Sir Leslie Melville

Keynesian or pragmatist?

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*The fox knows many things, but
the hedgehog knows one big thing.
Archilochus

Introduction

In their History of Australian Economic Thought, Peter Groenewegen and Bruce McFarlane assert that: 'Of his generation of advisers, Melville was probably the most committed to the revolution in economic thinking sparked off by the General Theory of John Maynard Keynes'. Even so, they acknowledge that 'Melville's strong interest in Keynesian theory was by no means uncritical' (Groenewegen and McFarlane, 1990, p. 143). Two examples of his independent views are identified: his work on the theory of interest rates and his concern about the problems likely to be associated with the translation of Keynes's theory to practical policy. The purpose of this paper is to examine Melville's career as economist and adviser during the 1930s and 1940s – the period of his major work - rehearsing the themes adumbrated by Groenewegen and McFarlane. Melville, in fact, quickly accepted many of the fundamental elements of the General Theory. Yet it is also true that he did not support the arguments of the General Theory in their entirety, preferring instead to regard himself as a pragmatist. Indeed, he believes that Australian economists of the 1920s and 1930s 'were all pragmatists, dealing with applied economics, applied to practical problems that were developing very rapidly' (NLA, n/d, p. 9).

Biographical background

Born in Sydney in 1902, Leslie Galfried Melville graduated Bachelor of Economics with first class honours from the University of Sydney, where his teachers had included R. F. Irvine and R. C. Mills. At the age of 21, and before completing his degree, he applied successfully for the position of Public Actuary of South Australia, being appointed in 1924. In this position he advised the state government and treasury on economic issues, being the only economist at that time in a senior position in any state or federal agency. He played a prominent part in the Financial Agreement of 1927 and gave evidence on Commonwealth-State economic and financial matters in 1928 before the Royal Commission on the Constitution, and again in 1929 before the Royal Commission on the Finances of South Australia as Affected by Federation. Earlier he had presented the case for South Australia becoming a claimant state of the Commonwealth.

In 1929 Melville was appointed inaugural Professor of Economics in the University of Adelaide. He was reluctant to apply at first and only did so after applications had closed on the prompting of the Vice-Chancellor, Sir William Mitchell.
His diffidence arose, as he put it in his letter of application to the Registrar, "because I consider my knowledge of Social Economics, Economic History and History of Economic Thought inadequate for the position and because my interests are primarily mathematical and statistical." Be that as it may, he was appointed to the chair, the other short-listed candidates being J. K. Gifford and A. G. B. Fisher.

He left Adelaide in 1931 to fill the newly created post of Economic Adviser to the Commonwealth Bank, then the nation's central bank. There he established the Economic Department for the purpose of conducting economic research and furnishing advice to the Governor and to the Board of the Bank. Before joining the Bank he had participated with other economists, including D. B. Copland, L. F. Gibling and E. O. G. Shann, in preparing advice to the federal government. Together with Copland and Shann he had advised A. C. Davidson, General Manager of the Bank of New South Wales, to raise the £A-£stg exchange rate from £A108 to £A125 = £stg100. He was a member both of the committee appointed to report to the Loan Council in 1931 on 'The Possibilities of Reaching Equilibrium in Australia' (the Copland Committee), which formulated the so-called Premiers' Plan, and the Wallace Bruce Committee in 1932 which reviewed the progress of the Premiers' Plan at the invitation of the Prime Minister, J. A. Lyons. Melville attended both the Ottawa Conference in 1932, and the World Economic Conference in London in 1933, as Adviser to S. M. Bruce, the leader of the Australian delegations. In 1936 he gave evidence to the Royal Commission on the Australian monetary and banking systems and was appointed in 1939, together with Gibling and Roland Wilson, to the Financial and Economic Committee, which advised the government on war finance and postwar reconstruction. In the absence of H. C. Coombs, Melville was often appointed Acting Director-General of the Ministry of Postwar Reconstruction and led the Australian delegation to both the British Commonwealth talks on finance and trade in London, and the monetary and financial conference at Bretton Woods, New Hampshire, in 1944. Between 1947 and 1950 he served as chairman of the Committee on Employment and Economic Stability of the United Nations Economic and Social Council; this committee included among its membership Ragnar Frisch, Roy Harrod and Oscar Lange.

In 1949 Melville was appointed Assistant Governor (Central Banking) of the Commonwealth Bank and between 1951 and 1953 he was Australia's Executive Director at the International Monetary Fund and World Bank in Washington. In the latter year he returned to Australia to replace Copland as Vice-Chancellor of the Australian National University. Here he directed the program of staff recruitment and building which led to the University's recognition within a decade of its creation as one of the nation's leading universities and shortly thereafter as one of world's most respected research institutions. He also set in place the amalgamation in 1960 between the ANU and the Canberra University College. While at the ANU he continued the work that he had undertaken in Washington to influence the convertibility of sterling, writing articles and communicating with fellow economists, including L. C. Robbins and D. H. Robertson. He was appointed to the group of economists which regularly advised the Governor of the Commonwealth Bank; was appointed to the Reserve Bank Board (he had earlier been a member of the Advisory Council of the Commonwealth Bank); and was a member of the government's Economic Advisory Council and the Immigration Planning Council.

Following the completion of his Vice-Chancellorship at the ANU in 1960 he was appointed Chairman of the Australian Tariff Board but resigned dramatically in 1963 following fundamental disagreements on tariff policy and its administration with the Minister of Trade and Industry, John McEwen. He then accepted a consultancy with the World Bank stationed in Manila and led a World Bank mission to the Arab Republic of Syria. He was then appointed to the Commonwealth Grants Commission, later becoming
its chairman for eight years. From the mid-1960s he undertook a number of government appointments, including the Enquiry into Wages and Industry in the Territory of Papua and New Guinea (1966); the Oil Industry’s Terms and Conditions for Refining of Indigenous Crude Oil (1971); the Treasurer’s Proposals for a New Superannuation Scheme for Australian Government Employees (with A.H. Pollard in 1974); the Commonwealth Committee of Enquiry on Health Insurance; Financial Adviser to the Northern Territory Executive on Financial Aspects of Self-Government; and he chaired the Tariff Advisory Committee of Papua New Guinea and the Social Science Research Council (the precursor of the Australian Academy of Social Sciences). During this time he held a Visiting Fellowship in the Department of Economics at the ANU’s Research School of Pacific Studies. There he participated actively in seminars and occasionally presented papers.

About Melville, it can be said without exaggeration that no other Australian economist has a record of public service of comparable breadth and distinction, having held, as Groenewegen and McFarlane point out, ‘every top post in Australian (official) economic life touching on banking policy, fiscal federalism, tariffs and international economic policy’ (Groenewegen and McFarlane, 1990, p.143). Melville also played a prominent role in the development of the discipline of economics in Australia, serving as President of the Economic Society of Australia - of which he was elected a Distinguished Fellow upon his ninetieth birthday in 1992 - and President of Section G (Economics) of the Australian and New Zealand Association for the Advancement of Science (ANZAAS). He was a regular contributor to the Economic Record, publishing important papers on interest rates, expectations, and macroeconomic theory and policy; an unpublished manuscript of a book on the application of dynamics to economic theory is to be found in the Melville archive at the Reserve Bank of Australia. His distinguished contribution to economics has been recognised in honorary doctorates conferred upon him by the universities of Sydney, Toronto and the ANU. He is a Fellow of both the Institute of Actuaries (London) and the Institute of Actuaries (Australia). He was created a CBE in 1953 and KBE in 1957.

**Melville and Keynes**

Melville and Keynes met on several occasions in London during the 1930s and 1940s. He and Shann dined with Maynard and Lydia Keynes in London in 1932, following their attendance at the Empire trade and monetary conference in Ottawa. On that occasion, Lydia appears to have done most of the talking, being particularly interested in the arts in Australia, while Keynes himself seems to have been concerned especially about his investments in Australian government securities. Both Melville and Shann were also invited by Keynes to Cambridge, where they participated in one of his Monday evening seminars with invited academics and senior students. It was during this visit to Britain that Melville consulted a number of monetary experts, including Keynes, Hawtrey, Gregory, Clay and Stamp, among others, on Australia’s exchange rate policy. The following year, while attending the World Economic Conference in London, the two men met once more. They were not to meet again until the British Commonwealth economic and financial meeting in London in 1944. Then followed meetings at Atlantic City, New Jersey, (the preparatory meeting prior to the International Monetary and Financial Conference at Bretton Woods), at Bretton Woods, and at the first meeting of the International Monetary Fund and the World Bank at Savannah, Georgia, in 1946. At these meetings in 1944 and 1946 there were fundamental disagreements between them, stemming as they did from the Australian Government’s hesitations about the ability of the international monetary proposals to provide effective security for Australia.
When answering interviewers' questions about Keynes, Melville has adopted a consistent view. He held Keynes in the highest regard, both as a person and as an economist. While he recognised that Keynes did not tolerate fools gladly, and could be rude to adversaries, Melville was adamant that Keynes was always fair. In retrospect, Melville recalls that Keynes "was an arrogant man. Yet I found him easy to talk with. In debate, of course, he was aggressive but I didn't mind that. That's what you expect in debate. But he could be rude. I've heard him [be] rude to people, though I must say that he was never rude to me" (Cornish, 1993, p. 20) As he said about Keynes on another occasion: "I didn't agree with all his views but he was always the easiest person to talk to" (NLA, n/d, p.77). It is not entirely clear what Keynes thought of Melville, especially after Bretton Woods at which Australia refused to endorse the agreement at the conclusion of the conference and failed to ratify the articles of agreement by the deadline for inaugural member status. But of his performance at the London talks in 1944 which preceded the Bretton Woods Conference, Keynes wrote to Giblin saying:

I saw ... a good deal of Melville's conduct of his business at the meetings. You can feel very confident that he upheld the dignity and integrity of Australia with the most marked success. Since, like you, he felt a greater nostalgia for the good old days before 1939 than the rest of us did, he was rather frequently in a minority position. But he handled himself most impressively, was clear, cogent and never unreasonable, put his point forcibly yet moderately, and achieved, in my judgment, as much as was humanly possible to move matters in the direction he desired. He had quite a difficult task and accomplished it supremely well.4

While there was much of Keynes's work with which Melville agreed, there were some aspects of it with which he took issue. Following the publication of the General Theory, Keynes was usually Melville's starting point and his differences were generally, though not always, attempts to move beyond the limits imposed by Keynes himself. While Melville said that he 'accepted Keynes's general conclusions', he was 'very unconvinced by a lot of the theory in his General Theory and it didn't seem to me to be very rigorously thought out but I didn't think that his conclusions were not generally correct' (NLA, n/d, p. 158). In particular, he regarded Keynes's conception of the consumption function as a function of income to be too narrowly specified, though he did agree that the consumption function was a 'useful tool'. Most especially, he 'always thought his conclusions about the euthanasia of the rentier were pure nonsense' (NLA, n/d, p. 159). Here he was not contesting Keynes's view that the rate of interest would tend to fall, ceteris paribus, as capital accumulated, but he did dispute the related idea that the rate of interest would tend to zero; he 'never thought of that as being a possible hypothesis' (NLA, n/d, p. 159). In short, Melville's view was that the General Theory was a very original and arresting work, concluding as he did that 'Keynes did make a tremendous contribution. I do think he developed a lot of things that were novel and original and I don't think the fact that you can find hints of them in other people's writing really destroys this conclusion' (NLA, n/d, p. 159).

As to whether Melville ever regarded himself as a 'Keynesian', there has always been some degree of ambivalence in his mind as to whether that label should apply to his own views. Thus he said in 1992 that:

I was very much influenced by Keynes and it is perfectly true that in my discussions at that time it would have been quite obvious that I was thinking along Keynesian lines. But I would think most people would associate Keynesianism with four things with which I actually disagree - one is public works expenditure to lift the country out of a depression; the second is low interest rates, even perhaps pressing to zero rates of interest; the idea that money doesn't really matter; and protectionism. Now I didn't agree with any of those. And I don't see
how I can be regarded as Keynesian if I didn’t. A lot of other Keynesian ideas -
yes, I accepted them (Cornish, 1993, p.18).

What he certainly accepted were two of the most elemental propositions
associated with Keynes of the General Theory, namely, that an economy dependent
solely on market forces will not necessarily tend to full employment, even if wages and
interest rates are fully flexible; and that there are strong grounds for managing the level
of aggregate demand through fiscal or monetary policy, or by some combination of both.
In 1978, at the high water mark of the monetarist revival, Melville wrote to Coombs
saying: ‘I was never a convinced Keynesian but the reaction against his views has I think
gone much too far. We are back to the Hawtrey - or British Treasury - views of the late
1920s. These extreme neo-classical and monetarist theories are, I believe, academic in
the worst sense. But they are widely held’.

The idea of Melville as an adherent of Keynes would appear to be at odds with
some contemporary and recent interpretations of opinion expressed by Australian
economists. Shann, for example, writing in February 1932, claimed that Melville was
‘the greatest “find” we have made in Australia for many a day, almost the one find
during this period of depression. I am inclined to think that Niemeyer and Gregory
foresaw this when they were here’. Giblin, writing to Ronald Walker in April 1934, said
that Melville was ‘a strong deflationist’, so much so that Giblin had been impelled to
tavel to Adelaide in 1930 ‘to talk against Melville, who was pushing Gregory’s thesis
there’ (Cain, 1982, p.12). Of Australian economists in the 1930s, Giblin was inclined to
categorise them according to their views on economic policy as follows:

Dyason was the one firm and consistent inflationist. Copland went that way in
waves, with strong back-eddies. I was inclined to sit on the fence, not sure of my
ground, and opposed whichever argument was put forward too confidently.
Brigden I think was the same, and Hytten. Melville of course was a strong
deflationist. Melville gradually and reluctantly has moved a very long way, but
with always a Hankering backward, which finds voice from time to time. Shann,
more fitfully, has moved even further the same way, and with his regret.

Melville himself has been very reluctant to classify individual economists
according to the positions they took in the policy debates of the 1930s, saying simply
that: ‘It would be futile to seek the dominant figure in those dramatic years. Probably
there was none, each laying what gifts he had before the alter of Australia’s needs’
(Melville, 1935, p. 83).

Among more recent commentators, Boris Schedvin and Neville Cain have made
independent judgements on more than one occasion about the nature of Melville’s
economic advice. Both seem to agree with Giblin that Melville was perhaps – with the
possible exception of Shann - the most orthodox of Australia’s leading economists.
Writing about the 1930s, Schedvin thought the Melbourne trio of Copland, Giblin and
Dyason were decidedly less conservative than Melville, who ‘had not travelled nearly as
far as those in Melbourne, and tended to emphasize the practical difficulties’ (Schedvin,
1970, p. 223). Writing twenty years later, however, he claimed that Melville’s thinking
had undergone a transformation by the outbreak of the second world war: ‘Like so many
others of his generation’, Schedvin asserts, ‘the experience of international economic
disruption in the 1930s moderated his economic orthodoxy and by the war years he was
unashamedly welfarist and receptive to arguments in favour of monetary and fiscal
expansion as a way of promoting stability’ (Schedvin, 1992, p. 98).

Cain, in his numerous papers on Australian policy advice during the depression
and recovery of the 1930s, contrasted the liberal Melbourne economists with the
conservative, even reactionary stance, adopted by Melville. Thus he has written that
Melville was ‘the most coherent of the opponents of fiscal and monetary activism’ (Cain,
1988b, p. 2); the ‘most vehement and articulate of the antagonists of fiscal and monetary action to eliminate unemployment’ (Cain, 1988b, p. 8); ‘was throughout extremely conservative in relation to public works, deficits and the floating debt’ (Cain, 1988a, p.3); and ‘remained consistently monetarist’, pursuing his ‘trenchant orthodox stance’ (Cain, 1982, p.33, fn. 20). In contrast to Schedvin, Cain argues that Melville became even more conservative or orthodox as the 1930s progressed. Commenting on an article Melville published in the Australian Quarterly in December 1930 (Cain, 1987, p.9), Cain believes that: ‘Where once he had paid lip-service to the monetary reformers’ [ie. the Melbourne economists] ideal of price stability, while stressing as decisive the practical and political difficulties of implementing it, now he spoke out more positively in favour of deflation, the discomforts of which had been ‘greatly exaggerated by alarmists’. Moreover, ‘Whereas [Melville], in the early thirties had (and after some reluctance) come around to a managed exchange rate, by early 1934 he had reverted to a preference for exchange stability’ (Cain, 1988a, p.3).

**Economic adviser during the depression**

Contrary to these views, Melville’s interpretation of the causes of the depression, and the policy position he adopted during the depression and recovery, were remarkably consistent. In the case of Australia, the depression was the result of a combination of internal and external influences. The nation had borrowed extravagantly throughout the 1920s, much of the borrowed capital having being spent by governments on public works of an unproductive nature, particularly on rural development and infrastructure. The servicing of external debt had become unsustainable by the late 1920s, while prices for Australia’s major export commodities had declined precipitately. Melville believed that Australia would have experienced a sharp economic downturn for these reasons alone. Indeed, his adopted state of South Australia had commenced to experience economic hardship as early as 1927. Yet Australia’s domestic predicament proved to be minor in comparison to the world crisis which, for Melville, was triggered by the Wall Street crash of October 1929.

This experience of governments borrowing overseas for investment in unproductive public works left Melville with a decidedly jaundiced view of the efficacy of government expenditure as a recovery device. Moreover, he claimed that the Australian electorate had come to the same view, refusing to endorse any government which dared to bring to an election a program of stimulatory measures based on government spending. The experience of the inflations in central and eastern Europe after the first world war, and the failure of Britain’s decision to return to gold at the prewar parity in 1925, were other factors which led Melville to argue against dramatic policy measures, such as E. G. Theodore’s fiduciary plan and J. T. Lang’s efforts to default on the foreign debt.

For Melville, the kernel of the problem to be dealt with in the early 1930s was how to translate the loss of real income, occasioned by the fall in export prices and the curtailment of foreign investment, to domestic spending with the minimum disruption. Of course it was possible to solve the problem by allowing the chips to fall where they might. But Melville believed that economists had a responsibility to find more politically and socially acceptable methods of coping with the depression. In his own policy advice, he invariably focused on three issues. First, was the need to stabilize public finance by bringing state and commonwealth budgets back into balance; this was essential for the restoration of confidence and the reduction of import demands. Second, he advocated cuts in domestic costs; this did not amount simply to wage cuts, but a reduction of all incomes including those deriving from the ownership of capital. Third, he believed that there was little chance of restoring prosperity without a recovery of prices, both
international and domestic; it was on this basis that Melville was a strong supporter of exchange rate flexibility and spokesperson on behalf of international attempts to reflate economic activity (Melville, 1930; NLA, n/d, p.61).

He pursued this approach from his chair at Adelaide, as Economic Adviser to the Commonwealth Bank, and as a member of the Copland and Wallace Bruce Committees. He was emphatic that Australia could not adopt a unilateral economic policy in the face of the massive loss of international income. The preservation of international and domestic confidence - especially the former - depended on restoring balance to government budgets. Excessive public works in the past had compounded Australia's difficulties and any further expansion would simply lead to a loss of confidence. Still, while there was no question but that government outlays had to be reduced, Melville was realistic enough to understand that deficits could not be expunged immediately and that borrowing from the banking system by the issue of Treasury bills would have to be maintained for some time. He was never faint-hearted about the necessity of wage cuts, continuing to advocate them throughout the 1930s as a stabilization device.

But perhaps his most persistent policy recommendation related to the exchange rate. While he continued to see merit in the preservation of exchange stability in normal circumstances, he was outspoken about the need to adjust the exchange rate when fundamental alterations in the external accounts had taken place. Together with Copland and Shann, Melville was able to convince Davidson of the Bank of New South Wales of the need to devalue the £A in January 1931 and he was completely opposed to the Chairman of the Commonwealth Bank, Sir Robert Gibson's, determination to restore parity with sterling. As a member of the Wallace Bruce Committee in 1932 he supported the committee's recommendation for a further devaluation (from £A125 to £A140=£stg100) and additional wage cuts, believing they would strengthen the balance of payments and provide scope for possible monetary and fiscal expansion. Keynes, on the other hand, publicly opposed these proposals, though it is unclear whether he had properly understood their essence. Melville has never concealed his disappointment that Keynes's negative attitude to a further devaluation (though not to additional expenditure on public works), served to stiffen the resolve of the Lyons government not to boost the economy (Cornish, 1993, p.12).

In short, and contrary to some opinions expressed earlier, it would appear simplistic to brand Melville as a deflationist. In the context of Australia's economic circumstances, and given the lack of any internationally coordinated approach to recovery, he proposed a coherent combination of measures to deal with the economic crisis as it affected Australia. Some of them, to be sure, if analysed singularly and in a strictly partial sense, may be said to have been deflationary, but others, such as financing government expenditure by the issue of Treasury bills and - above all - his uncompromising advocacy of devaluation, were decidedly expansionary in nature. But it is true that, as the recovery process evolved through the mid-1930s, Melville's predominant advice to the Commonwealth Bank and to the government was that these special expansionary measures should be curtailed so as to ensure that the recovery process did not turn into an uncontrollable boom and, in due course, into another depression. Hence the strong position he took on the funding of Treasury bills and the stabilization of the exchange rate, even canvassing in his Joseph Fisher Lecture at the University of Adelaide in 1934 the possibility of returning to a gold standard, though he did not actually propose this himself as a policy objective (Melville, 1934).

As to whether the recovery process was the result of discretionary policy measures or the automatic response to market forces, Melville has been an implacable opponent of the view adopted by Schedvin in his book Australia and the Great Depression. There it is argued that recovery in Australia owed little to positive decisions
by government authorities. Some policies, such as the absurdly high tariffs introduced as an anti-deflationary measure in 1930 - were antipathetic to what was necessary for recovery, while others - such as exchange depreciation - were the result simply of market pressures rather than positive policy responses. Melville has taken the contrary view, pointing out that there were alternative policy options available. It is his view that the authorities:

could have drifted on with unbalanced budgets financed by bank credit, as they showed every indication of doing. This would have aggravated the flight of capital and led to external default, but it was a possible course of action. It was prevented, not by market forces, but by the Senate and Gibson. Instead of drifting into default they could have defaulted deliberately as Lang urged them to do, and they could have followed external default by internal default. The devaluation of the currency could have been prevented by exchange control and the government was in fact giving serious consideration to this possibility before the devaluation occurred. There was no compulsion on arbitration courts to allow wages to follow the fall in prices (Melville, 1971, p. 145).

In sum, according to Melville, 'the measures taken on wages, on the exchange rate, on budgets were the result of deliberate policy and were decisive in preventing the flight of capital and external default. What effect default would have had on the nature of the contraction or the speed of recovery is open to argument, but it is not clear that it would have been "comparatively unimportant"'. Of Schedvin's argument that recovery was largely due to the expansion of manufacturing, a development which he argued was not consciously planned, Melville has responded by saying that: 'It seems highly implausible that the increased tariff protection, devaluation, reduction in money wages, expansion in the credit base and the fall in interest rates did not play a major part in the expansion of manufactures. To this could be added the fact that a substantial part of the manufacturing expansion was financed by an inflow of capital, an inflow that might not have occurred had there been external default.' This, in short, is a powerful response to a line of argument which appears to have become deeply embedded in some recent accounts of economic policy-making in Australia during the depression of the 1930s.

Objectives of economic policy

Melville's views on the ends to which economic policy should be directed were clarified in his Statement submitted to the Royal Commission on Monetary and Banking Systems in 1936 and in his personal evidence presented before the Commission (Melville, 1936). Though he was referring specifically to monetary policy, the policy objectives which he enunciated were meant to apply generally to macroeconomic policy. Such policy, he argued, should seek to achieve three things: (a) Stability in general business activity. (b) A maximum output of final goods and services. (c) As full employment as is practicable.' Price stability and exchange rate stability were clearly regarded by him as means to these ends, not as ends in themselves. He acknowledged that circumstances might arise when the three objectives were 'irreconcilable'. In that case, the costs and benefits of seeking one objective would have to be set against the costs and benefits of seeking the others. Ideally, the authorities should draw upon all the available policy instruments - including the exchange rate, credit controls, and interest rates - to ensure that optimum choices were made between the three objectives.

Yet he doubted in practice whether optimum choices could ever be made, given the complexity of the task. For pressures from government, the press, sectional groups and others would serve to complicate the task. So too would the multiplicity of institutions which influence decisions in matters of economic policy, among them the central bank, the trading banks, other financial intermediaries, and the Loan Council. The
timing of policy was yet another element of complexity, for a 'well-devised complex plan badly timed might be more mischievous than a crude, but simple, plan well timed.'

Because of the intrinsic complexity of the economic policy process, there was a need to try to simplify it by adopting simple rules. Thus it was necessary, Melville argued, to 'select one factor in the economy and attempt to fix it, at the same time endeavouring, as far as possible, to make every other factor in the economy adapt itself to the fixed factor.' But which element should be selected? There were several possible candidates which might be considered for the pivotal role around which the economy could be made to revolve: the size of the credit base; the level of bank deposits; the exchange rate in terms of another currency or commodity, such as gold or silver; wages; or the prices of a regimen of commodities and services. These various fixed elements were likely to be incompatible with one another; a particular size of the credit base, for instance, was likely to conflict with a fixed exchange rate; and a fixed exchange rate was likely to conflict with a particular price level. Nor would the choice of an anchor avoid the necessity for discretionary intervention by the authorities. 'Having regard to the necessity for Australia to trade on friendly terms with other countries, her need for overseas capital, and the convenience of traders and financiers', Melville argued that 'it seems best in her case to fix the exchange rate and adapt the economy to that fixed rate.'

In these circumstances, domestic policy would be guided in large measure by the level of foreign exchange holdings; monetary policy would be eased when the reserves rose, and tightened when the reserves fell. This would not mean that policy settings should be altered immediately as the level of the reserves changed. 'Were ample funds available', he said, 'we should watch the progress of a fall, or rise, for some time, and test it by examining other statistics in order to decide whether it was only a temporary movement, or whether we must expect it to continue indefinitely. In the former case no action need be taken to adapt the internal economy to the altered conditions. We should wait until London funds were in due course restored to their original level. In the second case there would need to be a contraction, or expansion, of credit - gentle at first, but applied with increasing severity until the internal economy had been suitably modified.' Given Melville's desire for a relatively stable exchange rate, the rise or fall in the foreign reserves - by placing pressure on the exchange rate - would signal the need for an expansion or contraction of monetary policy. But he admitted that the nexus between the foreign reserves and domestic monetary expansion and contraction could not be left simply to automatic processes or to the decisions of the trading banks. For there would inevitably be times when the expansion and contraction of credit overshot the mark 'unless there is a Central Bank waiting, properly equipped, to guide the economy as smoothly as possible.'

While Melville recommended that the exchange rate should provide the anchor - or compass, to use his word - around which monetary and other policy settings should be adjusted or guided, this did not mean that he was advocating a fixed rate of exchange in all circumstances. On the contrary, there would no doubt occur from time to time 'exceptional circumstances' when the exchange rate should be altered. 'A sudden and decisive change in the competitive capacity of our main export industries, together with a cessation in the flow of capital', he said, 'might ... impose a strain on the exchange rate which could not be met without deflationary measures ... In such circumstances the exchange rate would have to be altered ... This, however, might not be a disadvantage, since severe deflation is socially undesirable.' In principle he was, and remains, an advocate of short-term stability of the exchange rate, while continuing to concede that particular circumstances might necessitate alterations to the rate. In other words, he endorsed what came to be known as the adjustable peg system, and hence he supported the Bretton Woods system as a matter of principle. Certainly he agreed with the floating
of the £A in 1930/31 as a short-term measure until the £A could find its appropriate level, and while he has declared in recent times that it would be inappropriate for the $A to be fixed when most of the world’s currencies are floating, he has always doubted the efficacy of floating exchange rates. For, as he wrote in his Statement to the Royal Commission, ‘such a policy can lead only to successive depreciations of the currency, and ultimately to disorganisation of the economy.’

Though ‘full employment’ was his third policy objective, he was somewhat ambivalent as to whether it should be regarded strictly as an aim of policy or an outcome of achieving the other objectives. Possibly this is why he nominated it as the third of his three recommended objectives of monetary policy. He believed that the chances of achieving full employment would be enhanced if the other objectives were achieved. For policy aimed at stabilising the level of ‘business activity’, if successful, would serve to retain high levels of employment, as would the objective of maximising the output of goods and services. There were also likely to be problems attaching to full employment as an objective of policy in its own right. For example, conflicts might well arise between ‘full employment’ and the ‘economical use of resources’, thereby rendering it difficult to achieve the second policy objective – the ‘maximum output of goods and services’. Moreover, the desire to achieve ‘full employment’ might lead to excessive monetary growth, leading ‘to a spiral of inflation from which a nation could extricate itself only at the cost of great dislocation and heavy unemployment’. It was for these reasons that Melville chose his words carefully: ‘as full employment as practicable’ should be pursued as a policy objective, not simply ‘full employment’. Be all this as it may, during and immediately after the second world war, Melville became more relaxed about full employment as an objective of macroeconomic policy, though he was not altogether sanguine about the possibility of it being achieved without certain disagreeable consequences.

While Melville regarded both price and exchange rate stability as the means to successful policy outcomes, there was always the possibility of a conflict arising between the maintenance of price stability and the preservation of exchange rate stability. Of course, the problem might be avoided in theory by permitting some flexibility in the exchange rate. But this was not as simple in practice as it might seem to be in theory. Bearing in mind his opposition to floating exchange rates – in contrast to adjustable rates - he was unable to see how a suitable rate of exchange might be calculated for the purpose of maintaining price stability. Even discretionary adjustments to exchange rates aimed at accommodating domestic price instability could create ‘anarchy’ in international trade. Like Friedrich Hayek, he was concerned that price indexes were simply aggregates, artificial constructs which purported to measure general fluctuations in prices, rather than movements in the prices of particular goods and services. Alterations to monetary policy according to changes in a price index were likely to distort relative price movements, especially between export and import prices on the one hand, and prices for non-tradeable goods and services on the other. But it was not only the interplay between exchange rates and prices which caused concern in his mind. For international movements of capital might also play havoc with policies aimed at securing price stability. Capital inflows, for example, might put pressure on domestic price levels, signalling the need for restrictive monetary policy. Such policy, however, would raise interest rates, encouraging yet additional inflows of capital.

**Demand management and full employment policy**

Melville believes that, by the end of the 1930s, Australian economists for the most part had accepted the conceptual framework of Keynes’s *General Theory* and were advocating the introduction of policies consonant with that framework (Cornish, 1993, p.
19). From the late 1930s to the late 1940s Melville himself played a conspicuous role in the advocacy of such policies. As one of the three original members of the Financial and Economic Committee, he was instrumental in devising an approach to the financing of the war which followed much the same lines which Keynes himself was proposing for Britain. Since, at the outbreak of war, unemployment in Australia was still about 9%, the F and E Committee recommended that the government could safely expand expenditure on defence and related policies without the need for commensurate rises in taxation. But once the slack was taken up, further increases in expenditure would have to be funded from taxation, there being no desire to repeat the borrowing and inflationary policies which had been adopted during the first world war. This demand management approach to financing the war was successfully implemented until excess capacity in the economy began to evaporate, breaking down as it did when the 1941 budget, which included deferred tax credits, led to the defeat of the Fadden Government. This paved the way for the first Curtin Government, with its emphasis on direct controls rather than indirect mechanisms of the kind advocated by Keynes.

Melville's energies then switched to problems likely to be encountered by Australia as a result of pursuing a full employment policy after the war. He was not a principal author of the white paper, *Full Employment in Australia*, published in 1945, though he was invited to comment on its various drafts (Cornish, 1981). Instead, he was called upon to play a central role in Australia's so-called international 'Keynesian crusade', of which the conference at Bretton Woods was a significant milestone. In three important papers published between 1942 and 1946, Melville analysed the prospects for the postwar economy, focusing on the question of whether full employment would be possible (Melville, 1944; 1945; 1946a). In these publications he addressed himself both to theoretical issues and to practical problems. He made it plain that, while he supported the emphasis which was being placed in Australia on full employment and the management of aggregate demand, there were several problems which would have to be resolved before success could be assured.

Like many economists, Melville expected the postwar economy to proceed through two phases (Melville, 1946a, p. 21). To begin with there would be an immediate boom as repressed demand was released with the relaxation of wartime controls. Here, excess demand would be experienced, fuelled as it would be by the swollen liquid balances of the banking system and compounded by shortages occasioned by the under-production of the 1930s and the diversion of resources to the war effort during the 1940s. International demands would also be buoyant due to the requirements of reconstruction, while international shortages would continue to be experienced for some years. But these imbalances favouring excess demand would be replaced, perhaps within three years, by deflationary forces as aggregate supplies began to exceed demands. Keynes had actually gone a step further than Melville in adopting a three-phase approach to the postwar economy. His first two phases were somewhat similar to Melville's. But, assuming that deflationary forces could be contained in some measure by demand management, the perpetuation of more-or-less full employment would lead eventually to a deficiency of investment opportunities - the marginal efficiency of capital would tend to zero - and mature capitalist economies would stagnate unless governments acted to boost their expenditure, or interest rates were driven down, or incomes were redistributed in a manner calculated to stimulate the marginal propensity to consume, or some combination of these three strategies.

Melville accepted the view endorsed by most economists that employment would be the predominant issue of economic policy after the war. But he identified a fundamental difference between a 'high employment' policy, which had been the term adopted in the British Government's white paper of 1944, and a 'full employment'
policy, which had been promoted in the Australian Government's white paper of 1945. In fact he expressed some scepticism about the Australian Government's aim to maintain unfilled vacancies in excess of the numbers registered as unemployed. He thought the government should aim at an unemployment rate of no less than 3%, the rate recommended in Beveridge's book, *Full Employment in Free Society*, given that there would always be some frictional and structural unemployment. Yet he now agreed that the focus of economic policy should be the maintenance of employment, for unemployment represented not only a waste of potentially productive resources, but its occurrence would pose a threat to national and international security.

Of the policy instruments available to governments for the purpose of maintaining employment, Melville acknowledged the possibility that monetary policy would be too weak in exceptional circumstances to arrest powerful deflationary forces (Melville, 1942, p. 147). Instead, fiscal policies, centred for the most part on the expansion of government expenditure in the form of public works, might be required to combat unemployment. He was adamant, however, that macro (or 'global') policies would be insufficient on their own to deal with the unemployment problem in the postwar era. Particular policies would be necessary to deter unemployment associated with particular regions and industries. Furthermore, administrative and political difficulties were likely to attend the implementation of an unemployment policy centred on public works. Considerable planning of such activities would be required long before new expenditure programs could be introduced. Nor could public works be turned off and on simply according to the dictates of the trade cycle, since it was inevitable that governments would succumb to pressures exerted by sectional groups. As well, he wondered whether adequate information would be available to governments for the purpose of evaluating whether, or when, ameliorative measures should be introduced. Certainly there was a need to collect more comprehensive sets of economic statistics. There was also the strong possibility that a full employment economy would give rise both to a permanent state of inflation and to inefficiencies in the utilisation of resources, as sellers of goods and services, and of labour, acted to exploit their market strength in conditions of buoyant demand.

In addition to these administrative and political problems, Melville took the opportunity on many occasions to highlight the problems which would beset a small, externally dependent economy that sought independently to augment domestic demand for the purpose of combating unemployment, especially at a time when the international economy was exhibiting acute instability (Melville, 1945, *passim*; 1942, p. 154; 1946b, p. 10, 22). He was by no means convinced that the new international institutions, such as the International Monetary Fund, would be capable of supporting countries like Australia in these circumstances.

Here there existed a major difference of opinion between Melville and Keynes that surfaced before, during and after the Bretton Woods conference. Melville adhered faithfully to the Australian Government's position that, without a commitment by the major economic powers to full employment in their own economies - the United States in particular - the IMF would lack the resources and independence to support Australia at times of international distress. Keynes was inclined to take the contrary view, regarding the new international institutions and devices as sufficient to deal with the problems foreshadowed by Australia. For Melville, Keynes's argument had been weakened appreciably by the failure of the British Government to prevail over that of the United States on the issue of Keynes's Clearing Union versus White's Stabilization Fund; had the former won the day, Melville's position might have been different. As it was, he backed the Australian Government's so-called 'Full Employment (or Keynesian) Crusade', the purpose of which was to have incorporated in the charters of the new
international institutions - including the charter of the United Nations, the Bretton Woods Agreement, and the contemplated international trade agreement - a commitment to the maintenance of full employment. Melville was not himself the architect of this crusade, nor was he favourably disposed toward the stridency with which some others had endowed it. But even so, he believed it to be both theoretically and practically sound, though he harboured strong doubts as to whether it would be ever endorsed by the United States. Whatever the fate of the ‘Full Employment Approach’, Melville was convinced that the United States was the key to whether full employment would be preserved in the postwar world, for it was at once the world’s major production unit and potentially the world’s most unstable economy.

At international conferences in London and at Atlantic City leading up to the United Nations’ Monetary and Financial Conference at Bretton Woods, and at Bretton Woods itself, Melville was highly critical of some aspects of what was proposed for the International Monetary Fund. For example, he believed that the resources available to the Fund would be too small to meet the demands for liquidity at times of global depression; that Australia’s drawing rights would be altogether inadequate to meet its demands at times when severe balance of payments problems were threatening; that too many obstacles were being placed in the way of countries seeking the IMF’s permission to make adjustments to exchange rates; and, above all, that a firm pledge was required of members to maintain full employment in their domestic economies.

But it was not only what was being proposed for the Fund that drew Melville’s ire. For he was by no means convinced that proposals to reintroduce free trade would necessarily guarantee full employment in Australia. Though he always took the view that some freeing of world trade, by removing excessively high tariffs and restrictions, would be beneficial, he was unable to support the view that full employment would be best served simply by dismantling barriers to international trade. Melville’s attitude, expressed in the paper, ‘The Post-War Economy’, read before the Summer School of the Australian Institute of Political Science in 1945, was that the benefits of any reallocation of resources brought about as a result of the relaxation of trade barriers would be meagre in comparison to the waste of resources created by the unemployment likely to result from increased exposure to the uncertainties of international trade (Melville, 1945, pp.2-4). The main point of the paper was the assertion that the assumptions underlying the classical theory of international trade did not square with recent experience – the assumption of full employment could scarcely be said to have existed in recent times, if at all; factors of production were not perfectly mobile within countries or between countries; perfect competition had never prevailed; and competing nations in world trade were never similar in terms of size or bargaining power; nor were they at the same stage of economic development. While he admitted that ‘we must not underestimate the importance of international trade and freedom to export’, he concluded that ‘it is clear that countries, particularly small or under-developed countries, would be foolhardy to throw away their right to make use of protectionist devices to maintain employment, to give them time to adapt immobile factors of production to sudden developments abroad, and to safeguard their local industries from the power of external firms entrenched within large domestic markets.’

Melville later conceded that things had turned out much better since the war than he had expected at the time the new international economic and financial arrangements were conceived. Of course, he had never been an opponent of Keynes’s plans in general for the postwar era, based as they were on the creation of an international monetary institution dedicated to providing short-term liquidity to nations facing acute trade and payments difficulties, an international bank responsible for providing long-term capital for reconstruction and development, and a code of practice for the promotion of freer
international trade. Melville was committed to these ends as matters of principle. What concerned him most in the early 1940s were the details, many of which he thought were not altogether in Australia's best interests. As the nation's principal negotiator in matters of international finance, he considered it to be his responsibility to secure outcomes which would be in his country's best interests.

The role of economist as adviser and economic method

The valedictory paragraph of the *General Theory* is often invoked to support the view that Keynes believed the power of economic ideas to be supreme in determining the adoption of economic policy. However, a more considered reading of the paragraph, together with further analysis of what Keynes said on other occasions, leads to the conclusion that he clearly understood the salience of political factors for the successful translation of economic ideas into policy practice. In his much-quoted letter of 1 January 1935 to George Bernard Shaw, Keynes wrote that ideas had to be 'duly assimilated and mixed with politics and feelings and passions' (Keynes, 1935, p.493). Melville, like Keynes, had long experience as an economic adviser to government – some fifty years, beginning when Bruce was Prime Minister and ending with the prime ministership of E. G. Whitlam - experiencing as he did at first hand the practical nature of the policy-making process. To Melville, it was simply naïve to think that policy-making involved merely the application to government of the latest idea from academe. For, as he declared: 'On matters that so closely affect the welfare of people, Governments will not leave to technical experts decisions on matters so vital as the availability of credit, the size and use of foreign reserves and the rate of exchange' (Melville, 1970, p. 356). Policy meant politics, and politics was the art of the possible. To be sure, advisers had a responsibility to draw policy-makers' attention to the consequences of adopting different options. But they also had a responsibility to propose realistic policies for application in the contemporary world.

On the issue of economic methodology, Melville - like Keynes - possessed strong views about the deficiencies of econometrics. Both men were able to appreciate the possible benefits of some aspects of econometrical work. Keynes, after all, had served as the President of the Econometrics Society. Melville, for his part, encouraged the development of econometric analysis, including macroeconomic model-building, in the Economic Department of the Commonwealth Bank when he was Economic Adviser. Like Keynes, however, Melville was 'not altogether optimistic that the results will be as important as many people seem to think.' For one thing, he was always sensitive to the quality of available data, often lamenting the deficiency of suitable economic statistics. But more especially, whenever he was asked for his opinion on the usefulness of econometrics, he highlighted the difficulty of calculating suitable coefficients, 'for if you take too long a period of years in order to calculate the coefficients for your econometric equations you reach back into a period of time where the circumstances are different from what they are today, they're no longer relevant; therefore if you base your calculations on too long a period you are basing it on irrelevant considerations'. On the other hand, if the analysis were based on a short interval during which conditions remained fairly stable, 'you just haven’t got enough experience to justify the coefficients that you calculate.’ He could not be persuaded that the problem might be overcome by breaking up a small number of years into quarters, for 'the extent of the correlation between the different quarters is so great that you don't really get so much more information from your ... quarterly figures.' Hence he concluded that: 'This is the sort of thing that makes me doubt as to whether we can ever calculate the coefficients or the econometric equations with sufficient accuracy for this method really to give us very
reliable results. I think we still have to go on hunches to a large extent' (NL A, n/d, pp. 152-4; Cornish, 1993, p. 35).

In sum, Melville regarded the assumption, often implied in econometrics, that human behaviour was relatively constant to be highly questionable. Here he was not concerned about assuming that individuals reacted in exactly the same way to the same set of circumstances, but rather to the assumption that, taking a large number of people, the reaction of the average person remained the same. This, he thought, was ‘very dubious’. For he took the view that ‘attitudes of mind change. I’m quite sure that people would not respond today to an increase in the supply of money in anything like the same way they would have in 1929 or 1930’ (NL A, n/d, p. 153). But while he believed that ‘observation generally will show you that people do respond in different ways at different times to the same exposure to circumstances’, he was prepared to keep an open mind. If, in fact, there turned out to be greater constancy in behaviour than he was ready to concede, he was certainly prepared to admit that econometrics ‘will give us wonderfully useful results.’ It was largely because of this possibility that he was always willing to promote further work which drew upon this methodology.

Melville was critical, too, of the overuse of mathematics in economic analysis. Again he had much in common with Keynes, and also with Alfred Marshall. Like them his principal training was in mathematics. Keynes and Marshall had both been wranglers at Cambridge; Melville had topped the state of New South Wales in mathematics for the leaving certificate, and had majored in mathematics in his economics degree. His considerable misgivings about the application of mathematics in economics came therefore from an insider, rather than from someone whose lack of training in mathematics might have led to a vested interest in opposing the excessive use of mathematics in contemporary economics. Much of his criticism rested on the oversimplifications that were required: ‘You can’t really get all the complexity of reality into your assumptions. But people who follow the mathematical method unfortunately tend to believe in their results’ (Cornish, 1993, p. 35). Certainly mathematics could be useful in cutting through the complexities of the real world, but the process of simplification often went too far. He thought the approach of Marshall and J. R. Hicks had much to commend it. Marshall, in particular, ‘did his mathematics and then he tried to describe things without mathematics, using mathematics as background for what he wanted to say’, relegating the mathematics to footnotes and appendices.

In 1946 Melville participated in a symposium at the Adelaide meeting of ANZAAS, later publishing his contribution in the Economic Record under the title ‘Where Are We Going?’ (Melville, 1946b). His theme was that, whereas the physical sciences deal in objective facts which lead to the establishment of immutable laws or principles, the social sciences in contrast have to deal with circumstances that are likely to change as ideas, institutions, relationships between people, and human behaviour vary. These changes sometimes can occur spontaneously, or as a result of the natural sciences altering the environment in which humans live. Accordingly, the laws and principles of the social sciences must be varied in response to these changes. Taking economics as his example, Melville argued that economic theory and its application had to adapt to changes in human behaviour. Yet it was often the case that adjustments to economic theory lagged well behind fundamental economic and social changes. Even more to the point, decision-makers - politicians and businessmen - were usually slow to absorb new ideas, applying to current events theories which were altogether inappropriate. He doubted whether the appointment of economic advisers to policy-makers, such as politicians, would provide a satisfactory remedy since they themselves scarcely had the time to keep abreast of the latest ideas. It was not surprising, therefore, that such persons usually formulated plans designed to meet the previous crisis, rather than the current one.
Institutional change was apt to lag even further behind the generation of new ideas and their absorption by policy advisers. Hence Melville concluded that ‘we have the theory of social sciences lagging behind events; statesmen and practical men of affairs and their advisers lagging still further behind; and well in the rear the defective and anachronistic institutions and group ideas through which they must seek to give effect to their doubtful social philosophies. All this confusion gives to the ordinary man a sense of frustration’ (Melville, 1946b, p. 196).

This frustration, he thought, could be mitigated to some degree, though he thought that ideas, policies and institutions would always lag behind the progress of the physical sciences. But something might be accomplished all the same. For a start, there was a need for more fundamental research to be undertaken in the universities and elsewhere. Here he advocated something akin to the CSIRO for the social sciences, having perhaps in mind the new national university being planned for Canberra with its school of research in the social sciences (of which Melville was later offered the inaugural directorship). And improvements were necessary in the collection of economic and social statistics, and in their interpretation and analysis. Closer integration between universities and advisers to government might also serve a useful purpose, though Melville thought a problem here might be ‘the personal vanity of administrators and practical economists unwilling to accept guidance from academics’ (Melville, 1946b, p. 197). Even so, he thought a ‘constant interchange of personnel between advisers and the ranks of research workers at universities would be healthy and provide refreshment and inspiration for both’ (Melville, 1946b, p. 197). But it was in regard to the adaptation of institutions and group ideas to the needs of the atomic age that he felt most despondent about, for he knew of no solution to such things as ‘the dislike of foreigners, of people with different coloured skins or with different ways of life or different beliefs; dislike even of such superficial things as differences of accent, of dress and of food’; or how to persuade countries to sacrifice some of their national sovereignty for the purpose of achieving international objectives (Melville, 1946b, p. 197).

Contributions to economic theory

From the late 1930s to the early 1950s Melville published several papers on theoretical subjects. Most, but not all, of them were influenced by Keynes’s writing, taking as they did the General Theory as their starting point, or rather as the point of departure since their principal aim was often to extend the work of Keynes. Often Melville’s object was to criticise the static and equilibrium nature of Keynes’s work and that of his predecessors. Sometimes the aim was to expose deficiencies in Keynes’s reasoning. Four aspects of this work will be covered here: the rate of interest, including, above all, Keynes’s conclusion that the rate of interest will tend toward zero assuming the maintenance of full employment, low rates of population growth, and freedom from war; the neglect of expectations and dynamics in economic analysis; the extension of Keynes’s formulation of the consumption function to embrace influences in addition to income, such as wealth; and welfare economics, a subject seemingly of little interest to Keynes but one to which Melville expressed some interest.

The rate of interest

In several articles written in the late 1930s-early 1940s, Melville directed his attention to the rate of interest and, more specifically, to aspects of Keynes’s treatment of the subject in the General Theory. Melville was particularly critical both of Keynes’s conclusion that the rate of interest in mature economies would tend to zero, perhaps within one or two generations, and of his monetary theory of the determination of the rate of interest. Thus
in 1937, Melville said that he found 'unconvincing' Keynes's 'guess' that 'a properly run community with technical resources, of which the population is not increasing rapidly, ought to be able to bring down the marginal efficiency of capital in equilibrium approximately to zero within a single generation' (Melville 1937a, p.238).

His scepticism was based, in large part, on the massive increases in the demand for capital goods which would occur as a result of a zero rate of interest. For example, on a mortgage of £5000, a rate of interest of 1% would cost only £50 a year. 'Such a low rate of interest', Melville said:

would let loose a flood of demand for costly (not necessarily large) houses and expensive offices and public buildings which would soon exhaust the available supply of labour and building materials and drive up their prices. It would also make the annual charges so low that Governments would provide the public with many works, buildings and amenities now considered impossible. The demand for railways, tramways, underground and overhead transport, air services, irrigation works, libraries, museums, memorials, collections of art, pasture improvements, dams and schemes of water conservation would exceed all possible means of providing them. At zero rates of interest all sorts of schemes now apparently fantastic, would become practicable. We might find it worth while even to dig a canal to Lake Eyre from Port Augusta and to bring mineral baths in pipes to Sydney from Moree! (Melville, 1937a, p. 238).

In short, 'at zero rates of interest there would be both limitless opportunities for profitable investment, and limitless borrowing for consumption' (Melville, 1939b, p. 97).

For Melville, the most striking aspect of long-term interest rates throughout the nineteenth century until 1914 was their remarkable stability, especially given the considerable demands for capital throughout the period as a consequence of technological developments, population growth, and the opening up of the regions of recent settlement. During this period, rates of interest generally remained between 2½ and 3½% per annum, leading Melville to conclude that the forces preserving rates within these limits are very powerful. For one thing, as rates of interest fell below 2½%, the demand for durable goods, such as houses, would grow rapidly. At the same time it would provide an incentive for businessmen and manufacturers to pay more for buildings and machinery if, by doing so, they would be able to reduce their outlays for depreciation. On the other hand, as the demand for investment rose as interest rates fell, the supply of saving would tend to diminish. This was because, following Keynes's analysis of the propensity to save, as incomes fell so would the marginal propensity to save. This development would be compounded by the fact that, as interest rates fell, so the income generated from interest would also fall. Hence Melville concluded that it 'is not surprising, therefore, that a fall in interest rates below 2½% is soon checked'.

This conclusion, that a zero rate of interest was impossible - on the grounds that if such an interest rate were to prevail, there would be an unlimited demand for borrowing, both for consumption and investment purposes - was challenged in the Economic Record by W. B. Reddaway and R. I. Downing (Reddaway and Downing, 1939). Their argument was that the demand for loans at very low rates of interest would be checked in some measure by the premium payable for risk. Such a premium demanded by lenders would serve to limit the demand for investment. Melville, however, disputed this conclusion, arguing as he did that, as societies grow wealthier, and interest charges become less burdensome as a consequence, the risk of default on loans would decline. As he put it: 'In a society where there were no scarce goods, there would be no risk of default.'

About the determinants of the rate of interest, Melville claimed that Keynes's approach, as expressed in the General Theory, was altogether too narrow, based as it was on the interaction of the demand for, and supply of, money. Instead, Melville contended
that interest should be regarded as the income from investment, or the payment to capital in its widest sense. Rather than being determined simply by monetary factors, he argued that consideration should be given to a much broader range of influences, of which the following six – all real factors - seemed to him to be of particular importance: the level of real incomes; the distribution of income; the propensity to save; investment opportunities; price movements; and the degree of uncertainty. Following a review of possible future trends in each of these variables, Melville concluded, albeit with 'great diffidence', that 'in the absence of a major war, the forces making for lower yields of interest in terms of commodities are, on the whole, more powerful than those making for higher yields' (Melville, 1937, p. 242).

Keynes had come to a similar conclusion (Keynes, 1936, pp. 374-7). And like Keynes, Melville stressed that slower population growth and less capital intensive technology (compared with the nineteenth century) would tend to drive interest rates lower throughout the twentieth century, though he believed that inflationary price movements, were they to occur, would act to raise nominal rates of interest. Even so, he remained convinced that interest rates could not fall to zero. Having abandoned that idea, it still left open the question of what would be an appropriate rate of interest. The test, according to Melville, was whether the prevailing rate was deflationary or inflationary, for if 'we abandon the idea that a zero rate of interest is possible, and agree that, as interest rates fall, investment will expand without limit and savings dwindle and vanish, then it follows that there will be some rate of interest above zero such that, if interest rates are higher, their long-term effect will be deflationary, and if they are lower, their long-term effects will be inflationary' (Melville, 1946a, p.15).

As a policy instrument, Melville was not averse to drawing upon the rate of interest as a tool for the purpose of demand management. Nor, for that matter, was Keynes himself. But Melville certainly supported Keynes's desire to rely upon fiscal policy, rather than monetary policy, as a device for transferring resources from private use to the war effort. Thus in an address to the Economic Society in September 1939, Melville held that in 'ordinary times the function of a rate of interest is so to guide the use of available resources that they may most economically meet the wants of the people' (Melville, 1939d, p. 1). But when 'we are at war', he said, 'our aim is different. We are concerned primarily with winning the war and not with finding the most economical way of using resources.' For Melville, the disadvantages of raising the rate of interest to choke off private spending during a time of war were that high rates of interest would at once augment government debt and lower morale as income from interest payments distorted the distribution of income in favour of the rich. Instead of high rates of interest, Melville much preferred high rates of taxation, since the alternative to either higher taxes or higher rates of interest would be the 'authoritarian control of the exchanges, authoritarian control of investment, and ... authoritarian control of prices. That would be the price we would have to pay for a low rate of interest. However, if taxation were made severe enough, such controls would be less necessary' (Melville, 1939d, p. 3). This was precisely Keynes's view, not only with respect to war finance, but to macroeconomic policy in general.

The role of expectations and dynamics

Associated with Melville's attempts to rework aspects of Keynes's new approach to the determination of interest rates was his growing interest in the application of dynamics to economics. This interest seems to have predated the publication in 1939 of Harrod's important paper, 'An Essay in Dynamic Theory', published in the Economic Journal (Harrod, 1939). Like Harrod, Melville's interest seems to have been sparked by the emphasis which Keynes had placed on expectations and uncertainty at key points of his
analysis in the *General Theory*. Melville understood, of course, that dynamics - embracing the incorporation of expectations - had not been totally ignored in the development of economic theory before Keynes. But he did emphasize the fact that, until the 1930s, the overriding preoccupation of economists had been with issues of resource allocation expressed in terms of static equilibrium, and with the economics of stationary states. Melville admitted that ‘Keynes has attempted to break away from the concepts of the “classical” economists and has given us a brilliant start in formulating a theory suitable for a dynamic world.’ Yet, as he proceeded to add, Keynes, too, was:

often unable to shake off the earlier mode of thought. Throughout his book ... we can see him struggling to give expression to two conflicting ideas, the one static and the other dynamic. In his discussion of the principle of effective demand, savings and investment, the propensity to consume, the marginal efficiency of capital and the general theory of interest, the dynamic approach is struggling for expression. It bursts out triumphantly in his discussion of expectations and employment. However, Keynes surrenders to the equilibrium viewpoint in formulating his statement of the general theory (Melville, 1939a, p. 2).

According to Melville, there were a number of deficiencies in Keynes’s analysis in the *General Theory* which required special attention. Even in conventional equilibrium analysis – but more so in the case of economies undergoing change – expectations were needed to be incorporated in an explicit way. After all, prices for goods are determined not only by present demand and supply, but also by expectations of future demand and supply. Instability arises essentially because expectations fail to materialise, often because of changes which were unforeseen. ‘By bringing into our equations anticipations of the future’. Melville urged, ‘we obtain a complete solution of the problem of pricing at a moment of time. But we are only a step nearer a solution of the problem of dynamics. What we have to do is to find a method of describing and explaining a sequence of economic events. We need a description which will arrange data so as to reveal the mechanism of economic development’ (Melville, 1939a, pp. 5-6). Both deductive and inductive reasoning was required to achieve this aim. From deduction, hypotheses could be constructed to explain how expansion and contraction can occur; such hypotheses could then be tested on the basis of relevant data to find which of them fitted actual developments more closely.

Melville was far from satisfied with some recent attempts to provide dynamic frameworks in economic analysis. For example, there was the work of Harrod on the trade cycle, following as it did the lead provided by Keynes in the *General Theory*. Here, ‘multipliers’ were assigned to economic variables. Upon the assumption of changes to strategic variables – such as the propensity to save – consequential changes to income, output, and employment were derived. The problem was that this method of analysis explains ‘changes in the level of activity as if they were merely mechanical adaptations of an economy to a change in one or more factors. Human hopes, aspirations, expectations and failings find no place’. In short, Melville claimed that these ‘systems of explanation do not seem to me to touch the real dynamic problems of economics. They are “equilibrium systems” dressed up in new clothes. Indeed, it is usually not contended that the multiplier can do more than explain the cumulative processes of recovery and recession. The turning points are left unexplained.’

To illustrate, Melville referred to the recent attempt by Colin Clark and J. G. Crawford to predict Australia’s national income from assumed multipliers. The results were reasonably accurate for the years 1928/29, 1930/31, 1934/35, 1935/36 and 1936/37. But, according to Melville, the multipliers that Clark and Crawford had selected ‘failed badly for the critical years when we were anxiously scanning the skies for signs of a change.’ Most especially, the assumed multipliers failed to incorporate the pessimistic
mood of 1929/30, or the emergence of optimism in 1931/32 and 1932/33. ‘Thus’, Melville concluded:

mechanical explanations such as those based on the multiplier are likely to be useful in describing and explaining the development of recovery and recession but not to describe or explain the turning points. Colin Clark’s calculations of the national income in England and Australia, by the use of the multiplier seem to confirm this impression. In the critical years Clark finds it necessary to alter the slope or the level of his lines in order to obtain a reasonable correspondence between computed and actual values of national income. These changes in slope or level denote a sudden change in habits and expectations and a failure of the multiplier (Melville, 1939a, p.12).

To be sure, Harrod’s analysis did attempt to build expectations into the causal process; overly optimistic expectations tend to prolong the boom, while excessively pessimistic expectations act to exaggerate the slump, thereby necessitating some form of government intervention. But Melville thought that much more was required than simply saying that expectations oscillate from pessimism to optimism and back again. ‘If we are to have analysis of the trade cycle on which we can base policy’, it was essential, he said that:

we must be able to explain the first stirrings of recovery which occur in the depth of depression and to trace qualitatively and to some extent quantitatively the progressive development to the crest of the boom. We must know why and when recovery turns to recession. No equilibrium analysis is likely to help us in this task. The economic developments with which we are concerned are not developments from one position of equilibrium to another, for the postulated positions of equilibrium are never attained and are in fact unattainable. Neither is economic development a trend towards an equilibrium, and it is not a fluctuation about an equilibrium, with business activity alternately over-shooting and falling short of the equilibrium rate. Even if a series of adjustments towards an equilibrium were commenced, the adjustments themselves would so alter the data that the equilibrium would be disrupted (Melville, 1939a. pp. 9-10).

An alternative method of dealing with dynamics was sequence analysis, a technique in which discrete intervals of time are postulated. Decisions built on expectations of the future are made ex ante – at the commencement of the period. Unexpected changes then occur during the interval which lead to the ex ante expectations being realised. Alterations to plans are then made before the commencement of the new period. The idea is to show the possible consequences of unexpected events. As a method for incorporating dynamic processes, Melville admitted that, in moving from one interval to the next, a sequence of boom and depression can be traced and important changes can be observed as between ex ante expectations and ex post outcomes. Nevertheless, he tended to deprecate the usefulness of sequence analysis, claiming that it tended to have about it ‘an air of unreality’. For among other things, the sequences – or lags – were apt to be different at different times, and occurred for different reasons. In other words, too many things could go wrong, and for markedly different reasons.

Did it matter much if multiplier analysis had difficulty identifying the turning points, or if sequence analysis could not explain variations in lags, or that both approaches were incapable of explaining the reasons for turning points or lags? Melville thought it did, largely because different policy responses would be involved according to the particular conditions responsible for initiating the turning points and lags. Public works policies, for instance, might be justifiable in some circumstances but not in others. At other times, rates of interest or wages might be too high, or too low. Yet again, the public debt might be an excessive burden. ‘It seems to me, therefore’, Melville
concluded, 'that a detailed knowledge of the processes by which recessions are caused is necessary if we are to select the appropriate remedial measures and avoid as much waste as possible' (Melville, 1939a, pp. 13-14). He doubted whether 'it is possible to find a method which can be applied to every period of recovery and recession and which will enable us to say without a careful examination of the structure of production that this or that remedial measure should be used' (Melville, 1939a, p. 15). Even so, he thought there was more hope in securing better policy outcomes if the framework of analysis was expressed in dynamic terms, rather than within the confines of equilibrium analyses or stationary states.

The consumption function

As with his explanation in the General Theory of the rate of interest, Keynes's formulation of the consumption function attracted much attention almost from the moment of the book's publication. In the United States during the 1940s a considerable amount of work was directed to testing the reliability of Keynes's formulation of the consumption function against actual data relating to consumption expenditure. In a paper published in the Review of Economics and Statistics in 1954, but written while he was in Washington at the IMF/World Bank, Melville sought to elaborate upon Keynes's conception of the consumption function (Melville, 1954). In Keynes's formulation, the consumption function had been expressed simply as a function of current income, but owing to a 'psychological' law, expenditure on consumption tended to rise by less than the increment to income.

After reviewing the results of econometric testing of the determinants of the consumption function in the United States by writers such as Arthur Smithies, Franco Modigliani and James Duesenberry, Melville concluded that Keynes's approach was not very promising, save for very short periods of time. Modigliani and Duesenberry, in particular, had found that, except during cyclical disturbances and when income was rising sharply, consumption expenditure tended to rise in step with increases in income, rather than rising in a smaller proportion to income as Keynes had argued. Estimates by Simon Kuznets of the expenditure components of national income seemed to confirm these conclusions. On the other hand, the comparative stability of expenditure on consumption as a proportion of total expenditure seemed to be inconsistent with the well-known conclusions of budget studies, which generally showed that the rich save more than the poor. Melville argued that the issue could not be resolved in static, or cross-sectional terms. Instead, he lent his support to the findings of Modigliani and Duesenberry, which implied that Keynes had mis-specified the determinants of the consumption function.

Having reviewed these results for the United States, and after endorsing their conclusions, Melville was not entirely satisfied with leaving the issue there. Rather he declared that previous investigations of the consumption function had simply sought to relate expenditure on consumption to disposable income. He believed, however, that wealth was also an important determinant of consumption. Using Raymond Goldsmith's estimates of wealth in the United States, and after deducting public wealth and adding stocks of non-durable consumer goods, Melville tested the relationship between consumption and both income and wealth (Melville's equation assumed that the ratio of consumption to disposable income was a constant, except insofar as there was an increase or decrease in the ratio of wealth to disposable income). While he obtained satisfactory correlation coefficients for the period 1929 to 1940, his formula was somewhat less reliable when applied to the war and immediate postwar years to 1952. Even so, he was sufficiently confident of his results to conclude that the 'data so far available are consistent with the hypotheses of this paper that (1) consumption depends
mainly on the combined influence of income and accumulated wealth, and (2) the marginal propensity to consume is equal to the average propensity to consume except at times when income is rising or falling proportionately more rapidly than accumulated wealth' (Melville, 1954, p. 223).

For an understanding of Melville's work as an economist, this paper is of particular interest for several reasons. To begin with, it is a further example of Melville taking Keynes as his starting point but unwilling to accept Keynes's formulations as immutable. On the contrary, Melville exhibited a strong desire to extend Keynes's analysis, bringing to bear as he did the results of recent empirical research. For another, it is Melville's only attempt in a published article to use econometrics, combining as it did his three principal interests of economics, mathematics and statistics. Obviously, mathematics and econometrics had their place. But caution had to be exercised lest their application obscured more than it revealed. Furthermore, while he was reasonably confident of his methodology, the specification of his equations, and the results obtained, the article is expressly guarded as to its conclusions, several pages being devoted to how the research might be refined in various ways, including: breaking down the aggregates into different component parts; taking account of other variables affecting consumption - such as wartime controls and shortages of consumers' goods; refining the statistical data used for income and consumption; and clarifying certain conceptual and measurement problems relating to wealth.

Welfare economics

In two published papers - the first in the *Economic Journal* in 1939 (Melville, 1939c), the other in *Economic Papers* in 1941 (Melville, 1941) - Melville took up an issue of welfare economics which had long exercised the minds of economists but which had recently been revived in articles by Harrod and Robbins. Harrod had contended that 'some sort of postulate of equality has to be assumed' by the economist who wishes to advise on policies involving a redistribution of income. For, as he put it: 'If the incomparability of utility to different individuals is strictly pressed, not only are the prescriptions of the welfare school ruled out, but all prescriptions whatever' (Harrod, 1938, p. 397). Robbins had declared that it was unhelpful 'to speak as if interpersonal comparisons of utility rest upon scientific foundations.' To him, 'the assumption of equality comes from outside, and that its justification is more ethical than scientific' (Robbins, 1938, p. 640).

In contrast, Melville took the view that it was possible for economists to prescribe policies involving the redistribution of income without having to resort to some sort of postulate of equality, for 'in solving most economic problems we do not have to compare the utility of the marginal increments to two isolated individuals. We have to deal with the effect of changes in the composition of the national income on groups in a community' (Melville, 1939c, p. 552). For example, when attempts were made to gauge the impact of changes in tariff policy, or to evaluate the consequences of a wage cut, or to determine the impact of a rise in interest rates, concern was usually directed at the income distributional consequences for different groups, rather than for particular individuals. Some of the groups involved will be more affluent than others. But if two large groups of equal numbers were selected at random on the basis of different incomes, it was probable, Melville claimed, that the same number of persons in each group would possess a similar capacity to enjoy expenditure. After all, in each of two large groups of equal numbers selected at random, it would be normal to find the same number of persons of the same height, or the same chest measurement, or the same head breadth or physical prowess. And, in so far as the measurement of mental characteristics was possible by examinations or intelligence tests, the same kind of distribution would be
found in the two groups. Hence it seemed to follow, Melville reasoned, that 'in each of any two such groups of equal numbers the same number of people of any particular capacity to enjoy expenditure' could be expected to be found. To be sure, it was possible that, as an individual grew richer, experience and education might improve a person's capacity for enjoyment, but Melville was confident that 'observation and introspection allow us to assume that this improvement is not sufficient to prevent the marginal utility of money from falling' (Melville, 1939c, p. 553).

Therefore, if money was transferred from individuals in the richer group to individuals of the same capacity to enjoy expenditure in the poorer group, Melville concluded that each such transfer would bring about a greater gain of utility to the members of the poorer group than the loss of utility experienced by the member of the richer group. 'Thus', he said, 'the whole transfer may be said to increase economic welfare.' So, by this device of comparing large groups selected from random on the basis of differences of income, Melville believed that an answer could be given to 'most of the problems connected with the effect upon economic welfare of transfers of income from one group to another, even though we have no means of deciding the effect of the transfer of a unit of money from one individual to another' (Melville, 1939c, p. 553).

Conclusion

Throughout his career, Melville never adhered slavishly to a singular conception of economics. Nor did any particular philosophy guide his general thoughts and actions. In Isaiah Berlin's dichotomy - following Archilochus - Melville was a fox rather than a hedgehog (Berlin, 1997, p. 437 et seq). He preferred to take each particular idea or circumstance as an independent phenomenon. Still, he was clearly stimulated by Keynes's writing, sometimes in a negative way but more frequently in a positive way. Yet, unlike Keynes, who remained a pragmatist on matters of policy, but was inflexible regarding the conceptual framework that he had formulated in the General Theory, Melville was not prepared to confine his mind to the limits set by Keynes in 1936 (Keynes, 1937, p.122).

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Abbreviations

KCKP/LA refers to the Keynes Papers in the library of King’s College, Cambridge. AA/M448 refers to the Coombs papers at the Australian Archives. NLA 366 refers to the Giblin papers in the National Library of Australia. UAA, Series 200/26/29 refers to the University of Adelaide Archives; WPA, A-53-409 refers to the Westpac Archives.

Notes
4. KCKP/LA, Keynes to Giblin, 24 March 1944. I owe this reference to Alex Millmow.
5. AA/M448/1/12, L. G. Melville to H. C. Coombs, 4 December 1978.
7. NLA 366/5/81, L. F. Giblin to E. R. Walker, 19 April 1934. I owe this reference to Alex Millmow.

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