From: Raven, J. (1995). *The New Wealth of Nations: A New Enquiry into the Nature and Origins of the Wealth of Nations and the Societal Learning Arrangements Needed for a Sustainable Society (pp.46-55).* Unionville, New York: Royal Fireworks Press; Sudbury, Suffolk: Bloomfield Books.
Raven, J. (1995). *The New Wealth of Nations: A New Enquiry into the Nature and Origins of the Wealth of Nations and the Societal Learning Arrangements Needed for a Sustainable Society*. Unionville, New York: Royal Fireworks Press; Sudbury, Suffolk: Bloomfield Books. (Chapters 1 [which summarises the whole book], 4 ["Some Observations on Money"], and 17 [Summary of Parts I to III and overview of Part IV: The Way Forward] are available at www.npsnet.com/cdd/nwn.htm).

Chapter 4

Some Observations On Money

In the last chapter we saw that the world in which we are living is, from an economic and social point of view, very different from that which most of us take it to be. It is a *managed* world economy, which has come into being for a variety of reasons. The good reasons include the fact that it provided the only means of controlling economic, social, and bio-physical forces to which we would otherwise have remained subject. The quality of our lives - our wealth - is *primarily* dependent on what our public servants and politicians do ... even when that involves creating a set of "market" inducements to get businessmen and farmers to do what they need to do. To solve the problems which so conspicuously confront our civilization, we need *more* (and better) management, not less. We also saw that the real wealth on which the quality of our lives depends is best regarded as *commune*-wealth: It is wealth which is, or was, communally produced - mainly by predecessors who got scant rewards for their labours. And it is wealth which it is not generally possible for any one person to obtain unless all have access to it.

We will see later that better management will involve new understandings of what is implied by the term "management" and that new organisational arrangements and new public expectations are required if public-sector management is to function effectively. But before we turn to these topics we will examine the basis of the claim that society does *not* need more explicit management but rather the "return" of management to the "invisible hand" of the marketplace.

This chapter will first review a number of, generally overlooked, consequences of the changes that have already occurred in the way society is organised. Thereafter a number of socio-economic concepts which guide a great deal of policy thinking will be re-examined. Our first discovery will be that the realities behind terms like money, costs, prices, customers, and consumers do not conform to the images most commonly evoked.

The Quantity of Money

The amount of money available was once strictly limited and its value was directly linked to the value of goods and services[4.1]. Neither of these things is any longer true. The amount of money in circulation now amounts to more than 30 times the total value of world production[4.2]. This has come about as follows: Banks create money by making loans. They do

this by lending "money" which neither they nor anyone else already has. Within most countries other than Japan, bank lending is restricted to about nine times their total assets and deposits[4.3]. The money "lent" involves no transfer of funds from investment accounts. Nor do the banks have to decline to offer any service or forgo investment in order to lend the money. They do not even have to forgo lending to any other borrower, decide to transfer investment from one potentially profitable activity to another, or even choose between more and less profitable investments. The funds available for loan are therefore virtually unlimited. The myth that banks are lending "depositors" money is carefully cultivated to create an acceptable facade. The necessary money is created by making ledger entries. Even the money required to purchase bank property and buy gold is created in this way. The value of the asset is then continuously inflated to help increase the apparent size of the one ninth of their lending capacity that banks must maintain to satisfy legal requirements. Nor is this the end of the story - for even the notional restriction of bank lending to nine times their assets and deposits is a charade. The money one bank creates and lends appears as a *deposit*, first in the borrower's account and then, as the borrower spends the money, in the accounts of those from whom he or she has purchased goods and services. The banks then use these "deposits" to justify lending nine times their value to someone else. It does not require a genius to see how the processes just described result in the amount of money circulating round the globe amounting to more than 30 times the value of total world production.

This process has another important consequence. It results in banks' quoted rates of interest being grossly misleading. The banks have really lent (transferred from other possible uses) only about one ninth of the money they appear to have lent. The true return on their real investment therefore amounts to nine times their published rate of interest because the rest of the money they appear to have lent is entirely fictional. A nominal rate of 15% p.a. therefore represents a true rate of 135% p.a. on the money the banks have actually invested. Such a rate would be widely castigated as usurious and is, indeed, illegal. The true rate of return on bank "lending" via credit cards and other less controlled activities at nominal rates of 30 - 35% therefore amounts to a staggering 270 - 415% per annum.

But this is not the end of this incredible story.

When banks lend outwith national jurisdictions - and the point is particularly important in connection with their "lending" to Third World countries - there is no requirement that even a proportion of the money come from nominal assets and deposits[4.4]. Thus *none* of the money they "lend" to Third World countries comes out of their own pockets or their depositors' accounts. It is *all* fictional "funny-money". The banks' true rate of interest is therefore infinite - in that *any* return on nothing (the money actually diverted from other possible uses) is, by the mathematical process of dividing anything by zero, infinite.

Next, most of the money "lent" to Third World Countries promptly finds its way back into the Western bank accounts - either of those who have sold goods (usually armaments) and services to the "borrower", or the private bank accounts of the rulers, politicians, or public servants of the country to whom the money has been lent. Either way, the money provides a justification for a further round of lending both internally and internationally by Western banks. Defaults on "interest" payments on these loans of entirely fictional money are also used by the banks to justify a swathe of acquisitions of *debtors'* assets. This further swells the "assets" of the banks - this time with "real", appreciating, assets.

There is a convincing theory[4.5] that it was because President Lincoln had become aware (i) of the fraudulent nature of money and banking and (ii) that the economic system mainly produces *useless* work, and concluded that these two things meant, first, that governments could create their *own* money in the way banks do (and thus without paying "interest" on it), and, second, that an honest concern with efficiency and effectiveness would involve the introduction of a very different system of resource accounting, that the banks had him shot. Indeed *The (London) Times* openly encouraged that course of action at the time saying: "If (this) policy (were to become) a fixture then the government (of North America) will furnish its own money without cost. It will pay off its debts and be without debt. It will have all the money necessary to carry on its commerce. It will become prosperous beyond precedent in the history of the civilized governments of the world. The brains and the wealth of all countries will go to North America. That government must be destroyed." Fear of a similar fate may also be why President Woodrow Wilson - in the last of a long line of conspiracies starting in 1694[4.6] both colluded in secret with Rothschild (of London and Berlin, representing the international banking community) to deceive the American public into believing that the Federal Reserve System was a public body *and agreed that its true nature should be kept forever secret*. The effect was to maintain both the myths of banking and the power of the banks.

In fact[4.7] the 12 Federal Reserve banks are *private* banks who, in collusion with the US government, have created over $1,000 billion of fictitious money and then lent it back to the American government at a varying rate of interest - around 7%. This money has also been lent to other governments, with the result that the committee of the Federal Reserve System (a small committee consisting predominantly of the chairmen of the most important of the 12 banks) can make or break governments at will.

What happens is that the Federal Reserve banks "buy" government bonds in both the US and other countries. They charge the governments interest on the money they use to buy the bonds. But the "money" they use to buy them is entirely fictitious. If one asks "Where was the money needed to purchase these bonds immediately before their purchase?", the answer is that it was not anywhere. There was no such money. It was created by a ledger entry at the time of purchase and then "lent" to the governments concerned at interest. A fraction of these bonds is then sold to others who earn interest on them. The money "lent" to the governments then finds its way into the hands of government contractors, who, in due course, use it to borrow more money. Likewise, eventual purchasers of the bonds which find their way through the system and to other banks and corporations use these "assets" to borrow more money to "lend" to others.

Although it was agreed to keep the ownership and mechanism of the Federal Reserve System secret, and although it has in fact been kept secret for almost a century, it has now emerged that the owners of the banks (listed in order of importance) are: Rothschild Banks of London and Berlin; Lazard Brothers Banks of Paris; Israel Moses Seif Banks of Italy; Warburg Bank of Hamburg and Amsterdam; Lehman Brothers Bank of New York; Kuhn, Loeb Bank of New York; and the Chase Manhattan Bank of New York (who now own all the other banks in the cartel). The main owners of many of these apparently independent banks are Rothschilds and their relatives, amounting to not more than 300 people in all. Not only do these banks have a monopoly, the 1980 Monetary Control Act in the US (pushed through at the behest of the Federal Reserve System) *brings all other depository institutions under their control*. The

small committee representing these 300 people thus controls the whole banking system of the US and, as Roberts[4.8] and Adelmann[4.9] have documented, the central banks of most other countries too. (No doubt the whole system has now been replicated and elaborated in Japan with that country's customary attention to detail, secrecy, and promotion of the Japanese national interest.)

The effect of these processes is that banks are by no means restricted to lending 9 times their assets and deposits - because the one ninth itself turns out to be fictitious, having come from the Federal Reserve System.

Both the Federal Reserve Bank itself and its member banks not only lend to the "owners" of companies against the right to take over those companies if they default, but can - and do - use this fictitious money to purchase companies and other assets directly. In this way they come to own (or at least, through their rights arising from defaults of payment, have a lien on) virtually everything in America - and hence much of the rest of the world. They can make or break, not only all other banks, but all national governments.

It follows from these observations that it is not only the Third World which urgently needs to repudiate its debt - so too do the people of the West. They need to repudiate the "debt" owed to private banks who have acquired, through what can now be seen to be, at best, a huge confidence trick, and, at worst, a heinous conspiracy, legally enforcable rights to the ownership and control of nearly all property and institutions.

If what has been said is true, why are the banks so concerned to obtain collateral to "secure" loans? First, of course, the banks have to maintain the mythology that they are "lending other people's money" in order to remain in business. Second, the consequences for individual banks of "bad debts" or allowing "debtors" to renege are, indeed, extremely serious: The banks' *shareholders* sell their shares and move them to more profitable banks - obscenely profitable though their investments already are. Without shareholders the banks would collapse. Third, most bank managers simply believe the mythology.

It is also very much in the banks' interest to maintain millions of deposit accounts which allow depositors to earn what are, by the banks' own standards, trivial amounts of interest. This process - like widespread ownership of shares in privatised public companies - generates support for a system in which the real beneficiaries are the big stakeholders. It also stimulates systems support by perpetuating belief in that cornerstone of economic mythology - savings. A more tangible benefit is the creation of pressure for high interest rates.

What we have seen so far is that the banks provide a fantastic mechanism whereby the rich can extract money from the poor. Banks do this directly by taking the savings of the poor (both within and between countries) and investing them where they can earn higher interest rates - i.e. in rich places. Poor communities are thus deprived of their own capital. They also do it indirectly in ways which will be discussed in Chapter 7.

The observations we have made so far explain how it has come about that world debt has reached such a staggering figure and why it is increasing so fast[4.10]. They undermine the justifications put forward for the actions taken by the Trans-National Corporations, the International Monetary Fund, and the governments of the seven richest countries of the world

- the Group of 7 or G7 countries (which control the IMF and the World Bank) in relation to the so-called "debts" of the Third World.

They also indicate that assertions to the effect that certain types of necessary public action cannot be carried out because "there is no money", "it would mean raising taxes", or "it would be necessary to first earn the money by exporting products or services" - are without foundation.

However, they have other, much more serious, implications at a different level. Our observations undermine many of the most fundamental concepts of economics and expose its claim to be a science as fraudulent. The processes we have described mean that, as briefly discussed earlier, many concepts widely used in economic theory - including "money supply", "marginal differential rates of return on capital", and even (monetarised) "capital" itself - do not stand for what they are thought to stand for. Thus money does not even "circulate". It is manufactured and siphoned off by a huge system which is hardly even mentioned in classic economic texts[4.11]. Clearly the statement that one of the functions of money is to facilitate exchange misleads - for it leads us to imagine that what is being facilitated is the cumulation and division of barters between two persons. What is really happening is that, through interest payments and taxation (a large proportion of which is devoted to making interest payments on "debt"), is that ownership of the goods and services which are apparently being exchanged between two people is being sucked (at a fantastic and ever-increasing rate) into the hands of an invisible third party - bankers. Exchanges taking place under these conditions do *not* "in the end" cancel each other out in such a way that no one owes anybody anything. That is, they do not self-liquidate. Instead they end up with everyone owing almost everything to the banks. Even if the individuals concerned have been prudent enough to avoid incurring debts themselves, they will find that their governments have given the banks a lien on everything they think they own.

It is obvious to anyone who thinks about it that money is not real wealth. What the possession of money does is give those who possess it a *claim* on real wealth - such as property - and *the right to command the compliance of others in whatever activities they have chosen*. What we have seen is that a small group of international bankers have, with incredible sleight of hand, pulled off the confidence trick of all time. What hope do we have of introducing a new socio-economic order when they have acquired such enormous powers to command our compliance in activities of their choosing?

It would appear from what has been said that, far from (as would be the case in the sciences) describing a hidden reality which can be discerned behind the observable, the assertions of economics have as little contact with reality as the doctrines of medieval religion.

The foregoing has serious implications for the everyday use of terms like "money" and "debt" and thus for public debate of appropriate policies. Clearly, the word "money" no longer denotes what it did even when Adam Smith promoted the invisible hand of the market mechanism as a means whereby people could vote with their pennies to influence the direction of development. Terms like "debt" and "debtor" no longer imply what they used to mean: Most modern "debtors" have not somehow acquired capital or resources which anyone else would be using if they did not have them. No assets that belong to anyone else and could have been put to any other money-making or productive purpose have been lent to them. The term

"Third World Debt", which conjures up an image of a profligate population purchasing unnecessary consumer goods with borrowed money which the lender could have deployed in more profitable ways is even more misleading. In fact, (a) no money has been diverted from any other use - if more was needed to "lend" elsewhere it would have been created by the processes we have described, (b) the "money" has been spent, not by the general population of the countries concerned, but by their leaders, (c) most of it has been spent on armaments, not on consumer goods, (d) nobody else has been deprived of similar goods or services (if someone else wanted armaments or any of the other goods supplied the "money" "required" to produce - and not simply purchase - them would have been created through the processes which have been described), and (e) the money has frequently ended up in the Western bank accounts of the leaders of those societies. What has *actually* happened is that Western banks created the money in order to stimulate creation - *in the lending country* - of work producing maximally-quickly-obsolescent and maximally useless products (armaments) in order to keep the wheels of Western economies turning[4.12].

The Role of Money

In fact, it is not simply the nature of money - and the meaning of the term - that has changed. The *role* of money in society has been *overturned*

Adam Smith argued that decisions produced by the invisible hand of the marketplace would be better than those taken by "wise men" because even the wisest of men did not have all the information required and could not know all the consequences which their actions were likely to have when those actions interact with the actions of others. Bits of this picture could, however, be known to different people. If one allowed everyone to contribute to the decision-taking process by enabling them to vote with their pennies, this would provide a mechanism whereby all these different bits of information could contribute according to their quality and prevalence to the way things develop. Furthermore it provided a rapid feedback mechanism which would quickly respond to effects produced by the interaction of actions and marginal changes. In contrast to the public data which alone would be available to wise men, these bits of information would not need to be conscious and articulate; people could act on their intuitions or feelings. Prices would then be determined by, on the one hand, the costs of raw materials, labour, and capital - i.e. by the efficiency with which goods were produced or services provided - and, on the other, by how much consumers valued the goods or services and were therefore willing to pay.

But the world is no longer (if it ever was) like that. The control of cash flows is now used to orchestrate decisions taken through the politico-bureaucratic process. Funds are collected and budgets apportioned to achieve goals established by the owners of the TNCs, politicians, and public servants (who may or may not be wise or concerned with the public interest). Money is not used as the best available management mechanism to establish the goals themselves, to orchestrate their attainment, and to provide feedback to ensure that the *system* achieves its unwritten goals effectively. Instead, taxes, grants and levies are fixed by men (or women) to influence the costs and prices of materials, labour, land, capital, and transportation, and to influence the behaviour of manufacturers and consumers so as to point them in the direction of what is conceived to be the public interest or the interests of the TNCs. The main feedback mechanism in modern societies does not consist of people casting, on a daily basis, a whole series of votes with their pennies, voting separately in relation to each of a wide variety of

different types of provision and product, but a single, five-yearly, vote in relation to a wide-ranging package of policies and provisions. A positive effect of this political voting is that it becomes possible to spend money on communal activities which it would have been difficult to provide through the individualistic market. A less positive aspect is, however, that it pre-empts individual voting on many issues.

One effect of having become an economy in which costs and prices are managed is that it it is now more important for producers and the providers of services to attend to grant and levy legislation than to the needs of those who are nominally their customers or clients. Or, put differently, the customer is not the "sovereign" person he or she is supposed to be. This is why it has become more important for farmers to attend to the grant structure than to the needs of their customers, the well-being of their cattle, or the fertility of their soil (which is not to say that their eventual customers' needs may not be better met by their doing this). Another effect of this change is that the image of "a customer" which comes into the minds of most of us when we hear the word leads us to mistaken conclusions. Customers are no longer individuals voting with their pennies, but corporate giants purchasing on behalf of hundreds, even millions, of people - for medical ("health") services or international defence alliances. The effect of these changes is that the realities which lie behind the main words central to market theory - words like "money", "customer", "product", and "producer" - are quite different from what they were when market theory was developed and from what they are taken to be in everyday conversation. For this reason the continued use of such terms - and market theory itself - misleads.

Additional Considerations

There are four widely accepted beliefs about money, management, and wealth-creation which create serious barriers to developing the concepts and tools required to run modern societies effectively. These are:

1. That we must have money *before* we can initiate wealth-creating activities.
2. That wealth inheres in manufactured products.
3. That wealth is to be equated with money.
4. That manufacturing industry is the main source of wealth.

As we will shortly see, none of these beliefs is well founded. Wealth is a *product* of organised activity, not a necessary pre-cursor to it. Money is a *tool* to be used to organise wealth-creating activity. Money is neither something which is in limited supply nor an outcome of wealth-creating activity. Wealth mainly inheres, not in private goods, but in the wider environment. Public servants and other service providers, not industrialists, are the main producers of wealth.

The excuse that "there is no money" to do important things is clearly without foundation. Douglas[4.13] drew an analogy between the supply of money and the supply of railway tickets - which are designed (among other things) to provide management with information about how many trains are required. He remarked:

> "It is every whit as sensible to argue that because there may happen to be 100 tickets from London to Edinburgh in existence, that therefore no more than 100 passengers may travel, as it is to argue that because the units of money happen at the moment to be insufficient, therefore desirable things cannot be done, irrespective of the presence of the men and materials necessary to do them."

Bank notes are notes of authority to command the compliance of others in a course of action one has chosen. They are voting slips which enable us to comment on the goods and services we are offered.

Viewed in this way, money is not sacrosanct. We can print more notes of command - but, if we do, we must beware of devaluing other people's power and influence. One can command (by introducing income and other taxes) that people vote with their money in particular ways and thereby deny those concerned any effective say in relation to the issues to which those votes pertain. (Note the need to provide alternative prioritising and feedback mechanisms.) More generally, as Douglas[4.14] noted, there is an essential continuity between money as a general ticket which can be exchanged for a wide variety of goods and services and a railway ticket which can be exchanged only for a particular service. We could therefore envisage a wide range of types of money having limited domains of validity. The most important consideration is that any system that is introduced be, and be seen to be, fair and effective.

Currently, the operation of the monetary system is neither well-policed nor fair.
Money - i.e. tokens which enable us to influence what happens in society - is normally issued to us in return for a contribution to society. However, (i) the most important contributions to society have come from previous generations who are now unable to gain any reward for their efforts; most of the money that is currently paid to those with the highest incomes has been earned, not by them as individuals but by previous generations; (ii) we do not need most members of society to "contribute" in the ways which are currently deemed to merit the highest rewards; (iii) it is not at all clear whose current contributions are in the end going to benefit society and the planet most; (iv) the poor are poor mainly because the well-paid leaders and managers of our society - including those who control the financial system - have failed to do their jobs properly and not because of their own laziness or ineptitude; (v) the well-being of the rich is heavily dependent on disproportionate contributions from the Third World and future generations who get scant returns for their efforts, and (vi) many of those who are currently paid most spend their time on the very activities which do most to destroy the future and the planet. It would seem to follow that there is every reason to distribute money more equitably and, in particular, to offer everyone a high basic standard of living which will provide the security needed to facilitate the kinds of innovation society most urgently needs.

Money as a tool can be used well or badly: It can be used to organise activities which benefit us all or which benefit only a few; it can be used to dissipate energies on activities which occupy many and benefit few. The unintended dissipation of money on useless work can be achieved as easily through market mechanisms as through bureaucratic generation of checking activity.

The notion that manufactured goods are the main source of our wealth is due to their tangibility. Actually, large numbers of - supposedly non-productive - service providers - designers, drivers, salesmen, computer programmers, management personnel, accountants, market researchers, advertisers are required to produce and distribute them ... and their monetary value is dependent on those who purchase them being able to use them - on the availability of roads, good health, and ample leisure. All who provide these services contribute directly to wealth production. In fact most international trade now consists in trade in *services* - finance, consultancy, education, tourism.

We have continued to believe that all these other activities - some of them wealth-creating in themselves - have to be paid for out of taxes raised from levies on manufacturing industry and incomes. As a result, we have created a taxation and accounting system which absorbs vast amounts of labour - and which *does* drain human resources away from wealth-creating activity of one sort or another. It is this which needs to be replaced by a new, social-science-based, accounting system which takes account of many more of the relevant costs and benefits. Traditional economic theory has underestimated the contribution of the public sector to the public good. It has underestimated the contribution of the public sector to the private sector. It has overestimated the contribution of the private sector to both the public sector and the public good.

Conclusion

Social scientific research is urgently needed to set money and taxes in the context of an adequate framework for thinking about social management - a framework which encompasses non-market means for prioritising options and influencing decisions, and providing variety, choice, accountability, and feedback. The focus on *money* is diversionary: What we need to focus on is the way in which society *uses* money to frustrate or achieve human ends. We need to examine the decisions taken in the course of constructing the components of prices and in conducting cost-benefit studies and claims about "efficiency".

Notes

4.1 Originally, the issuer of "money" - e.g. cowhide tokens - was the owner of the real assets (cows) they represented. Even as late as the Middle Ages, money largely consisted of receipts issued by goldsmiths in return for valuables deposited. These receipts could be exchanged for other goods and services but their value remained directly linked to the value of the goods deposited. The control of early coins was vested in the monarch as a trustee for the nation. Currently governments do *not* act as trustees for nations in such a way as to curb misuse of the system for sectional benefit. That is, they do not act as Weights and Measures officers who insist on the maintenance of high standards.

4.2 Ekins, 1986; Roberts, A.E., 1984; George, 1988; Institute of Economic Democracy, 1982

4.3 In most Western countries and Japan the overall figure was about 9:1, but varied between activities. In Britain it has recently been revised so that business loans require 8%, real estate 5%, and government bonds zero. Not all the capacity for lending afforded by these figures was - or is - directly taken up. However, the process whereby loans return to banks as deposits which are then used to justify further lending makes the figure relatively meaningless. But even the official figure has been eroded. The Japanese have recently increased it 30:1, and the Bank for International Settlements is now recommending 12:1.

4.4 Ekins, 1986; George, 1988; Institute of Economic Democracy, 1982

4.5 Ekins, 1986; Roberts, A.E., 1984; Adelmann, 1989

4.6 The (private) Bank of England was created in 1694 by William Paterson. It was designed to purchase Crown debt (bonds) and resell it to private investors. In return for the bonds, the Bank issued currency to the Crown and charged interest. Within two years the Bank had issued far more currency than it could redeem in gold. As Paterson wrote "The Bank hath benefit of interest on money which it hath created out of nothing". The Crown specifically excluded the Bank from the requirement to be able to redeem its notes in gold, thus legitimising debts which far exceeded assets - a situation which would, in any other business have constituted fraud. A monopoly was established which would not have been tolerated elsewhere.

4.7 Douglas, 1935/78a&b; Roberts, A.E., 1984

4.8 Roberts, A.E., 1984

4.9 Adelmann, 1989

4.10 Douglas, 1935/78b

4.11 It is remarkable, or perhaps, given the evidence not surprising, and perhaps even supportive of a theory that there has been a conspiracy, that these texts have been altered so little to take account of the writings of C.H.Douglas in the 1930s (see for example Douglas, 1934, 1935/78a&b).

4.12 Ekins, 1986; Adelmann, 1989; Daenhardt, 1994. The next step is also in their interests: The nominal debt will be used as an excuse for the Western banks, in the shape of the IMF, to intervene in the affairs of the

"debtor" countries to make them "more efficient". They will do this by insisting, first, that public services are run down. (This will have the added advantage of making them less able to monitor the workings of the world economic system.) Second, by insisting that "inefficient" manufacturing industries are closed or, preferably, first sold to the TNCS and *then* subsidised "in order to preserve jobs". The net result will be that the countries concerned will be required to focus on exporting below-cost food and raw materials or, if that objective cannot be achieved, below-cost, labour-intensive, manufactured goods.

4.13 Douglas, 1924/79, 1934, 1935/78a&b, 1936

4.14 Douglas, 1934