Business Confidence

Over the last few months the business outlook has become puzzling and uncertain. The suddenness of the change from the post-war years of inflationary demand and easy earnings to a tougher period of tight finances has given rise to doubts and in some instances to pessimism. Pessimism is highly contagious. It may at first infect only a small segment of the community. But once it gets under way it can be as devastating as a bushfire in dry timber.

Economists have long been well aware of the vital part played by the hopes and expectations of business about the future. Some indeed have assigned to business psychology the major role in their analysis of the causes of fluctuations in economic activity and in the cycle of prosperity and depression. Lord Keynes wrote chapters about it. Certainly the psychological atmosphere, the mental state or mood prevailing in board rooms, managerial offices and clubs, and among the spending public, can have a profound effect on business activity and thus on the level of employment.

It is no exaggeration to say that the community can think itself into a recession far greater than that warranted by the underlying economic con-
ditions. If, at the first appearance of dark clouds on the horizon, everyone starts to rush for cover, to pull down the shutters, to play for safety first, what might have been no more than a strong cleansing rain, can, by a perverse Fate, be turned into a deluge.

This does not mean that business should turn its back on the hard facts of life, that it should indulge in foolhardy recklessness. But, having carefully weighed up the new situation, it should always bear in mind that its particular function in the economic process is to take risks, to venture boldly, and to be enterprising. It is its willingness to perform this function of risk-taking that marks it out from most government enterprises and that constitutes its special title to the support of the community.

Many businesses, it is true, are contending with great difficulties at the moment. But, insofar as some of these difficulties are temporary, they should not be permitted to influence unduly the businessman's estimate of the future. Wherever possible free enterprise should show its faith in the future by keeping its plans of expansion intact. Businessmen should be guided not only by their accountants' estimates of profit and loss, but by their own intuition and by their responsibilities to the nation. When times are blackest the leader must try to diffuse confidence and optimism. When confronted with a challenge he must be bold and intrepid. The cold logic of mathematics has its place in business decisions; but the future is something that cannot be adequately interpreted by the rigidities of the profit and loss account.

It should always be remembered that the businessman is not the helpless slave of an economic environment entirely external to himself, over which he has no control and to which he has no course but to automatically respond. For by his own decisions he himself determines in large measure the nature of that environment. The state of economic conditions twelve months or two years hence will be shaped by the decisions that are taken by businessmen today, just as the state of economic conditions today is partly the result of business decisions made a year or two previously. The businessman may not be entirely the master of his own fate; but he is very
much more than the slave of circumstance. This truth should never be forgotten.

If he plans for the future with reasonable optimism in the belief that things will be better, his hopes are likely to be happily realised. If, on the other hand, he retires into himself in a mood of resignation and hopelessness, his worst fears will almost certainly prove to be well founded.

IN any case the forward perspective for Australia is not without its good features. If there is darkness in the sky, there is also light. Against the burdens of high costs and the difficulties imposed by the adverse external position, must be placed the boost to spending that will be given by reduced taxation and by the still exceptionally large capital projects of government, the gains in productive efficiency of recent months, and the rapidly growing capacity for the production of basic products, many of which, too, are still cheap by world standards. Moreover, from the longer view, no one can doubt that Australia is set for an era of extraordinary growth and development. The greatest years are ahead.

It was the most renowned of modern economists, Keynes, who wrote: “If animal spirits are dimmed and spontaneous optimism falters, leaving us to depend on nothing but a mathematical expectation, enterprise will fade and die—though fears of loss may have a basis no more reasonable than profits had before.”
THE FULL EMPLOYMENT PROBLEM

The employment situation over the last few months has given rise to growing concern. Reported large-scale retrenchments in public projects because of shortage of finance have been followed by announcements of pay-roll reductions in a number of private industries.

The facts of the situation are not easy to unearth. The only thing certain is that so far the overall unemployment position is of comparatively small dimensions. This does not rule out the possibility that in some sections of industry and in certain trades the scale of unemployment has assumed more or less serious proportions.

Official statistics show that in the eight months from November, 1951 to July, 1952, the numbers employed in private business had fallen by 95,000. This was partly offset by an increase in government employment of 21,000, so that the net position shown by the statistics is that approximately 74,000* less people were employed in July this year than in November last year. Even this is not so serious as it seems since most of the dismissals in private industry comprise women, a large proportion of whom would be married. Of the net decline of 95,000 in private employment, women account for approximately 53,000. The following table sets out the broad position over the whole range of employment.

<table>
<thead>
<tr>
<th>DECLINE IN EMPLOYMENT</th>
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<tr>
<td>November, 1951 to July, 1952</td>
</tr>
<tr>
<td><strong>Males</strong></td>
</tr>
<tr>
<td>Manufacturing incl. Gov't.</td>
</tr>
<tr>
<td>Retail Trade</td>
</tr>
<tr>
<td>Wholesale Trade</td>
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<tr>
<td>Hotels and Restaurants</td>
</tr>
<tr>
<td>Private Building</td>
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<tr>
<td>All Other incl. Gov't.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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Deduct increases in Government employment and a few private industries, e.g. coal mining.

| **Males** | **Females** | **Total** |
|—— |—— |—— |
| 18,100 | 6,100 | 24,200 |
| **Total** | 23,900 | 49,800 | 73,700 |

NOTE: This analysis excludes employment in rural industry, domestic service and the defence forces, in all of which employment has probably increased.

*This general estimate does not take into account the number of new applicants for employment (arising from migration, juniors leaving school and so on), coming on to the labour market, over the eight months in question. The figure must be around 50,000, although retirements would offset it to some extent.
In the field of government employment the main increases took place in rail and air transport, the post office and other departments, and in public works which alone, surprisingly, show a rise in employment of 500. Defence forces also increased by 19,600.

The industries hardest hit in manufacturing are textiles and clothing, boots and shoes, plastics, food preserving, some electrical goods, sporting equipment and products subject to heavy sales tax, light engineering, motor bodies, rubber and paper. There have also been reductions in employment in retail trade and in private building. On the other hand employment in basic industries has increased. For instance, the iron and steel industry has increased its labour strength by roughly 1,000 in the last six months.

* * * * *

For the great part of the time since the end of the war, and particularly over the last two or three years, the economy has been in a state of over-full employment with considerably more jobs offering than people available to fill them. The employment recession of the past few months has altered a situation to which we had become accustomed through long acquaintance, and the continued existence of which we had begun to take almost for granted. But judged by any pre-war standards, and indeed by the meaning attributed to full employment by many economists, the level of employment at the time of writing is still remarkably high. If we no longer have over-full employment, we cannot be far short of full employment. While there are pockets of unemployment of more or less significant dimensions, taking the economy as a whole the general volume of employment is still satisfactory. The real anxiety lies not so much in the present level of unemployment—which is not serious—but in the fear that the unemployment situation might rapidly worsen and get out of control. This is a possibility that cannot be altogether ruled out and that should be faced up to frankly.

One thing seems fairly certain—that we are not likely to see again, for some time at least, the highly inflated boom conditions of the last few years with a large excess of jobs over job-seekers. The end came with the dive in wool prices
from the economic stratosphere. This was quickly followed by a very substantial falling away of the flow of private capital from abroad seeking investment in Australia. The wildly optimistic expectations of both governments and private business, based on the indefinite continuance of the boom, were thus disappointed. The reaction, naturally enough, has been one of disillusionment and some considerable irritation which has at times verged on childish petulance.

NOT AS SIMPLE AS WE THOUGHT

We were almost assuming that the full employment problem had been solved for good and all. But the problem is now beginning to look not nearly so simple as many seem to have imagined.

The belief that full employment is a relatively straightforward easy matter seems to have become widespread since Lord Keynes. Experience since the war has served to strengthen the grip of this belief. Before the war unemployment generally ranged between 5 and 10%. And in the great depression it rose to nearly 30%. Full employment was the rare exception.

Keynes’ theories and proposals were based on pre-war experience and particularly — so far as his advocacy of heavy government spending was concerned — on the special circumstances of England itself.* He attacked the problem of chronic unemployment which he analysed as basically due to insufficiency of effective de-

* This led a great American economist, Joseph Schumpeter, to write in an essay on Keynes: “... practical Keynesianism is a seedling which cannot be transplanted into foreign soil; it dies there and becomes poisonous before it dies. But... left in English soil, this seedling is a healthy thing and promises both fruit and shade. Let me say once and for all: all this applies to every bit of advice that Keynes ever offered.” An exaggerated judgment perhaps, but one worth bearing in mind.
mand. The remedy lay in measures of policy to stimulate and maintain demand at a level which would be sufficient to provide for full employment of all resources, including labour. Many of the followers of Keynes—and they include the majority of modern economists—seem to assume that all that is necessary in order to achieve full employment is to maintain demand through the manipulation of monetary and fiscal measures. These ideas have been given practical expression in the expansionist financial policies of the post-war period of easy money and credit conditions, low interest rates, and heavy governmental expenditure.

It is true that Keynes advocated all these things. But, as we have seen, Keynes was concerned essentially with the chronic under-employment of the pre-war years. The Keynesians, whose influence on economic policy since the war has been paramount, applied the master's philosophy to the entirely different circumstances ruling during the post-war period. These were circumstances not of under-employment and depression, but of buoyant economic conditions brought about by war-caused scarcities and a huge pent-up demand made effective by the plentiful spending power accumulated during the war years. Even had there been no Keynes, it is probable that full employment would have been the normal condition of the years that followed the war.

The application of the Keynesian philosophy thus had the effect of throwing petrol on to what was already a healthy economic blaze. An artificial inflation was heaped on a natural inflation. The natural post-war boom conditions were excited and intensified by policies which were really applicable to times of depressed economic activity. Keynes himself is reported to have said in 1930: "Twenty years from now Government departments all over the world will be talking about my doctrines, and by that time they will be quite obsolete and dangerous."

FAILURE TO CONTROL THE BOOM

What has all this to do with the present position in Australia? Just this—that a large part of our present economic difficulties, including the tightening employment situation, is attributable to our failure to damp down the fires of the boom
years, from the general over-confidence to which the boom gave rise, and from lack of economic foresight. We know now that Australia would have been in a much sounder and healthier position today had the boom been put on a tighter rein. Our present discontents are in great measure due to the let-down from the economic high spirits of the boom years, a reaction which was sooner or later inevitable. The forces making for the recession which we are now experiencing were in fact set in motion by the boom itself. The great classical economists used to insist that in economics, as in physics, every excess generates its opposite reaction. Nowadays we seem to have forgotten this truth. The policies that were pursued in the boom years look, in retrospect, to be sadly mistaken. The responsibility for these policies cannot rightly be laid at any single door. All authorities were infected with the Keynesian virus—Government advisers, politicians of both parties, industrial tribunals, the trade unions and many sections of private business.

Most of us have exhibited a sublime and rather naive confidence in the doctrines of Keynes. After Keynes had spoken, the full employment problem, we thought, was as good as solved. All that remained to be done was to faithfully apply the ideas of the master. Economic stability and full employment would follow as naturally and easily as night follows day.

The work of Keynes did, of course, mark a great advance. It did reveal some of the points where we were going astray. It demonstrated that compensatory government expenditure could play an important role under certain conditions; also that governments could exercise a vital influence on the level of economic activity through the instrument of the budget. The employment White Papers of the various English-speaking governments issued directly after the war reveal this confidence in Keynesian doctrine, on which they were in large part founded.

But two very significant limitations to Keynes were either overlooked or, at least, not given their proper measure of importance. Both of these limitations are especially relevant to the Australian position at the moment.
THE FIRST LIMITATION

The first is that the Keynes' theories in their formal aspect were evolved largely on the assumption of a self-contained economic mechanism—that is, one in which the economy of a particular country is regarded as closed-off from the rest of the world. The effects of international trade on the economy of a single country were thus excluded from the reckoning.* But this assumption, unfortunately, has little or no relation to the facts of the Australian economy of which international trade forms a significant part and in which fluctuations in export income exert a potent—almost dominant—influence on the state of internal economic conditions. In fact, the Australian economy is tragically vulnerable to the price the world is prepared to pay for one product—wool. This has been brought home to us with stunning force over the last twelve months.

Full employment, on the Keynesian analysis, depends on the maintenance of effective demand. But what happens where there is a collapse in spending power caused by a fall in export income? It is not at all clear—as has been suggested in some quarters—that this can be satisfactorily offset, and the total of effective demand maintained, through attempts to bolster spending by an expansionist internal monetary policy. There is, for instance, the problem of the adverse trade balance which follows from the drop in export income. An internal inflationary policy, because it increases buying power, including spending on imports and on products otherwise exportable, must be expected to aggravate this problem—unless, of course, harsh import restrictions are imposed, as has been done in the present crisis of the trade balance.

But how far can import restrictions be pushed without leading to unemployment?—since so many industries and public projects in Australia depend on imported supplies of raw materials, parts and capital equipment. Also, quantity import prohibitions have unhappy effects on standards of living and on the rate of industrial development.

The classic method of meeting an adverse external position was that of internal deflation—the exact opposite of the

* Keynes of course was very well aware of the importance of international trade in the employment problem, and he was indeed the outstanding advocate of the need for international financial institutions to minimise the effects of international fluctuations.
Keynesian ideas. This led to a reduction in costs, a fall in money wage rates, and some unemployment. The reduction in costs tended to correct the trade deficit by discouraging imports and encouraging exports and also, eventually, the unemployment position through the restoration of business confidence. This policy was admittedly serious and unsatisfactory in its short-term effects; but can we be sure that we have yet found an effective alternative, especially in cases where the decline in export income is of large proportions?

THE SECOND LIMITATION

The second limitation of the Keynes' analysis is that it was concerned specifically with the problem of general unemployment—that is unemployment spread more or less evenly throughout the entire economy—and with the problem of general under-demand. But there is also the problem arising from particular unemployment in certain industries, occupations or localities caused by a falling away in demand for particular commodities or services. This can clearly be a most significant aspect of the whole problem. Indeed it is very largely the one we are facing in Australia at the moment.

It raises, too, important questions about the true meaning of "full employment," on which there is a great deal of confusion. "Full employment" cannot possibly mean a situation in which there is always a job suited to each man's capabilities, experience, or special technical qualifications. Nor can it mean that there will always be ample jobs available close to the present place of living of the labour supply. It cannot mean, for instance, that if there are 100,000 carpenters in a community, there will always be 100,000 jobs for carpenters. Or that a person now employed in the paper trade can expect that that trade will always be able to provide employment for him; or that in a particular district there will always be sufficient jobs for the people who live there. At best, full employment can only mean that in the economy as a whole there are sufficient jobs of one kind or another for the total of available workers.

Clearly this can act rather harshly on the people concerned who should, however, constitute no more than a small minority of the total working population. But it is surely
better that there should be jobs of some kind available than no jobs at all. No economic system yet devised, or that can be conceived, could overcome this problem of the need for changes of occupation, industry or place of work. The most that economic policy can hope to do is to minimise the extent of these changes; it cannot eliminate them.

It was a Labour Prime Minister, a man to whom full employment was a fetish, the late Mr. J. B. Chifley, who stated these truths in blunt terms.

“No guarantee can be given to anybody that they can stay put in a particular industry, but there will be work for all. It is realised that there will have to be transfers of workers, and in many cases transfers of whole communities to other forms of work.

“The most any Government can do is to see that there is work for everybody.

“I am quite certain that everybody will not be able to stay at home, because there will have to be transfers of labour if there is going to be expansion.”

NOTWITHSTANDING the optimism of the Keynesians, the provision of full employment is anything but simple. In fact it is the most complex problem of a free society. We are certainly nearer to its solution since Keynes. But there is much still that we don’t understand.

Full employment demands, too, not merely a right economic diagnosis; but, even more important, a most ingenious and efficient administration of the treatment prescribed by the doctor.

The economic body is a complex and delicate mechanism. If it is abused or if it is subjected to treatment based on superficial diagnosis or on lack of understanding, it will respond just as badly as the human body under similar circumstances.

When a man indulges to excess in alcohol or tobacco or late nights, he pays the consequences, in a lowering of general bodily health and an increased susceptibility to disease. The body economic, similarly, cannot be maltreated without impairing its capacity to function effectively. When the economic mechanism has been thus abused, it is hardly likely to be restored to good health by two tablespoonfuls
of the patent medicine (of Treasury Bills) in a glass of water. Oh, that it were only as simple!

The greatest danger of all arises from political interference with economic processes, the application of policies based on political motives rather than on economic needs. In politics, short-range considerations are usually paramount; the soothing drug is preferred to the surgical operation or the long-range deep therapy treatment; or, to change the metaphor, a hectic night-out of enjoyment for the community, regardless of the hangover in the morning. But in economics the longer perspective must be kept constantly within view. Economic problems respond only to conscientious diagnosis and to faithful and steady observance of the measures indicated by such diagnosis.

These truths are forgotten in the chase of the politician after political popularity, and in the pressure of different sections of the community for temporary financial or political advantages. The ultimate economic consequences of these things can be highly unpleasant—as the present economic predicament of Australia bears witness—and possibly disastrous. When a real crisis occurs, there is no escape from placing economics above politics. But must we always wait for a crisis?

There is need for economic policy to be constantly under the review and guidance of a body divorced from political considerations or the influence of pressure groups. As Mr. Churchill said years ago, the modern nation is interested primarily in economics not in politics. It is abundantly clear that the present-day machinery of democratic government and administration is unfitted for the proper and efficient solution of economic problems. The establishment in Australia of a Council of Economic Advisers, similarly constituted to the body of this name in the United States, would assist in bringing the government machine more into line with inescapable modern requirements.* If that were done, the prospects of economic stability and continued high employment would be, if not assured, at least considerably brighter.

* See article "A C.E.A. for Australia" in May/June "Review."
THE doctrine of the perfectibility of the world is old. It is not, however, Christian doctrine, rather, as Schopenhauer perceived, it is radically irreligious. Men cannot get along without religion. If one is abandoned another is adopted. And all our humanitarianism, all our philanthropy and welfare work are efforts to fill the great spiritual void left by the decay of faith, drab substitutes for the older creed. The spirit of man craves a friendly God, and you give him economics. He asks for immortality, and you say, 'Be content, here is beer and bacon.'

Since there is nothing beyond the present to be hoped for, let us make the only lives men will ever know less pitifully wretched. As the tide of religion has receded, the tide of this creed, the only alternative, it seems, has correspondingly risen. Miracles, once the province of the Church, will now be performed by the State, which will provide a heaven on earth, here and now. I am not to be understood as decrying humanity, kindness, philanthropy. These are no new things. They were not discovered yesterday. It is the gospel that is new. These things have always existed, and will continue to exist. There was plenty of kindness in the world, before it was set above the Olympian gods, above truth, and freedom and justice, before emotionalism was placed upon the throne of Zeus and took the wheel of the universe. In the new Garden of Eden, when we enter it, there will be good roads and water supply, unlimited picture houses, unstinted soft drinks, excellent sanitation, and humane slaughtering, the best of schools and wireless installations for everyone, free concerts and lectures for all. There will be no far horizons and invincible hopes. We shall cease to think of birth and death, of the infinite, of God, and the sublime secrets of the universe.

I AM not much in love with these six-penny Utopias. Men have other thoughts than these—thoughts that wander through eternity, and projects unattainable in time. How childish to think that the world's griefs are all of economic origin. Our world planners
have great designs for the filling of empty stomachs. Let them ponder the more intricate problem—the filling of empty hearts.

The troubles of the world have by the brilliant diagnosticians, like Robespierre or Marx, been assigned to a great variety of causes. Landor thought the best initial step towards the amelioration of its sufferings would be ‘to strangle the last king with the entrails of the last priest’, or vice-versa. The giant or dragon to be slain is differently pictured in different generations. In one age monarchs are declared the public enemy, in another the aristocrats, in another the bourgeois class, or the capitalists, the bankers or the Jews. The millennium is not yet, however, in sight.

And under whose leadership are we to advance towards it? There is never any lack of seedy reformers, ‘the Projectors and Schematists’, for whom Swift had such contempt, who suppose themselves entrusted with a divine mission for the betterment of the human lot, ‘sky-blue idealists’, as Carlyle called them, kind hearts and muddy understanding, ‘potato philosophers, who see their way to provide beef and beer, or preferably beef without beer, for everyone from East to West; the grass-green enthusiasts, who in their mind’s eye see men all over the earth sitting for ever at their cottage doors, festooned with ivy and honeysuckle; who are persuaded that if wars should cease, gambling be put down and love-making rendered respectable, if men in their more energetic moments were given a ball to play with, a harmless woolly ball, God would be better pleased.

The oyster-women locked their fish up
And trudged away to cry ‘no Bishop.’

Even morals become a nightmare when we reflect upon its self-appointed representatives. What sort of world would it be in which Wesleyanism or Anglicanism ruled the scene? in which throughout its breadth and length not a soul ever kicked over the social traces, in which there were no idlers, or spendthrifts, or jesters or Sir Fopling Flutters? Does anyone in his senses really wish for an undiluted respectability throughout eternity? A perfectly ordered world is not, though it may be to yours, to everyone’s mind. Some would prefer a disorderly as vastly more interesting, and a risky life as better worth living and infinitely more attractive. Must we look forward to wholly conventional lives, all alike, on the model of a colony of ants, in standardised buildings, with hot water provided, lifts and electric light, where all men think the same thoughts and pursue similar ends? If this be what is promised us, then indeed the life of all our blood

Is touched corruptibly, and the pure brain,
Which some suppose the soul’s frail dwelling-house,
Doth by the idle comments that it makes
Foretell the ending of mortality.

SCIENCE has worked wonders in our time, and may be confidently expected to work still greater wonders. The Utopian architects, as might have been anticipated, have turned to her genius for assistance and encouragement. If science be permitted to take matters in hand no bounds can be set, Professor Haldane assures us, to human progress. Diseases will, of course, be banished. Men, he predicts, ‘will be able to think like Newton, to write like Racine, to paint like the Van Eycks, to compose like Bach. They will be as incapable of hatred as St. Francis.’ Man’s life will probably be measured by thousands of years, ‘and every moment of his life will be lived with the passion of a lover or discoverer.’ One can see it will all be very wonderful. Professor Haldane is a man of science, the grand manner of the prophets sits well upon him, and I have no kind of claim to challenge his forecast of what science can perform. It may be that the Professor Haldanes of the future will be able to manufacture
any kind of men to order, cynics or saints, chess-players or engineers, poets epic or lyrical, or any brand of humorist, philosopher, Adonis, or Admirable Crichton to suit the requirements of society.

And what more could you want? Well, shall we say, for one thing, justice, a small matter which this programme does not include? Would you in possession of this heaven upon earth be content to forget the past sufferings of human kind? Would a happy lot for men and women to be some day born obliterate or compensate for all that the previous generations have endured? Do not these humanitarian schemes overlook, with a singular inhumanity, the millions who have perished without even a glimpse of the glories to come? They are of no account. Yet what have the new-comers done to deserve the felicity denied their predecessors, and will they be of any greater account when their day, too, has come?

Oh dreadful thought, if all our sires and we
Are but foundations of a race to be,—
Stones which one thrusts in earth, and builds thereon
A white delight, a Parian Parthenon,
And thither, long thereafter, youth and maid
Seek with glad brows the alabaster shade,
Not caring that those mighty columns rest
Each on the ruin of a human breast,—
That to the shrine the victor’s chariot rolls
Across the anguish of ten thousand souls!

The thoughts of our well-meaning reformers appear to be directed to one end only, the cessation of strife, and the consequent cessation of effort, for which there will no longer be any need. But how false it is to suppose that human beings desire unending ease, unthreatened safety, that their summum bonum is cushioned comfort, a folding of the hands to sleep. That way madness lies. What then is left to occupy their interest and attention? They desire rather difficulties, such is their nature, difficulties to elicit their powers, to keep them alert and wakeful. They wish to be alive. In the absence of resistance to desires, desires decay, and an intolerable, an appalling tedium invades the soul.

Whose lives do we read with interest and admiration? The lives of men lapped in comfort from the cradle to the grave? Or of those who in the face of odds have accomplished their ends, good or bad? When the soul of man rises to its full stature, with what disdain does it regard the sweetmeats and the confectionery. In their anxiety for human welfare, in their collectivist schemes, the sentimentalists have overlooked the individual man. They submerge him in the sea of their universal benevolence. But who desires to live in the pauperdom of their charity? Every man desires to be his own architect, and the creator of his own design, the sentimentalist himself among the rest. And the last and greatest insult you can offer to the human race is to regard it as a herd of cattle to be driven to your selected pasture. You deprive the individual of his last rag of self-respect, the most precious of his possessions, himself. If you treat him as a thing, an inanimate object, which can be pushed hither and thither, if you treat him as one of a drove of oxen, you take away his birth-right, and for his loss nothing can compensate him, not all the soothing syrups and honeys of the world.

To its eternal honour Christianity has stood steadfastly for the sanctity of the individual. To imprison the human spirit is the unpardonable sin, the attempt to make men automata, to force them into the same mould. No means will ever be found to induce human beings finally to surrender themselves, either body or soul, to a dictated felicity, to satisfactions chosen for them, whatever vulgar Caesars rule the world. And upon this rock all forms of regimentation, of standardised existence will eventually shipwreck.
EVERY type of compulsion is hateful, always has been, and always will be hateful, as long as men are men. Was this freedom about which the poets have raved since the world began, for which men have died in millions, worth the bones of a single soldier? Have you ever asked yourself why men have fought for liberty? Not for amusement. Freedom they must have, whether they know or not what to do with it, freedom to choose cause or party, order or disorder, the good or the bad, to steer each his own vessel to the port of his desire. Take away his choice, and you make of him, for all your benevolent intentions, a chattel or a slave. There is a rebel in every man; men will revolt and demand again their freedom. As Dostoievsy expressed it, when everything is smooth and ordered and perfect, 'in the midst of this universal reason there will appear all of a sudden and unexpectedly some commonplace, or rather cynical and sneering gentleman, who with his arms akimbo will say to us, "Now then, you fellows, what about smashing all this reason to bits, sending their logarithms to the devil, and living according to our own silly will?"' And he will have followers in their thousands. Men desire the strangest and, in their neighbours’ eyes, the most incomprehensible, the most irrational, the most preposterous things.

The astonishing thing about the human being is not so much his intellect and bodily structure, profoundly mysterious as they are. The astonishing and least comprehensible thing about him is his range of vision; his gaze into the infinite distance; his lonely passion for ideas and ideals, far removed from his material surroundings and animal activities, and in no way suggested by them, yet for which, such is his affection, he is willing to endure toils and privations, to sacrifice pleasures, to disdain griefs and frustrations, for which, rating them in value above his own life, he will stand till he dies, the profound conviction he entertains that if nothing be worth dying for nothing is worth living for.

The inner truth is that every man is himself a creator, by birth and nature, an artist, an architect and fashioner of worlds. If this be madness—and if the universe be the machine some think it, a very ecstasy of madness it most manifestly is—none the less it is the lunacy in which consists the romance of life, in which lies our chief glory and our only hope.
Profits and the National Welfare

The tighter money market has come as an unpleasant shock after the long period of plenty. Both governments and private industry have been compelled to cut down important programmes of development because current savings are not high enough to sustain them. Loan raisings fall far short of government works expenditures, and even long-established companies are experiencing difficulty in obtaining adequate finance for new activities.

The immediate cause of the scarcity of capital is the 40% drop in savings which occurred in 1951/52.* The fall in savings is in turn due to the sharp down-turn in export income, the falling away in internal business activity, and to the inroads of heavy taxes and rising prices on the incomes of the investing public. But, basically, the problem is more deep-rooted. Familiar springs for the refreshment and expansion of industry have been drying up for some time, choked at the source by high taxation on investors and companies. This trend was concealed until recently because of the great accumulation of funds by private and institutional investors over the war and early post-war years, the abnormal level of wool prices, and the large inflow of capital from abroad. For instance, life assurance companies which poured millions into private and public projects in the years following the war are now short of money to invest. Free enterprise may be passing into a new and difficult era marked by a chronic shortage of risk capital.

Since private business is responsible for the employment of about 80% of the national labour force it is surely commonsense to ask ourselves how industry can be encouraged and enabled to give the optimum in efficient service to the

* Undistributed profits and personal savings. As a considerable part of personal savings is used to finance the purchase of motor cars and dwellings and to repay advances previously used for these purposes, the volume of savings available for other investment purposes probably dropped by much more than 40%.
community. One plainly essential condition is that in one way or another industry must be able to obtain adequate capital for expansion and for the improvement of its methods and processes.

While the great part of industry is privately controlled, this can only be achieved via the medium of profits. Unfortunately the whole approach to profits in this country tends to be determined by emotion based on false premises rather than by a realistic assessment of economic needs. To many people the idea of more profit is synonymous with exploitation and inequality of incomes. This popular view overlooks the fact that steep taxation on companies and high income earners severely rations the amount of income from profit which eventually reaches the pockets of investors. Excessive incomes from dividends are easily netted in the hands of the ultimate recipients. But a real change in public opinion will only come about through a wider understanding of the central role of profits in the economic mechanism in stimulating investment. After a large slice of profit has been taken in taxes (at present 9/- in the £ on the greater part of the incomes of public companies), the balance must be delicately apportioned between dividends and reserves. Dividends must be high enough to encourage fresh capital; but not so high at a given level of profit as to jeopardise the future stability and progress of the company. Something has to be kept aside for contingencies and for expansion. Unless profits amply cover requirements for dividends and reserves, new investment must inevitably be retarded and the community will suffer.

THE provision of new industrial plant and the carrying out of research into new methods of production are thus linked closely to the level of profits. Now that the volume of private savings in the higher income brackets is so much smaller than it used to be, the small and medium investor must be encouraged to lend their money in greater amounts. Profits must therefore be high enough to enable a return by way of dividend which is well above the level of interest on government bonds and mortgages. Otherwise the small saver is not likely to be interested in incurring the extra risk of investment in company shares.
But an even more imperative reason for increasing the general level of profits is that better profits will enable companies to become more independent of the vagaries of the investment market. So long as the volume of personal savings is meagre and precarious, highly important ventures must be postponed until better times. With ample reserves from ploughed-back profits, companies would be prepared to carry out new building projects when activity was slack and costs lower. As it is now, companies are forced to expand mainly when it is easiest to obtain capital from the public. This is generally at the height of a boom and the inflationary scramble for scarce men and materials is thus intensified.

THE LEVEL OF PROFITS HERE AND OVERSEAS

To obtain the true earning rate of any company it is established practice in financial and accountancy circles throughout the English-speaking world to relate profits to funds employed, namely Shareholders' Funds. Shareholders' Funds represent the book value of assets after deducting all liabilities, in other words the net worth of the business. Such statistics are compiled in aggregate from published company reports by the Securities and Exchange Commission and the National City Bank of New York for the United States, by "The Economist" for the United Kingdom,* and by the Commonwealth Bank for Australia. These statistics indicate that profits in Australia, after providing for taxation, are well below American and British standards in many cases, despite the much higher level of taxes in the United Kingdom. Because of the high level of company earnings in America, companies are able to finance the great part of their capital improvements and expansion out of reinvested profits. American concerns are able on average to retain two-thirds of net profits (after tax) and still leave shareholders well satisfied with their dividends. On the other hand most Australian public companies are forced to pay out much more in dividends than they devote to reserves, in order to maintain yields on their shares and to retain the interest of investors in future issues. In the case of some leading companies the distribution reaches as high as 80% of earnings after taxation.

* Only available since the passing of the new United Kingdom Companies Act, 1948.
The following table is indicative of the trend of profits, after taxation, in manufacturing in U.S.A. and Australia.

### PROFITS IN MANUFACTURING

<table>
<thead>
<tr>
<th>Return on Shareholders' Funds (After Tax)</th>
<th>U.S.A.</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>1939</td>
<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td>1946</td>
<td>12.1</td>
<td>6.3</td>
</tr>
<tr>
<td>1947</td>
<td>17.0</td>
<td>7.8</td>
</tr>
<tr>
<td>1948</td>
<td>18.9</td>
<td>8.1</td>
</tr>
<tr>
<td>1949</td>
<td>13.8</td>
<td>7.7</td>
</tr>
<tr>
<td>1950</td>
<td>17.1</td>
<td>8.2</td>
</tr>
<tr>
<td>1951</td>
<td>14.4</td>
<td>8.2</td>
</tr>
</tbody>
</table>


It will be observed that while the rate of return on shareholders' funds in manufacturing was the same in both U.S.A. and Australia in 1939, the post-war trend of profits is widely divergent. American profits reached a peak well over twice 1939 and are still appreciably higher, despite stiff tax increases in 1951 to help finance the immense rearmament programme.

The higher rate of profit in U.S. manufacturing companies flows from a variety of causes. But in the last analysis it boils down to an enlightened public attitude towards profits. Organised political pressure for any severe limiting of profits is almost non-existent. Indeed, trade union leaders in U.S.A., readily acquiesce in the making of high profits which are promptly reinvested for the betterment of the working conditions of their members. American labour is not alone in this bold commonsense attitude. Swedish trade unions in 1947 also insisted that their labour-controlled government provide adequate fiscal concessions for the making and ploughing back of profits in Swedish industry. They reasoned that this would mean more jobs and eventually higher real wages.

One of the most disconcerting aspects of the Australian position is the low earning rates of the oldest and soundest companies which must provide employment for a high proportion of the labour force and which produce most of our basic goods and services. The following table shows the average rate of net return (after tax) in 1951, in U.K. & U.S.A., in various fields of manufacturing, and the comparative figures for Australian leaders in the same lines of activity.
<table>
<thead>
<tr>
<th>Industry</th>
<th>Australian Company</th>
<th>% Return on Shareholders' Funds after Provision for Taxation</th>
<th>U.K.</th>
<th>U.S.A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron and Steel</td>
<td>Broken Hill Pty.</td>
<td>6.4</td>
<td>7.7</td>
<td>12.3</td>
</tr>
<tr>
<td>Glass</td>
<td>Aust. Cons. Inds.</td>
<td>6.4*</td>
<td>8.4*</td>
<td>15.3</td>
</tr>
<tr>
<td>Cement</td>
<td>Aust. Cement</td>
<td>5.9</td>
<td>8.2*</td>
<td>14.1</td>
</tr>
<tr>
<td>Paper</td>
<td>Assoc. Pulp and Paper Mills</td>
<td>5.3</td>
<td>11.3</td>
<td>16.1</td>
</tr>
<tr>
<td>Rubber</td>
<td>Dunlop Rubber</td>
<td>10.0</td>
<td>8.5*</td>
<td>16.1</td>
</tr>
<tr>
<td>Textiles</td>
<td>Felt and Textiles</td>
<td>7.4</td>
<td>7.0</td>
<td>8.3</td>
</tr>
<tr>
<td>Electrical</td>
<td>Amalgamated Wireless</td>
<td>7.8</td>
<td>8.1</td>
<td>16.2</td>
</tr>
<tr>
<td>Tobacco</td>
<td>British Tobacco</td>
<td>7.8</td>
<td>12.5</td>
<td>9.8</td>
</tr>
<tr>
<td>Brewing</td>
<td>Carlton and United Breweries</td>
<td>4.5</td>
<td>6.1</td>
<td>11.8</td>
</tr>
<tr>
<td>Sugar</td>
<td>Colonial Sugar Refining</td>
<td>3.6</td>
<td>8.9*</td>
<td>12.1</td>
</tr>
<tr>
<td>Food Preserving</td>
<td>Henry Jones</td>
<td>9.4</td>
<td>7.4</td>
<td>11.6</td>
</tr>
</tbody>
</table>

* Based on results of leader in the field.

Sources: Melbourne Stock Exchange Record, Records and Statistics Supplement to the Economist, Economist Intelligence Unit, National City Bank of New York, Monthly Letter.

Notes:
1. Shareholders' funds are as at January 1st for U.S.A. In the case of Australia and United Kingdom, they are average funds used over the year.
2. Profits in the U.S. textiles and tobacco industries were abnormally low in 1951, whilst earnings in the U.K. paper and tobacco industries were much higher than usual.

Sufficient data is not available to show earnings comparisons for particular industries before making provision for taxation. However, the following table covering all manufacturing is indicative:—

<table>
<thead>
<tr>
<th>% Profits on Shareholders' Funds in 1951</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>United States</td>
</tr>
</tbody>
</table>

Notes:
1. The Australian figures after tax were compiled by the Commonwealth Bank, from published company balance sheets. The figures before tax are based on an analysis made by the Institute covering the companies included in the Commonwealth Bank sample which disclose their taxation payments or provisions and whose results are republished by the Sydney Stock Exchange Statistical Bureau.
2. The data for United Kingdom was extracted by the “Economist” from published company reports and reclassified by the Institute to accord with the Australian and American definitions of shareholders' funds or net worth. The main reasons for the large discrepancy in results before and after taxation in United Kingdom are as follows:—
   (a) Company taxes are much higher;
   (b) British companies possibly make much larger appropriations from net profit (after tax) to provide for obsolescence and replacement of assets, including stocks, than appears to be the case in U.S.A. and Australia. This has the effect of reducing disclosed profits below taxable profits.
3. The American statistics were compiled by the Securities and Exchange Commission. They cover a larger range than the National City Bank of New York study and the results after tax are slightly lower.
Profits before taxes in United Kingdom and U.S.A. average 20% to 30% on shareholders’ funds. By contrast in Australia they are only about 15%. Judged by overseas levels therefore, company profits in Australia are far from high, but rather appear to be inadequate to sustain the pace of development overseas and hence maintain competitive standards and jobs for Australian workers.

Latest balance sheets suggest that the flush of inflationary profits is over and that stiffer times are ahead for most companies in Australia. Present government attitudes on price control and company taxation and other aspects of public planning may have to be revised in the light of the changes in company finances since before the war. To disallow an adequate margin of profit is merely to obstruct and slow up the whole rate of technical advancement and of national economic progress. Not the employer or the investor, but the wage-earner and the consumer, stand to lose most from financial policies based on a vague hostility to business profits. This is plain economic truth, not special pleading.
What is the Meaning of Free Enterprise?

A FEW months ago the Editor of a leading British business journal* addressed an open letter to the President of the Federation of British Industries. In this letter he posed a question: “How many men,” he said, “in British industry, however exalted their position, could define what they mean by PRIVATE ENTERPRISE or FREE ENTERPRISE...?”

The Editor went on to say: “We believe that the absence of any clear idea about the nature of the private enterprise system among business men is a mortal danger to the system itself.”

This letter brought forth a flood of replies from British businessmen—some commendatory, others critical. Some said that no good purpose would be served by trying to describe the meaning and nature of private enterprise in more or less exact terms. But the majority seemed to think that something of value—possibly of substantial value—would emerge. The head of one of the world’s leading public relations firms made a strong point: “There are hosts of people,” he wrote, “to whom private enterprise has only the vaguest significance.”

This is almost certainly true.

WE seem to have reached a stage where a re-definition of free enterprise in modern terms is urgently needed. For one thing political divisions in both Britain and Australia have become rather blurred. Thus we find “free enterprise” governments imposing measures of a strongly socialistic character; while we have socialist parties opposing these measures with ideas which would be applauded by many supporters of private enterprise.

Quite apart from the vague notions possessed by many people about the phrase “free enterprise”, there is a real danger that to the supporters of free enterprise itself the phrase might become no more than a meaningless political slogan or catchcry. Are Australian businessmen in a similar case to their counterparts in England? Would the majority find it hard to explain in precise terms what is meant by “private enterprise”? Quite possibly!

For other reasons a clear statement of the meaning of private enterprise would seem to be singularly appropriate just at the moment. It is generally true to say that the great bulk of economic and social legislation of the last two decades—in Australia no less than Britain—has been directed toward the objective of sharing up more equally the community’s production of wealth. This tendency was given a special impetus by the war when plans of post-war reconstruction centred mainly on giving effect to the social ideas most clearly and comprehensively expounded by Lord Beveridge. But this movement, because of hard practical reasons, has just about exhausted itself. Attempts to take the levelling process further are now just not practicable without wholly submerging the driving impulses of risk, enterprise and personal effort and initiative on which a community depends if it is to remain progressive and productive. If the central economic problem of the last two decades has been to remove the curse of economic insecurity through the policy of “fair shares”, the economic problem of the next two decades is likely to be that of greatly expanding the production of wealth. And the special claim to fame of free enterprise is that,

*Scoope.
What is the Meaning of Free Enterprise? (continued)

whatever its defects, it can assure a faster rate of material progress than any alternative that has so far been offered us. The classic socialist criticisms of private enterprise, on the whole, have not been on the score of production, but on the score of instability and that private enterprise does not of itself distribute what it produces in an equitable fashion.

WELL, then, what kind of economic system have we in Australia at the moment? Is it, in real substance and in spirit, a system of true free enterprise? Or is it a system of free enterprise only in external appearances? Is the structure one of private enterprise only in broad architectural outline whilst the details of construction are foreign to and inconsistent with the main design? Does the real red blood of personal enterprise flow strongly in this young Continent today, or is it suffering from a kind of pernicious economic anaemia or, perhaps, a premature hardening of the economic arteries? Has our economic organisation become soft? These are questions worth looking into.

How, then, does the present position in Australia conform with our notions of what constitutes a system of true free enterprise? Certainly the great part of the productive assets of the community are still privately owned. Certainly the great part of employment (around 80%) is still provided by private businesses. Are these not the major tests? Do not these facts conclusively prove that Australia is still predominantly a free enterprise country?

At a hasty glance, the building seems sound enough. But if we look a little closer, cracks and flaws begin to appear. We notice, first of all, that the strong incentives which free enterprise is supposed to offer have been considerably watered down by taxation which becomes extremely heavy at a comparatively low point on the income gradation. It can be said at once that the opportunities for amassing a reasonable store of wealth, still less a fortune, no longer exist except for the slick operator or for those already possessing great capital resources. The aspiring young are no longer allowed their dreams. We may have been successful in achieving one of the main objectives of Lord Keynes, “the euthanasia of the rentier”, but we have also gone a long way toward bringing about the “euthanasia of the enterpriser”—something which Lord Keynes would have regarded with horror.

IT is very much to be doubted whether this state of affairs provides a sound basis for developing a young Continent crying out for growth and adventurous enterprise. Recently, an article in one of our metropolitan dailies lamented the fact that there no longer seems to be rising from the ranks of the young, men of such stamp and calibre as Sidney Kidman (on the land), H. V. McKay (in manufacturing) and Sidney Myer (in retail trade), whose work meant so much to Australia in the earlier decades of this century. Perhaps this is hardly surprising. Perhaps we no longer provide the environment in which such men can exist and flourish. Might as well expect the hardy English oak to thrive in the Arctic wastes or the Sahara Desert.

And in addition to the fact that the State takes so great a share of the wealth acquired by the personal effort of the individual, it also takes a major part (on average nearly one-half) of the earnings of the industrial company. If we discount the effects of post-war shortages and of the boom years of abnormal wool prices, it would probably be agreed that it is not easy in these days for the small company or the young company to grow big. For bigness is largely made possible by the re-investment of business profit, the familiar process of “ploughing back” earnings. Moreover, it is much easier
for the older, well-established companies to acquire from the money market capital resources for large-scale expansion than the relatively unknown smaller company. (And even the larger companies are at the moment severely limited in this regard.) Perhaps many a potential Sidney Myer or H. V. McKay is born to blush unseen. Heavy taxation on the scale we are practising not merely removes the incentive to accomplish great things, it removes the means of accomplishment.

Nor is the private enterpriser entirely free to try out his ideas, to experiment, to follow his intuition in the Australia of today. He is told what he must not do. He is not encouraged to do. He lives in an environment of restriction. Since the war he has been hedged about by government controls which reach practically into every nook and cranny of the economy—state control of his prices, state control of the marketing of his product, controls over lending, over the raising of new capital, over his material supplies, controls on imports, on building, controls here, controls there. Some day some enterprising individual, with the time and resources, will make a catalogue of government controls over business in the Australia of today. It will make an interesting story, and one that will astonish and shock.

What other flaws are there in the edifice of business enterprise? There is, for instance, the cost structure. The costs of producing in Australia have become so great that it is virtually impossible for a great part of private industry to compete with overseas industries. Costs have risen so high that they could necessitate the continuance of import restrictions in some form so long as they remain at levels so far out of line with the world position. Also businesses are discouraged from undertaking big capital expansions which can only be carried through at excessively high costs. Does this cost structure provide an encouraging foundation for business enterprise in this country? Clearly not!

These three alone—the deadening burden of high taxation, the restrictions on business freedom, which, in essence, amount to restrictions on the free execution of business ideas, the high cost structure—provide formidable obstacles to free enterprise. It is, then, at first sight, almost a miracle that there is as much business activity as there is!

Part of the reason is that Australia has just passed through one of the biggest and longest-sustained booms in its history. Not even the wildest optimists could have envisaged the day when the price of wool would exceed 200 pence per lb. In addition, private capital from abroad, encouraged by high wool prices, has been coming into this country for investment at an altogether abnormal rate. Migration and development and the general condition of post-war shortages have all contributed to an economic climate exceptionally favourable to business expansion.

In addition, since the war, the businessman has been assisted over the obstacles in his path by governments concerned at all costs to maintain full employment. In some respects he may have been slightly pampered. The state has not only assumed the responsibility for giving economic security to the man in the street, it is rapidly getting into a position where it is assuming responsibility for trying to provide security for the businessman. If the environment for business enterprise in Australia has not been exactly invigorating, at least it has not been altogether uncomfortable.

Whatever the economic system we have tried to describe can be called, it is not true free enterprise. It is, in-
What is the Meaning of Free Enterprise? (continued)

deed, little more than a pale, unconvincing imitation.

We come back to where we started. What, then, is free enterprise? In what does its essence consist?*

THE essence of free enterprise lies in the incentive it provides for individual achievement through the rewards offered in return for great effort and risk. You will only get the best from a community so long as each individual can be sure that the additional effort he puts into his job, the particular skill that he possesses, his special abilities and knowledge, and the enterprise and risks which he takes, will be fairly and suitably rewarded. It means a system in which every man has the opportunity to make the most of himself. But it means also a system in which, once the minimum needs are assured, every man must be prepared to stand on his own two feet, to suffer the consequences of his mistakes or shortcomings, to take the bad with the good. It is a profit economy but it is also a loss economy. It is a system impossible without freedom. And because it cannot function without freedom, it imposes great responsibilities on the individual to see that he acts in a way that is consistent with the freedom he is granted. It aims at private gain; but not exclusively. It must also concern itself very earnestly and intimately with the public good.

The widest spread of individual opportunity; the incentive of rewards proportioned to contribution; the prospect of gain in return for efficient service; the penalty of loss for inefficiency; the freedom to plan and to execute, to act on one's own judgment; a high and continuing sense of responsibility for the national welfare and all that that implies; these are the indispensable ingredients of true private enterprise. The institutional forms of private property and contract flow from these, and though essential, are nevertheless incidental.

A GREATLY respected British journal, "The Economist", discussing in 1944 the problems of reconstruction after the war, said:—

"The profit motive, the willingness of men to take risks, is of course, indispensable in a democratic economy; it provides the most powerful of all stimulants to industrial and commercial effort and economic progress. It may even be said that our capacity to solve the industrial, commercial and social problems of the postwar world will depend upon the renascence of individual enterprise and courage."

Where the British countries have fallen short of solving their post-war problems, may this not be due to their failure to fully revive the spirit of enterprise and courage?

*A brief article cannot pretend to give a full and satisfying explanation of the "free enterprise" system. We have merely tried to focus attention on a few of the essential components.
BORN at San Angelo, Texas, in 1895, Eugene Holman graduated as M.A. at the University of Texas in 1917 and entered the oil industry. For some years he was engaged mainly on geological investigations. In 1942, he was appointed a Vice-President of the Standard Oil Company (New Jersey), which, in terms of total assets, is the largest industrial corporation in U.S.A. today. At the age of 49, he became President.

Eugene Holman is a “working” director and is, by his own definition, a “professional manager.” He combines knowledge, judgment and an unusual ability to take the long view, and he has, too, a disarming common touch.

Mr. Holman subscribes to the view stated in an organisation manual issued by his Company: “To maintain a business climate favourable to reasonable profit making, management must impose upon itself a proper concern with many social responsibilities. No business exists in economic isolation. It is part of the economic and social environment of its time. Its policies and actions affect many segments of that environment — and in turn are affected by them.”

At our invitation this article was specially prepared by Mr. Holman for publication in “Review.”

Enough for All Men’s Needs

By EUGENE HOLMAN

President, Standard Oil Company (New Jersey)

The peoples of the world are using up raw materials at a rate never equalled before. The expanding economy of the post-war years plus the present unhappy need for rearmament has resulted in the new high rate at which we are taking minerals from the earth. Perhaps it is no wonder, therefore, that some people fear we are in danger of exhausting our natural resources. But I am convinced that this fear is groundless. In fact, I believe that, under certain circumstances, the natural resources of the world may be considered inexhaustible. For the record of the past indicates that natural resources will always be available for our use as long as men have the freedom to acquire knowledge and the incentive to put their creative talents to work.

In prehistoric times, men used simple tools, such as axes and picks, made from stones that were readily available on the earth’s surface. With these tools they were able to create societies, and within these societies they gathered knowledge of the natural world. As their knowledge accumulated, they used their tools to obtain some of the softer metals, especially copper and tin. They fashioned more and better tools. In time, they moved on to the Bronze age, and thence to the
threshold of the modern world, the age of Iron. Each step was characterised by an accumulation of knowledge and by the use of the minerals which that knowledge made available. When humanity stepped from the age of iron to the age of steel, it had already stored up a vast amount of information and analysis concerning the natural world. There was also a formidable array of important tools—levers, pulleys, wedges, hooks and gears. The age of steel was born with a far richer heritage of human knowledge and natural resources than any other previous age.

The steplike pattern of development from age to age is marked by two outstanding features. First, it proceeded at a geometric rate. Each successive age was shorter than the age before it. The stone age lasted tens of thousands of years. The steel age, in spite of its astonishing achievements, is not yet a hundred years old. And, second, each upward step was dependent upon the knowledge accumulated in the age before.

The point is that in every age it was the use of all available materials that supported societies in which men could gather knowledge. Increased knowledge, in turn, has invariably led to an increase in the number and kinds of raw materials men have had to work with.

Thus we see that true conservation has never meant the hoarding of raw materials. On the contrary, the very use of raw materials stimulates the search for more sources and new kinds of materials. Conservation, therefore, is intelligent, efficient use. Not profligate waste, of course, but not hoarding either.

The picture becomes clearer as we look at present day developments. As far as natural resources are concerned, the twentieth century has, in an almost literal sense, inherited the earth. There are new metals and new sources of energy in the offing. There are new uses of familiar materials, and faster, more efficient ways of discovering new sources of familiar materials. And there are materials, produced by the synthesis of organic compounds, that have made their appearance for the first time.
In my own industry—oil—I have seen how constantly increasing knowledge, stimulated by growing use of petroleum products, has helped expand the sources of crude oil. When I was in the field as a geologist I often heard people predict that the world's supply of petroleum was rapidly running out. Back in the 'twenties, one man solemnly proclaimed that he had figured the last oil well in the United States would go dry in exactly ten years. I don't know where that prophet is today but I hope he is better informed. The proved reserves of oil deposits in the United States are now at an all-time high, despite the fact that since 1941, the consumption of petroleum, for war and peace, has been enormous. The same is true of proved reserves all over the world.

This expansion of oil reserves was made possible largely because the oil industry produced and used the oil at its disposal, and thereby developed the means, financial and technical, to find more oil. One new device that is helping find new oil fields today, for instance, is the airborne magnetometer. Improved drilling methods now permit deeper strata to be reached, and today's geologists have means of determining oil structures more accurately.

In addition, oil men are learning how to get more oil out of reservoirs already located. Repressuring, waterflooding, and other techniques of secondary recovery are adding greatly to the quantities of oil available for consumers' use.

In many different parts of the world new sources of oil have been discovered in recent years. The great fields in Alberta, Canada, began to produce crude oil in commercial quantities only two years ago. In several fields in the United States, where oil exploration has been going on for years, discovery wells have come in within recent months. New sources of oil have also been opened up in recent years in central Sumatra, southern Iraq, and western Venezuela. Meanwhile, in other parts of the world, including Australia and Papua in the southwest Pacific region, geologists are making surveys and drillers are at work in the everlasting search for new oil deposits.

Moreover, should the supply of oil some day begin to dwindle, we know that we will be able to derive liquid hydrocarbons from oil shales, tar sands, coal and other sources.
Besides the mineral energy derived from coal and oil, we may soon enjoy the benefits of two great additional sources of energy. Recent developments in atomic research give promise that atomic energy may be available for constructive purposes, and scientists are giving serious attention to the likelihood of harnessing the vast energy of the sun. In fact, at present in the United States some houses are successfully utilizing solar energy in heating systems. Whatever their application, atomic energy and solar energy will play an important role when and if their use becomes economically feasible. The over-all effect will be to increase still more the total amount of energy available to humanity.

There, in outline, is the picture of our energy resources. It is plain that we are in no danger of exhausting them. Indeed, I am convinced that we can regard them as practically limitless.

Let us look now at metallic mineral resources to see if the concept of inexhaustability stands up as well for them as it does for energy resources. There are forty-five metallic elements and some 8,000 alloys of those metals now in commercial use. Iron and aluminium are the two metals most used today, and they occur in great abundance on the earth. Current explorations for new iron deposits range from the jungle of South America to the mountains of Labrador.

In connection with the search for new deposits of metals and the part human ingenuity plays in extending natural resources, a good example is the famous Broken Hill Proprietary Company, Limited, in New South Wales. I understand that the company was originally in the business of mining silver, lead and zinc. It wasn't until the problem of diminishing deposits arose that the Company turned to the business of mining iron ore and the production of steel. It was a wise decision. Today, the world knows Broken Hill, as one of the most modern steel mills in the world, and a producer of high quality steel at very low prices. As a company spokesman has aptly put it, "for over half a century the mine was to link the age of silver with the age of iron and steel."
Australia’s rich deposits of high grade iron ore are, of course, in no immediate danger of depletion, but if the danger arises, it is quite likely that new sources will be uncovered as they were in the great Mesabi range in the United States. Not long ago it was feared that the Mesabi range was running out of its deposits of 50 per cent. iron ore. Today, companies are making large investments in Mesabi, in order to refine an ore called taconite, which treated by a new process produces 60 per cent. iron ore. The Mesabi range contains a taconite strip several miles broad and 100 miles long.

The search for more deposits of iron ore is an adventurous story of modern industry in many parts of the world. In Labrador, engineers are laying down tracks for a 338-mile railroad line through snow-covered mountains and bleak wastelands to haul iron ore from the Ungava area; on Labrador’s northern tip, to a port on the Gulf of St. Lawrence. At Steep Rock Lake, Ontario, seven million tons of lake bed are being removed to get at the iron deposits underneath. In Venezuela, a railroad is being cut through the jungle to a river, where barges will carry iron ore out to the coast.

A new mineral resource that man’s knowledge is just about to bring into usefulness is titanium, which although it is the fifth most abundant metal on earth, was hitherto impossible to process for commercial purposes. It is said that a new, inexpensive process is being worked out. Titanium should be ideal for modern high-speed aircraft, because it is lighter than steel, stronger than aluminium, and highly heat resistant.

Two other rigid materials are supplementing metals and we shall probably see their use expanded before very long. The first is glass, in use for centuries, but now taking on new importance in building materials, fabrics, and other uses. The other is plastics, which are used for everything, from children’s toys to automobiles. One of the impressive things about plastics is that they can be made from corn cobs, oat hulls, and other formerly useless waste materials. Both glass and plastics are doing much to extend our supply of metals.

So we see that the story of metal resources closely parallels the story of energy. Research and ingenuity are also making our supplies of needed metals inexhaustible.
The picture of sufficiency for our material needs is bright indeed, but the concept of unlimited resources does not mean that progress is easy. Human effort and thought must be applied to natural resources before they have any value at all. In some parts of the world, rich in potential resources, people still live in poverty because they have not yet learned how to make use of them.

Often the progress that comes with use of natural resources is impeded by political and social conditions. In many parts of the world today these conditions hamper or paralyze the normal healthy growth of free science and industry. Extreme nationalism, government controls and monopolies, currency restrictions, abnormal tariffs, the denial of just rewards for effort, or threats of expropriation, wars and revolutions have caused valuable raw materials to remain useless in the earth, where no one benefits by them.

Where men are free to create their own goals and achieve them in their own way human progress, I am convinced, has no limits. The one great resource, without which all the natural resources in the world would be nothing, is the free creative spirit of the human individual. Therein lies the true secret of inexhaustible material resources.

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