall". The two teams were made up of men from rival parishes, and the "goals" were either the players' own houses or a couple of villages two or three miles apart. When the teams met there was neither comparing of numbers nor matching of sides. The ball was thrown up and that company which could catch or carry the ball by force or cleverness to the assigned place won the game. The game was extremely rough and undisciplined, many players returning home as if from a pitched battle with noses bleeding, bones broken and out of joint, and bruises so severe as to shorten their days. Compared with modern rules the traditional rules were loose and simple.

As the traditional forms of football declined, due mainly to urbanization in

the late eighteenth and early nineteenth centuries, models of play much more suitable to an industrializing society were being established at the great English public schools. Play was just rough and the rules were as still 💽 oral but it was now being ed for the first time on playular weekly basis with a regspecific season. The pubits own lic school authorities in the early hundreds were, for the eighteenhostile to the game. most part, largely because of its unassociations. Many gentiemanly attempted to headmasters but the boys con- in their schools tinued to despite this ruling.

Rugby School in 1845, was the first school at which football rules were reduced to writing. Then in 1849, Eton wrote its own set of rules. At Rugby,the ball was allowed to be carried. and scoring was done over the cross-bar. The boys of Eton did not like this apparently and as they thought they were the pace setters in every field, they promptly answered Rugby by C placing an absolute taboo on ballhandling in their own game, and their own game, and their goal was scored by the ball passing under the bar.

When the game was finally diffused from the schools into wider society during the 1850's, the adherents of these two different models failed to agree, and so the variation in the rules of British Football that resulted from public school rivalry in the 1840's, was perpetuated on a national scale.

Meanwhile, as Englishmen emigrated to North America and Australia they carried the institution of football with them. In these new environments and 41 cultures, the game took on local forms, different from both rugby and soccer.

Thus all the codes of football that are now played in Australia have a common heritage. And if you take a detached, intellectual look at Saturday matches in Melbourne, you can still see certain similarities between modern football and those above-mentioned pagan rituals of the second century B.C.  $\bullet$ 



communities sprang up and are still expanding today.

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Natimuk is located in the Wimmera's large wheat and sheep belt. Some cattle are kept but, as yet, not intensively, and only for dairy use. Irrigation is also carried out, but also only on a small scale as it is used for private stock fodder. Farms average from 500 to 3,000 acres, but the land is usually widely spread about owing to merging of farms and inheritances.

Natimuk has numerous sporting associations and branches of the R.S.L. and C.W.A. For the younger children there are Scout and Guide groups, an active Gymnasium club, and a large freshwater lake five miles from the town. With all these organizations one large problem becomes evident transport.

Natimuk itself holds practically nothing for young people's future. Even Horsham (20 miles distant) has only a limited scope to provide jobs for her own school-leavers, without an influx from outlying towns. So a Natimuk teenager has to seek employment or training in Melbourne or Ballarat.

In truth, the tempo of the town is apathetic as concerns bettering the individual. There are notable improvements to the facades of buildings, to streets and roads, but for the individual there is nothing to offer — except going further afield and leaving the town without a growing generation.  $\bullet$ 

The average Australian lives in suburbia, and tries to keep up with the Joneses. I come from Natimuk, 200 miles from Melbourne. In Natimuk we have to keep up with people who have names like Westerndorf, Hauestorfer, Gladigau, Meyer and Schilling.

Watione Sudholt

ATHATIMUM

THEY RE RACING

These names, of course, are all of German origin, as is my own.

Natimuk contains the descendants of Lutherans who in 1845 felt compelled to flee their native country because of religious persecution. These people settled first in South Australia, and gradually there was a migration to the Wimmera. The major settlement was centred near Murtoa, but other thriving

# **HITCH-HIKING UP THE BITUMEN**

#### Josephine Christoffersen

Hitch-hiking from Alice Springs to Darwin along 1,000 miles of bitumen is a fascinating, and sometimes risky, adventure.

In June last year a girl-friend and I decided to undertake this journey with £80 between us. The desire to leave Melbourne's miserable weather behind, to visit old friends in Darwin and to enjoy the long sunny days of the Dry Season in the Northern Territory, were sufficient reasons for going.

We reached Alice Springs late one night by train, or the "Ghan", as the train from Pt. Augusta to Alice is nick-named, and spent the night with friends. Early next morning, we walked down to the railway station and enquired of the truck-drivers at the loading sheds about the possibility of a lift to Darwin. A truck was leaving that evening at five o'clock, so we were fortunate enough to obtain a lift there and then.

Alice Springs is an expensive place to stay in, so after the minimum amount of food required, and endless walking around the town, we arrived promptly at the appointed place that evening. The two drivers were still loading the semi-trailer, so we sat on our rucksacks, backs to empty gallon drums, and chewed dry, tasteless biscuits, washing it all down with warm, rust-tasting water from our water bottles.

At 9.30 p.m. the semi-trailer was loaded and ready. The darkness was almost absolute. Torches flashed their friendly beacons in the dark as the two rucksacks were firmly stowed away in pockets low down in the sides of the trailer, which was already a conglomeration of tools, rope and canvas.

The driver climbed up; his partner curled up on the flat, narrow bunk behind the front seats and went to sleep. The two front seats were divided by the huge mis-shapen hump of the engine. This warmed up considerably as the miles passed, and added the discomfort of heat to bone-jolting hardness. It was necessary to change places every hour or so to prevent permanent injury to the spine and bones of the posterior.

Conversation was limited to the driver and the one perched in the middle, as the noise of the motor was loud and continuous. The powerful headlights pierced the deep gloom on the "Bitumen", the red sand, stunted growth and rocky patches on either side showing up brilliantly and intermittently. The night wore on.

The driver was a taciturn man with the name of Yogi. He lived on drugs and beer. Towards the early hours of the morning his driving became markedly worse as the huge semi-trailer hit first one side of the road and then the other. Occasionally the headlights would light up a caravan, or a private car with sleeping-bags huddled on the ground, or the form of a kangaroo beside the road.

Morning came, and with it the breathtaking beauty of sunrise. Over the red, sandy country, rolling for miles as far as the eye could see, the sun's fiery, yellow glow gave us a hint of the heat and dust to come.

43

At 9.00 a.m. we stopped at the "Three-Way", a motel at the junction of the "Bitumen" and the Barkly Highway which leads to Mt. Isa and the Queensland coast. After a meal of steak sandwiches and soft-drink, and futilely swatting at the myriads of flies which settled on every inch of exposed skin, we were again on our way.

The heat and the dust, and the glare became oppressive as the day wore on. Cramps in the legs due to inability to stretch muscles became agonizing, the dust crept into eyes, nostrils, mouths and ears; conversation lapsed and extreme tiredness grew as the miles passed, and the afternoon dragged interminably. Tempers became short.

The scenery changed constantly and varied from forbidding desolation to fascinating and unusual beauty. Everywhere the vastness and almost total lack of habitation, the tremendous distances, and the heat haze, strained the eye and depressed the mind, making one realize how truly insignificant a human being is.

Churchill's Head, a clay formation jutting out from a rocky hill in the bend of the road, the Devil's Marbles, an awe-inspiring sight of huge red, almost round boulders resting on one another at precarious angles . . . all these passed. Another night came and passed the same as the first.

In the middle of the following morning, we reached Darwin, two tired, grubby, hungry, bad-tempered but exhilarated girls.

It was a trip worth doing and I'd do it again — just like that. ●

**Adrian Newport** 

oh aching time, oh moments big as lear

The view from the surf club-house was one which excited both surfers and spectators. The beach has always been claimed as Victoria's best, and today saw a consistent wave of sixteen feet and an occasional set which had a last wave of nineteen feet. The day was bright and a slight off-shore breeze was holding the wave at peak height and also blowing the spray high into the air to show a misty horizon, dividing the glassy green surf from the blue cloudless sky. The beach was decorated with surfboards surrounded by suntanned surfers who were all intent on watching the expert performers on the huge wave.

Four of the five board-riders in the water were club-members who were all well respected as surfers and, in fact, the only ones who could challenge a wave of this size. The fifth was an unknown surfer who was seen entering the water alone and paddling his newlooking board through the first of the white water on his way to joining the other four who were out beyond the wave line, which is where the wave begins to take shape. It is getting beyond this wave line which deters all other surfers from entering the water, but the unknown surfer paddled on his knees with apparent nonchalance.

The view from this surfer's board was one which would strike terror into the hearts of most, including its rider. He was not at all nonchalant; in fact, he was amazed at the ferocity of the wave which looked so graceful from the shore. A wave broke fifty yards in front of him and the white water sent him towards shore at a far greater pace than he was paddling out.

It was the last of a set, and he saw his chance of getting out the back before the next set. He set himself on the board and began paddling with fast and powerful strokes. He could see another set looming up, but he hoped to be over the first wave before it began to break.

If a surfer can see that a wave is going to break on him, he overturns his board and clings underneath so that the wave will pass over him without carrying him all the way into shore again.

The surfer gave himself a good chance of getting over the wave but as it got nearer he could see it peaking and holding its shape. He paddled harder and his arms began to ache. The other surfers on the beach saw his predicament and felt sorry for him. Some were amused but everyone knew

the feeling. He decided to roll over, thinking he had no chance, but the wave still held its shape so he reversed his decision and began again to paddle harder. Angry at himself and his poor judgement, he cursed loudly and thrashed his arms in an effort to clear the approaching wall of water. The wave seemed almost to stop and so too did his board. It was as if he were working frantically and having no effect. The thought of the wave crashing down on him filled his mind, for he had ample time to think of that dreaded feeling, of being held breathless under the water, and being rolled around like a ball.

Finally he felt the board rise, and, even then, did not know whether or not he would clear it. The board began to tip back and was flipped over like a match-stick. A deafening crack followed, and while the board flew high into the air, the surfer experienced all the terror he had imagined. He seemed to be held under for several minutes, for longer than he had thought possible. His lungs seemed to be bursting and he was genuinely fighting for his life He kicked frantically and managed to get his head above water to face the blue sky and dazzling white foam.

He relaxed himself and felt very tired. Seeing his board being washed onto the sand, he groaned and prepared himself for a long hard swim, after which he dragged himself from the water, only to suffer witty criticisms from the other surfers. Even the exhausted surfer himself was beginning to forget his experience and prepare to wait for a surf that was more his size.

# FRESHMEN AND Sophomores ON The Campus

#### **Dennis Dargel**

I am an American, from the State of Illinois. I am studying at Swinburne at present while my father is stationed in Melbourne for an international firm. I have been invited to give Swinburne students a description of the American education system.

The American school year begins early in September and ends early in June. We have a Christmas holiday of of about two weeks and an Easter holiday of about one week. The school year is divided into two semesters of about four and one half months each, but there is no vacation between semesters.

After attending kindergarten, a student starts grade school which consists of grades one to eight. In certain localities there are junior high schools which consist of grades eight and nine. Usually one starts high school at the age of thirteen or fourteen, in the ninth grade. High school consists of four years with a special name for each year. The Australian third form or ninth grade is called Freshman year. Then comes Sophomore year, Junior year, and Senior year which is the same year as matriculation in Australia. Australian schools are about one year ahead of American schools, so an American would study the same subjects in his Senior year as an Australian would study in Leaving.

To determine whether a student passes or fails is a complex affair. There are three six-week periods every semester. A student gets a grade of A, B, C, D, or F for every six-week period — A being excellent, C being average, and F meaning failure. Then one also gets a grade for his semester exam. The three six-week grades, plus the semester exam grade, are averaged, and the average determines whether you pass or fail.

All American schools are co-educational, except fee-paying "prep" schools in the East, military schools, and some Catholic schools.

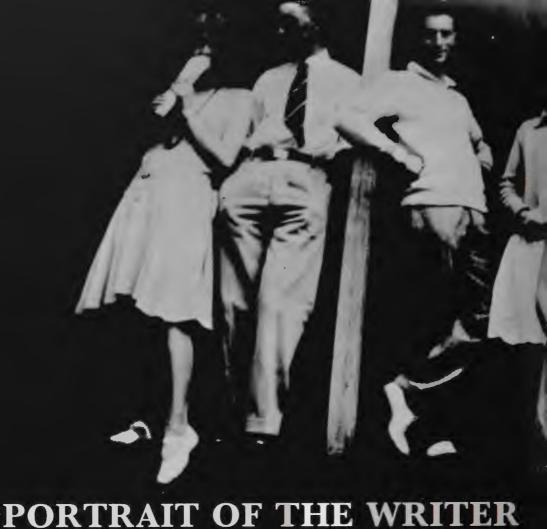
The study of Australia is very limited. Australia is studied only in World History and to a small degree in International Relations.

After completing high school, about sixty per cent of students go to college. Colleges commonly label their various years in the same way as high schools —"freshman", "sophomore" and so on. In Australia the word "college" is used both for secondary institutions (like Scotch College or Methodist Ladies' College) and for tertiary institutions (like senior technical colleges and also certain colleges within Australian universities). However, in the U.S., the word "college" is reserved for tertiary institutions, and it covers *all* tertiary institutions (some of which are called universities and some of which are not).

Roughly speaking, a "college student" in the U.S.A. is any student in his late teens or early twenties. Under this definition, undergraduates at Melbourne University and diploma students at Swinburne would all count as "college students".

In the U.S., most college courses are broad and general, consisting largely of humanities and leading to a B.A. degree.

It is usually necessary to study these courses first before you can proceed to post-graduate studies in specialised, vocational disciplines such as medicine, commerce or engineering. It's all very confusing, but most fascinating. ●



Fans of Alan Marshall ought to read "In Mine Own Heart," which he published last year. An autobiographical book, like "I Can Jump Puddles" and "This is the Grass", this takes Alan's life story to the late nineteen thirties. He presents a gallery of characters and episodes, amusing, intriguing, moving, that helps us understand a period of near-contemporary life in Australia.

At the beginning of the book Alan Marshall is boarding at a house in Brunswick, run by a married couple. He had stayed in numerous boarding houses but each boarder gradually became subject to pressure from the proprietress. He never stayed long at these places. His ambition was to become a writer. But to achieve this he had to meet people and develop a character. He found it difficult to meet people, especially girls, as he was a cripple on crutches.

He made friends with Paul Freely, and with him sought meetings with girls. Paul was an athletic, enthusiastic young man, and the fact that Alan walked on crutches seemed of no significance to him in their relationship with other people. Alan's association with Paul gradually developed some poise and confidence in him. In most respects they were independent of each other and fought their own battles while mentioning them in passing.

Alan started a different relationship with a man named Arthur. Arthur was a punter, and, like all gamblers, lived under a mental strain. He wanted some woman to love; he was not a gambler at heart, but his war injuries prevented him working and were now even showing signs of bringing about permanent paralysis. Arthur eventually fell in love with a waitress, Florries Birch, and married her.

Alan was now head clerk at Crown Casket and Joinery, a coffin factory, and he soon became the nightwatchman as well. Alan, as nightwatchman, lived in a small room at the back of the factory. This enabled him to save more money, for now there was no rent to pay and he also earned £5 extra.

Alan's next friend was Ted Harrington, a "poet bloke", whom he met through Arthur. The Depression, which began in 1929, was now beginning to fill the streets and the countryside with unemployment. Ted lived in a room with two elderly gentlemen; here Alan went every Friday evening. They sometimes listened to ballads of revolt and love, of despair and hope; sometimes they sang.

Alan left his job, after some trouble with the manager and became an accountant in the Modern Shoe Company. There was a different atmosphere in this factory from that which had surrounded the coffin factory. The struggle was fiercer. There was intense competition in the shoe trade where depression conditions were sending many factories bankrupt. His increased wages released him from a cage and enabled him to buy a car. But as the Depression deepened, employment of children increased, while men and women over 21 found it difficult and almost impossible to get work.

Alan started reading school books on grammar studying what all school children knew, but which his bush education had denied him. But he soon learnt that the writer blossomed



# AS A YOUNG MAN

not from training in his rules or the sequence of words but from the experience of feeling upon his shoulders the burdens of all people. Alan learnt a lot from listening to people, especially the girls at the Modern Shoe Company. What happened to his mind amongst these girls brought life into his stories; he won a number of competitions, but could not get the stories published. Editors wanted stories that the public wanted. Under an assumed name he submitted a story, based on "what the public wanted", and it was published, the first story of his to appear in print. Alan soon realized that the Modern

And soon realized that the Modern Shoe Co. would crash and he discussed it with Arthur, who advised him to buy the leasehold of an apartment house. This Alan did, and he felt a bit more secure with this added income. But he soon learnt it was not easy to be the proprietor of an apartment house, and the wild living of his tenants forced him to sell this, and move into a room in Brunswick during the last weeks of the Modern Shoe Co. Soon the factory was put in the hands of the liquidator, and it closed.

### Elva Lunn

Alan now sought a livelihood as a freelance journalist, and he decided to wander on the road in his old and shabby car. He had been travelling for a week when he picked up three men by the side of the road. Alan left these men in a couple of days, and felt depressed at the thought of being alone again. The next person he encountered was a young man named Curly. Curly was an interesting talker and often directed his humour against himself. Curly had a mate with whom he had been travelling. Curly and his mate Bluey, had "jumped" a goods train, and travelled this way throughout Australia. Bluey hadn't jumped off the same time as Curly on their last trip, and Curly had been unable to find him back along the track. How Curly and Alan tracked down Bluey makes grim reading. Bluey had died a tragic death. After this discovery, Curly immediately left Alan and that was the last they saw of each other

Alan stayed for a while with a sideshow where he mixed with the crowds. He then camped for a few days, and completed his notes before heading south, to write about a prosperous wheat-growing area.

He then met up with Roman and his son, Albert, who was once a famed fortune-teller, but now just worked in the country shows. Alan soon learnt to tell the fortunes of people, and Roman offered Alan to join up with them. But instead Alan returned to Melbourne.

In Melbourne, he rented a room and went out telling fortunes in aid of the unemployed, hospitals and the Spanish Civil War fund. Fortune-telling brought him face to face with people. They were presented for his observation under conditions that removed the facade concealing them. Eventually Alan became an advisor to women, in the pages of a woman's magazine which made his name a household word in Australia. Alan soon resolved to establish himself as a writer of literature.

The book takes us inside the lives of various people. They each live differently and have different ideas and beliefs. I would recommend this book to everyone, for it is most entertaining and moving. The reference number in the Swinburne library is "920 MAR.".

"Lampoon", a magazine published by students at Harvard University in the U.S.A., traditionally publishes a list of awards for the worst movies and actors for each year. Not to be outdone, "Swinopsis", the Swinburne magazine, has made a survey among diploma students this year in order to make similar awards for the field of television and radio.

A questionaire was issued to about 200 students, and the students' votes were collated. Here, then, are the "Swinopsis" awards for the worst of nineteen sixty-five ---

In section A, Sunny-Side Up was moderately well hated; it was at least seven votes ahead of its nearest competitor. In section B, Coronation Street

was about thirty-five votes ahead of its nearest competitor. In section C, Jack Little was only one vote ahead of Noel Ferrier and Ray Taylor. In section D, Panda was six votes ahead of Robina. Section E found a draw between Jackie Gleason and wrestler Killa Kowalski. Lucille Ball was only one vote ahead of Judy Garland in section F. In section G, the worst radio programme was the Ackie and Jackie programme, and it was well ahead of its nearest rivals. In section H, Grantley Dee was one vote ahead of Don Lunn.

WORST AUSTRALIAN-MADE TELEVISION Show ..... SUNNYSIDE UP

WORST IMPORTED TELEVISION Show ..... GORONATION STREET.

WORST MALE COMPERE OR ANNOUNCER ON MELBOURNE T.V. .... JACK LITTLE.

Worst overseas actress seen on melbourne T.Y. .... Ucille Ball. 9. WORST PROBRAMME ON MELBOURNE Radio .... Schie and Jackie WORST ANNOUNCER OR COMMENTATOR (Male or remain won melbourne radio .... granties dec

· WORST FEMALE COMPERE OR ANNOUNCER ON MELBOURNE T.V. ..... Panda WORST OVERSEAS ACTOR SECT OI MELBOURNE T.V. ..... Kulla Kowalski

> Several students wrote interesting general comments on their questionaire forms.

> Regarding television, Robert James (First-year Commerce) wrote, ''(!?(!!'

— which, you will agree is a pretty strong opinion. Another student (anonymous) asked: "Is the 'idiot box' the television set, or the person watching it?" Hmm!

Regarding radio, a typical comment was: "A lot of announcers on commercial stations try to sound American, which is bad enough, but they fail, which is worse."

Anyway, we extend our congratulations to the winners of the "Swinopsis" 1965 awards. To make the contest fair we suggest that this year's winners should now retire from show business and give somebody else a chance to win "Swinopsis" awards in '66.

> **Bob Greaves** Lindsay Swindon

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# **AROUND THE CAMPUS**



# caf. grows with college

The Swinburne cafeteria, which caters for 7,000 senior and adult students, is now a thriving and expanding concern.

The cafeteria, which is in its fourth year of operation, is one of the most spacious student social centres outside Melbourne and Monash Universities.

Open from 9 a.m. to 7.30 a.m., it has seating for 300 students at a time. With two staggered lunch time sittings, up to 600 students can be accommodated between noon and 2 p.m.

Spectacular daily sales include 100 pints of milk, 400 cups of coffee, 50 dozen doughnuts and 10 dozen bottles of soft drink

The cafeteria can also be used for conferences, film shows and social functions.

In order to enlarge the menu the college has this year begun adding new facilities, including a new kitchen, store-room, service lift, serving area and a rest room for cafeteria staff.

An amplifying system has been installed to enable the Students' Representative Council to broadcast announcements concerning student social activities.

Although prices are kept unusually low, the cafeteria manages to pay its own way.

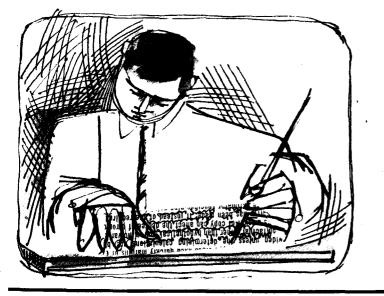
the story behind exams You, dear student, aren't the only person who finds examinations a bother. The staff, too, have examtime worries.

Organising the annual examinations at Swinburne is a major operation. The exam period covers seven weeks in November and December, and two weeks in February.

A total of 4,286 candidates sat at Swinburne for last year's examinations in 467 subjects, ranging from secondary and trades to second-year University level.

The examiners had to inspect 21,410 pieces of work, including written papers, art folios and practical experiments.

The biggest batch of candidates was 520 for Matriculation English Expression, which is taken in the first year of pro-



fessional diploma courses. The next most "popular" subject is Mathematics 2A (equivalent to Matriculation mathematics) which last year attracted 438 first-year candidates.

Preparations for the annual examination commence in August when the Head of the Humanities Department (Mr. H. C. Saunders) drafts a complicated 100-page timetable, which allots each subject to a certain room on a certain day with certain supervisors.

The biggest day in the 1964 examinations was Friday, November 13, called by the Swinburne staff "Black Friday", when about 1,200 candidates were on the premises simultaneously.

All this makes Swinburne one of the biggest examination centres. in Victoria, the others being the two Universities, the Exhibition Building and the Royal Melbourne Institute of Technology. Like these other big centres, Swinburne keeps its records up to date by having all exam data processed by electronic computors. Indeed it often seems as though Swinburne is one of I.B.M.'s best customers.

In March, while the computors at I.B.M. are having a rest, Swinburne officials start planning how to cope with the huge numbers who will "front up" for the next battle in the following November.

Approximately one Swinburne student in ten writes with his or her left hand, according to a recent survey.

The survey was conducted at Swinburne's main examination centre — the college hall — during examinations in 1964. The survey took place, unknown to candidates, while they were sitting for three-hour papers. The survey was conducted, unofficially, by a staff member who happened to be supervising the exam room at the time.

The main job of exam supervisors is to make sure that all candidates are comfortable and that all candidates hand ir original work. (at universities, these supervisors are called, for





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obvious reasons, "bulldogs".) However, many supervisors find that time hangs heavily on their hands; as well as keeping an eye on candidates; they have to find something intellectual to think about in order to avoid going batty. Engineering lecturers, we presume, dream about power stations; mathematics lecturers, about quadratic equations; and humanities lecturers, about the destiny of Man.

left, write, left

Well, last year a certain humanities lecturer, while patrolling the aisles, became curious about that exceptional species, Left-Handed Man. On two consecutive days he calculated the proportion of candidates who showed evidence of being able to write with their left hand.

On one day, during a first-year matriculation-level exam, only eight per cent appeared to possess left-handed ability. On another day, however, during a second-year exam, left-handed ability rose to twelve per cent.

As second-year students are a more advanced bunch, the higher proportion of left-handedness among them is, of course, to be expected. Therefore an improvement may be expected from firstyear students later in their courses. Our advice to any firstyear student who is not yet able to write with his left hand: "Keep trying".



# swinburne as a tourist attraction

Noticed any University students around the Swinburne campus lately? Probably, you have, without realising it. Each year the college acts as host to several different groups of visitors from Melbourne University.

• Each year undergraduates from the University's engineering faculty spend several weeks at Swinburne, engaging in practical work in the College's machine workshop.

• At another time of the year usually Term Two — University engineering undergraduates engage in painting at Swinburne's art faculty, which is recognised as being among the three foremost art schools in Victoria.

The party of artists is usually accompanied by the University's Professor of Electrical Engineering (Prof. C. E. Moorhouse). They come for one half day each week over several months.

The party takes over an upstairs studio in Swinburne's threestorey art building, and receives personal attention from the Head of Swinburne's art school, Mr. L. S. Pendlebury, who is prominent in Melbourne's artistic world. The class in painting is part of

an effort being made by universities and senior technical colleges to broaden the interests of their specialist students.

(in senior technical colleges, this "broadening" is provided by courses in Social Science, taken in the post-matriculation years.) ● During one morning each year, we are visited by several dozen post-graduate students from the University's Faculty of Education. These students have already completed degrees in arts, com-



merce, science or music, and are now doing Diploma of Education. Ultimately they teach to Matriculation level in secondary schools.

During their excursion to Swinburne, these graduates inspect college amenities and visit various departments. They are usually most impressed by the library, the caf., and Swinburne's "adult" atmosphere.

At other times during the year dozens of Dip. Ed. students have longer visits to Swinburne, lasting about three weeks, in order to observe our classes in operation and to gain teaching practice under the supervision of our staff.



### s.r.c. report

During 1965, the S.R.C. has continued to grow both socially and financially. We have affiliated with us, many new clubs and societies, such as the Engineering Student Society, Overseas Student Association, Chemistry Society, together with many new hobby clubs. Through our financial grant, we have helped to establish the Electronics Society and Photography Club.

We have fulfilled our usual commitments of organising dances, running the Commencement and Annual Balls. This year we have been especially active in participating in Moomba, the Annual Raft Race, which we won, together with the Annual Car Rally.

The Miss Swinburne Quest was particularly successful this year, with the raising of over  $\pounds$ 320 for a Community Aid Abroad project in India. This quest gained much good publicity for the students and the College as a whole.

Our sporting teams have participated in many inter-college activities. We are particularly proud of our recently established girls' hockey team, which produced many bruised shins, etc.

We have continued to produce our monthly college newspaper, Contagious, which provides a forum for student opinion. This year has seen the introduction of a Student Discount Card which has proved very popular with both students and staff alike.

The Fourth Annual Revue, provided an outlet for student talent and was much appreciated by the large number of parents and students who attended the three performances. We have accepted responsibility of establishing a disciplinary committee which is impowered to discipline full time students. However, it has been used only once which indicates the general high standard of student behaviour at the College.

We strongly believe that the S.R.C. will continue to grow with the increasing support that is being generated among the student body by the many and varied activities which we provide.

keith d. johnson, president

### students' representative council 1965

president: keith johnson vice president: garry l. ponton secretary: danny o'brien treasurer: des o'connor

#### executive:

members :

nembers.

4th year: art: carolyn delaney chemistry: laurence schafe engineering: keith johnson graham brookes

3rd year: art: david murray chemistry: david alcock commerce: des o'connor engineering: graham moore noel brayn

2nd year: art: garry l. ponton commerce: danny o'brien

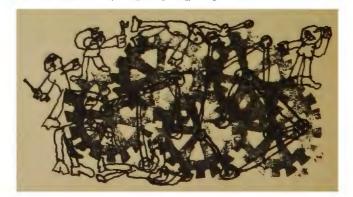
1st year: art: paul dickenson chemistry: john edwards commerce a: robert james commerce b: allan bray dip. comm. prac.: judy hedges comm. cert.: lyn edwards engineering: russell swenson

editor of contagious: ralph patford

overseas students' club: thomas vap

swinburne engineering students' society : bill mather

swinburne chemistry society: ron major



### s.e.s.s. report

This has been the Society's inaugural year as a student body, representing over four hundred engineering students in the college.

The society was formed in August last year under the strong feeling that there should be an organised student body to represent the Engineers within the college.

During the year the S.E.S.S. has organised activities including four dances, regular lunch-time films and engineering talks, and three excursions. One excursion, fully occupying a week-end, was to a dam site and a number of engineering works in the Wimmera district. There have also been donations by the Society of engineering equipment to the college.

Earlier in the year all full-time engineering students in the college filled out a questionaire distributed by the S.E.S.S., and a report has now been drawn up of all the suggestions and criticisms made by the students.

At the beginning of 1965 we were granted representation on the S.R.C. We are also trying to establish ourselves with other Engineering Student Societies so as to benefit from their affiliated functions.

william mather, president

### s.c.s. report

The Chemistry Society was formed at the beginning of second term with the following executive guiding an enthusiastic committee:

- L. Schafe: President
- R. Dickson: Secretary
- J. Freshney: Treasurer
- Dr. R. Bradbury: Patron

We raised £50 for Liz Butler, our Miss Swinburne contestant.

Other successful activities included excursions to industrial plants, films and lectures, the First Annual Dinner Dance held at the Hotel Australia and, by the time this is in print, the establishment of the first student book exchange system in the Diploma School.

As can be seen we have been highly successful, thanks to an enthusiastic committee and the solid support of students of the Chemistry School.

lawrence schafe, president



### sports report

In Inter-Technical College competition, Swinburne has had cricket, football, soccer, basketball, squash, hockey, athletic and swimming teams this year. We have no premierships or other outstanding successes to report, but our teams have fulfilled their obligations to other institutions and have completed scheduled fixtures without giving walk-overs. We are indebted to David Alcock for organising students and teams.

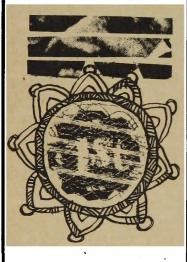
As Swinburne moves towards higher academic standards, it is noticeable that the pressures of study and the demands of extra classes are restricting the scope for sport. Yet there is the problem of generally increasing national unfitness to consider. We may have to consider re-arranging our timetable for an 8 a.m. start, and for a onehour session each day when the entire student body (and staff too for that matter) is available for suitable physical exercise. Perhaps squash, badminton, table tennis, basketball and gymnasium facilities should be set up on the campus, in order to compete for student interest with health-destroying agents like cars and cigarettes.



### | college awards

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We congratulate the following people who have been awarded certificates and diplomas since the last issue of the magazine was prepared.



## certificates

art :

benjafield, charles robert bottomley, ingrid boucher, john william cayzer, roger stuart gordon, margaret jane heath, rodney fitchett howatt, lindsey james james, carol dianne johns, lorraine mary mason, heather jean moore, kathleen lauren murray, david gilmour mcdonald, maxine pontin, david ronald randles, janice margaret rendell, judith marie russcher, marius rust, bernhard senior, kendall ward skelton, pamela florence slaney, ronald tregenza, carolyn enid wells, christine mary wilks, robin anne woodard, catherine anna

#### building construction:

james, philip edward nieuwenhuizen, henricus joseph

applied chemistry:

mainka, helen maree

accountancy: baker, jack laurie baker, max victor beaumont, frederick george albion belleville, brendon gavan burchell, hugh thomas byrden, james brzezinski, henry clark, bruce ronald cook, william barry crawford, stephen curteis davison, colin earles, graeme maxwell falconer, alan william fuller, james edward garrett, john brian grant, howard robert hains, allen wilfred harvey, francis rupert hiscock, peter mclaren irving, john wilson joseph, milroy arthur langford keogh, barry john lew, max meyer livingstone, hugh patrick loh, siew heoh lugg, edwin charles mangan, eugene john matters, alan orme mckinney, godfrey graham

mcliesh, john malcolm nelson, claude william nicholls, eric adrian parker, dennis john parker, gordon holroyd paterson, graeme charles potts, murray william purchase, garry boyd ravenscroft, graeme william richardson, louis alexander logan robergs, gunars ilgonis sandy, francis schult, carl frederick serpell, godfrey leonard snell, ronald joseph maurice tudor, john michael vollebergh, henri william martin wallington, john eric reginald white, bruce alexander

#### commercial:

boyd, shirley roslyn henwood, janet anne jones, robyn frances keane, jannette margaret lo, shin ying mcanespie, jean donald odgers, patricia eileen stevens, lynda jay trenberth, janece kay

#### secretarial :

golomb, diane leona smith, marion lorraine

#### supervision :

braithwaite, william albert fellows, charles ronald issett, john charles johnson-clarke, robert henry lefebure, edmond angele jules marie ghislaine rayson, charles john robertson, ralph valentine webster, stanley charles

#### civil engineering :

asche, niels georg

beadle, ellis barrie charles bride, john chandwick greenland, frank norman keir, rodney smith, geoffrey ronald stevens, norman gary

#### electrical engineering:

lock, brian john macdonald, alan donald pitman, john william wegener, robert john

heating, ventilating, air conditioning and refrigeration :

asker, rex albert

heating, ventilating, air conditioning and refrigeration : technician :

calow, graeme john

mechanical engineering:

blackwell, norman peter harris, malcolm raymond ikin, john frederick kilkenny, james thomas westall, kenneth james williams, leonard

#### mechanical technician:

osman, ronald albert sharkey, roger randolph

production engineering:

lyon, lloyd riddler, bruce sydney wolfram, peter klaus

production technician:

geita, raka henao, hoidae kenwright, joseph tabua, goodwill robert timothy, josiah

## diplomas

#### advertising art:

anderson, keith david bechervaise, lynette marie docking, ethel frances gurney, margaret jane jewell, kay denise ling, david ming yiu

#### illustration :

bird, john edwin pearce, howard william

#### applied chemistry :

anderson, bruce harold anderson, mary helen brooks, geoffrey norman burn, geoffrey robert chan, eric ning clarke, joan adelaide copley, anthony walter drew, wayne murray evans, evan charles francis forsyth, james alan gault, john robert grace, geoffrey edgar kairouz, john michael le page, ian laurie mckinnon, roderick leo russo, gaetano smith, thomas keith ward, robert henry west, leo henry thomas williams, brian douglas horng, yap swee

#### chemical engineering:

anderson, bruce harold adlam, arthur john barnhill, bruce leslie chan, eric ning cohen, joseph leon ip sze yuen johnson, david graham roseblade, reginald john russo, gaetano suffern, monty clarke

#### commerce:

burn, david edmund loh siew heoh paterson, graeme charles phillips, laurence bruce

commercial practice :

collyer, nola marie smith, marion lorraine taylor, pamela loris

#### civil engineering:

baird, peter andrew baxter, bruce gordon birkett, alan george boehm, john boland, maurice joseph collett, keith osborne crome, bruce and rew davies, reginald thomas gardner, robert james hollis, frank malcolm hooke, david llewellyn kruize, harm lee yiu ming mainka, bruce george mclaren, kevin peter mctier, howard rodney oxley, leslie john richards, donald george sherman, douglas john shrimpton, david ernest silver, lloyd sinclair, william malcolm smith, leon bernard tan beng teng tan cheng soon tan choon huat tanner, robert william telfer, alan ramon thomas, lindsay raymond warren, herbert edward wilson, david john woodhouse, robert mcrae ying kin shu zarins, olafs

#### electrical engineering:

baker, thomas philip betts, kelvin lysle chan yu kee garner, maxwell peter green, arthur laurence hayball, graham albert hollingsworth, arthur alfred mcdonald, peter lynton mcnaught, ewen douglas oxley, ian lawrence petrie, robert william steele, eric harold

#### mechanical engineering:

allen, robert balint, john george bethune, brian bey, john peter birkett, kenneth john bushell, brian anthony cameron, laurie robert dimsey, peter john ellis, graeme norman esperson, peter james eva, robert graeme fallshaw, lloyd flanigan, gary richard game, william john hampson, david richard hillman, allan archibald holmes, garry james jackson, andrew joseph milner, george edward paul, stanley leonard purdy, patrick finlay purnell, kenneth john rankine, roy albert rivis, john henry sartori, laurence john schmierer, rudolph emanuel searl, robert arthur staley, bruce thompson, barry winston walsh, alexander joseph watson, digby charles wilson, james brett stephen wong chee keong yam kok hoong

young, malcolm robin zrna, brian norman

#### production engineering :

57

firth, kenneth frank forster, david john hanlon, peter john hocking, leonard john

### post diplomas

heating, ventilating, air conditioning and refrigeration :

wright, jeffrey neil

#### industrial management:

dalla riva, peter johnson, ian murray morgan, arthur kenneth pollard, john morris

## | class prizes,1964

art :
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58

1st year a. gerrard 2nd year d. murray 3rd year carolyn delaney 4th year barbara grosman

#### applied chemistry:

2nd year	i. r. gillard
3rd year	j. e. freshney
4th year	k. j. pidgeon
in your	in j. plugeon

#### chemical engineering:

2nd year	г. e. stannells
3rd year	k. y. fung
5th year	a. j. mckirdy

#### commerce diploma:

1st year w. j. armstrong 2nd year d. g. o'connor 3rd year g. e. cúddon

#### commercial certificate:

shirley roslyn boyd

first year diploma commercial practice :

judith isabel hedges

diploma of commercial practice :

janice clarke

civil engineering:

2nd year g. j. both 3rd year j. e. drake 4th year l. j. stack

electrical engineering:

2nd year g. s. moore

3rd year j.r.coles 4th year m.wingate

#### mechanical engineering:

2nd year p. a. bull 3rd year r. womersley equal d. a. fitzgerald 4th year k. w. imberger

#### production engineering:

2nd year k. c. price 1st session sandwich course r. clough 2nd session sandwich course r. o'brien



## special prizes

engineering drawing: p. gilbertson mathematics: k. w. imberger physics: d. r. briggs a. f. tylee social science prize: r. f. patford (electrical) frederick william green prize: john alfred rose



## acknowledgements

The art director wishes to thank Mr. B. Barrett, of the Humanities Department, for his work collecting and editing student manuscripts, and Mr. R. Francis of the Art School for his encouragement with production. Thanks are also extended to Miss V. Thompson of the Commerce School for arranging the typing of manuscripts, and the other members of the 4th year Advertising Design Group for their contributions to this edition of Swinopsis: Helen Cromb, Carol Osborne, Elizabeth Scandrett, Vadim Roussiyan, John Ward, Don Klein and **Derrick Stone.** 

### photography

carolyn delaney peter jeffs

## cover design

carolyn delaney

# printing

ennis and willis pty. Itd. 46 market street melbourne, 61-2051 art director

carelyn delaney, 21. metricolated at Hentbelower School, now 8

A CONTRACT BUILDER

## illustrators

20. attended Swinburne Junio School before coming to the Senior School to do art. He is keenly interested in music both

#### keith beglay,

19, from Box Hill Technical School, now completing Dip. Art Course.

21. 4th year Art, from Swintnum's secondary school; as well as being interested in all kinds of numle the manupporter of tim National Trust which is campaigning to preserve instantic buildings and natural landscape in Victoria; he beges to form a National Trust group at Swinburne.

Janot goodchild, 18, completing at diploma, from Preston Technical College: this is her third approximate as a writer in this magazine.

### gillian haag,

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that the the state of the state	
High School, now doing	
Dip. Arl Course.	
peter jeffs.	6, 1
20, commenced his art	16,2
training at Maryborough	26, 3
Technical School, con-	48,5
linuing at R.M.I.T. and	5
Swinburne,	14 10
ralph marsden,	14, 2
19, from Boxhill Grammar,	
now doing Dip, Art Course.	
pat reynolds,	
20. did leaving at Lauriston	
Girls' School before at-	
tending Swinburne to do	
Dip, Art Courso,	
arthur wigley.	- 11
20, from Ringwood Tach-	
nical School, doing Dip.	
Art Course.	
margaret wilde,	30
21, did leaving at Black-	40-41
	- House
burn High School, now	
completing Dip. Art Course.	



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### authors

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-23-25

josephine christoffersen; studied art in Cyprus and for a short while at Swinburne, also trained briefly in Victoria as a nursu dennis dargël, 10, Nom U.S.A., did Levying at Camberwell Grammar; did tet year Commorce this year. Avorge farmakis, 19, from Burwood Techmoal School, 3rd year

# robert greaves; 19, from Waverley High School, 2nd year Applied judith hedges. Department studentship. graham henderson, 10, from Nunawading High, doing 2nd year Commerce Alwin himan, kerrin hume, now gaining experience in the business world preparatory to taking up 19, from Heidelberg Technical School, 4th year Civil Engineering. cliff jones, connie koh. 21, from Singapore, studied for Matriculation at Mac-leod High School, now elva.lunn,

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14

6

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olve lunn, 19, from Ringwood Technical School, 2nd year Dip. Comm. Price. with an Education Depertment studentship: Roured prominently in this year's "Mise Swinburne" Quest.

raising funds for Com-munity Aid Abroad. John d. mccoy, 40 18, from Fern Tree Gully Technical School, 3rd year Electrical Engineering. kathryn morrison, 10, from Box Hill Girls' Technical School, has completed Dip. Comm. Prac. after topping her class; is about to take up 10 teaching commercial subpeter neale, 4 19, from Burwood High School, 2nd year Comadrian newport, 18, from Box Hill High School, has completed 2nd year Mechanical Enjohn osborne, 20 21, from Burwood High School, 3rd year Mechanical Engineering: graeme pike, 19, from Box Hill Technical School, 4th year Electrical Engineering, marjorie sudholz, 10. was a sixth-former and boarder at Clarendon Presbyterian Ladies' College, Ballarat; now beginning Commerce; Inter-ested in English literature and drama lindsay swindon, 18. matriculated at Cam-berwell High School, was accepted into B.Sc. quota at Melbourne University but decided to do Dip. App. Chem. at Swinhuma now doing 2nd year. ross walker, 19. studied for Matricula-tion at Melbourne Boys' High School, now doing

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