Acknowledgements

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Comments from the Editor

This edition of the ACE JOURNAL includes two articles by Christian economists from Australia. How important it is to benefit from exchanges across the international divides. Another paper by Michael Schluter is also included; he takes a most interesting, not to say controversial, look at the Biblical material relating to interest, and argues that there is a very close link between interest and the energence of large-scale capitalism. Michael argues that neither has valid roots in the Bible. This view has major implications. Comments on any of these papers would be much appreciated.

We do apologise for the late appearance of this issue of the Journal. The next issue should appear in the Spring of 1987 and it will focus on tax/benefit reform and basic income systems. In the next issue we will also publish an annotated bibliography of Christian economics writings recently compiled by the Association of Christian Economists (USA).

Readers might like to read (and review) one of our members new book; Transforming Economics, by Alan Storkey, SPCK/Third Way Books, 1986.

Contributions for future issues of the journal should be sent to the Editor, Andy Hartropp, 15B Fen End, Over, Cambs. CB4 5NE.

WORKING PAPER

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THE OT BAN ON INTEREST: ITS RELEVANCE FOR REFORM OF BRITAIN'S INDUSTRIAL STRUCTURE IN THE 1980's

by

Michael Schluter

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This paper follows two others, "Can Israel's Law and Historical Experience be Applied to Britain Today?" and "Family Policy in OT Israel: Some Lessons for British Social Policy in the 1980's". Comments and suggestions on this paper would be much appreciated, and should be sent to the author.

Council of Reference The Rt. Hon. Viscount Brentford - Sir Frederick Catherwood, MEP
Dr. Roy Clements Dr. Anthony Cramp

SUMMARY

1. Interest on loans between citizens is indeed contrary to God's will as revealed in His word. This does not just apply to loans at high interest to the poor in a primitive agrarian community, but to all types of loans within a society. All references in the Bible to interest are negative, and the ban on interest is strongly reinforced by the Year of Debt Remission every seven years when all loans between citizens were cancelled.

2. The reason that interest is wrong is that it undermines financial interdependence and joint economic enterprise of the extended family which are vital for its long-term cohesion. It also contributes to breaking down family and local community indirectly by encouraging population mobility, large-scale urban structures and an increased role of central government in society.

3. A ban on interest would not have precluded development of modern technology, although its form would be different, but probably would have precluded many contemporary institutional forms such as the public company, pension funds, bank credit arrangements and government borrowing.

4. Capital markets are a direct result of interest. They have been a major factor leading to industrial concentration in Britain, resulting in huge firms and factories. The growth of concentration has been particularly marked since 1930, so that the 100 largest companies, for example, will probably account for two-thirds of all manufacturing output within the next five years, and financial institutions like the pension funds probably now own two-thirds of all shares traded on the Stock Exchange.

5. Industrial concentration has had harmful effects on human relationships. Large firms use their power to bully small firms; large factories are associated with hostile relationships between management and labour. Larger firm size has also required increased central government intervention in the economy, and undermined the financial interdependence and self-determination of the family and the community.

6. Various practical measures are available to reduce the size of firms in modern Britain without risking a loss of economic efficiency. These include development of subcontracting, fiscal incentives for divestment of subsidiaries by large companies, and joint research and marketing agreements by small companies.

7. A possible policy package to mitigate some of the effects of interest, by reducing concentration of the industrial structure, might include the following: strengthening the mandate of the Monopolies and Mergers Commission, providing fiscal incentives for company divestment, lowering corporate tax on companies with less than 10 employees, and raising the limit below which small companies are exempt from VAT. These policies would help to create employment and strengthen the family, as well as improving relationships between firms and within firms.

A. INTRODUCTION

Does the Bible really ban interest and should Christians really try to reduce the role of capital markets in the twentieth century? The ban was the centre-piece of Christian thinking about economics until well into the sixteenth century. Latimer, Ridley and the other great British reformers unanimously believed that the Bible did not allow interest. Tawney spells out just how important the issue was for the place of Christian faith in man's total world view:

> "When the [sixteenth] century began, 'to live by usury as the husband-man doth by his husbandry' had commonly been treated as ignominious, immoral or positively illegal: when it ended, money-lending was on the way to enjoy the legal security of a recognised and reputable profession. But that change itself was part of a larger revolution which was to ...turn religion itself from the master interest of mankind into one department of life with boundaries which it is extravagant to overstep. For the theory of usury which the sixteenth century inherited had been not an isolated freak of casuistical ingenuity, but one subordinate element in a general system of ideas, and the passion which fed on its dusty dialectics is intelligible only when it is remembered that what fanned it was the feeling that the issue at stake was not merely the particular question, but the fate of the whole scheme of mediaeval economic thought which had attempted to treat economic affairs as part of a hierarchy of values embracing all human interests and activities, of which the apex was religion". (Tawney, Introduction to: A Discourse Upon Usury, by Wilson, p. 106).

Today few Christians can be found who believe that the charging of interest is wrong either for the individual or for society at large. However, if Christians are to make their faith once more the centre of all human interests and activities, perhaps the interest issue must become again the centre of debate.

In this paper we shall argue from both the OT and the NT that the ban on interest is a biblical rule. Interest is wrong because it undermines the kind of human relationships which the Law as a whole is trying to foster. If it is accepted that interest is wrong, the implications are extremely radical and far-reaching: for example, the whole basis of the capitalist system is undermined. This is not to argue that in a society plagued by inflation and unemployment a Christian is sinning by putting his money in the bank. Rather, the argument will be that capital markets have had the effect of undermining family and community relationships, and thereby threaten care for the poor and weak in society at the foundations. We dare not attempt an immediate revolution to throw out interest, for fear of making the weak in society even worse off, but nor should the status quo be quietly accepted. It is possible to move back gradually in the direction of obedience to God's word. In this paper, we attempt to understand why interest is banned in God's word, and then develop a programme of reform for Britain's industrial structure.

B. BIBLICAL TEACHING ON INTEREST

Does the Bible Really Ban Interest?

Israel was unique among societies in the Ancient Near East in prohibiting interest. As Gamoran argues:

> "None of the legal codes of the ancient world outside of the Bible contains laws proscribing lending on interest. Two of the codes, the Laws of Eshnuna and the Code of Hammurabi, include provisions for loans on interest. In some cases the law fixes the interest rate; in one instance a penalty is established for taking excessive interest; but in no case is lending on interest prohibited or even discouraged". (Gamoran, The Biblical Law Against Loans on Interest, p. 127).

The first instance of condemnation of interest outside the Bible occurs in Ancient Greece and Rome. The very distinctiveness of the biblical perspective on the issue should give Christians reason to consider the issue carefully.

Many today believe the Bible bans only excessive interest or "usury". This is because the old AV translated the Hebrew word for interest as usury, which has the connotation of excessive interest. However, the meaning of the Hebrew word applies to interest of any kind. Two Hebrew words for interest are used. The first means "bite". This refers to the borrower receiving less than the full amount of the loan, but having to repay the whole amount at the end of the period. The second word means "increase" and refers to the lender getting more than he lent back from the borrower. Both ideas seem to be used interchangeably in the OT (De Vaux, Ancient Israel, p. 170).

The ban on interest does not merely aim to prevent exploitation in a primitive agrarian community. In Exodus and Leviticus, the interest ban is stated in casuistic form: "If your brother is poor, then do not lend to him at interest ...", which focusses on the relationship between two individuals (Ex 22:25; Lev 25:37). If that was the only way that the ban was stated, it could be argued that it was not intended as a constitutional requirement for all loans. However, in Deuteronomy the law is stated in the apodictic form: "You shall not lend upon interest" (D 23:19 RSV). In this form it sounds like the Ten Commandments. The law is worded so as to make it clear that it applies to all loans, both in regard to the commodity being loans and those to whom the loan is made:

> "You shalt not lend upon interest to your brother; interest of money, interest of victuals, interest of any thing that is lent upon interest". (D 23:19 RSV).

There is only one exception: that is, loans to foreigners. These are people outside Israel's borders. The resident alien or refugee is included among those who may not be charged. The ban on interest between citizens of a state is given as a universal absolute. There seems no way to avoid this conclusion. Perhaps it should even be regarded as a structural evil, in the same category as death (I Cor 15:26).

The interest ban is reinforced by the law requiring remission of debt every seventh year - the Year of Debt Remission (D 15:1-11). This is also a public, constitutional law stated in the apodictic form. It is linked with the seven year rest for the land, as the same Hebrew word is used for "release" (D 15:1; L 25:4). It is also clearly linked to the interest ban by having the same striking exception, that is, the foreigner (D 15:2; D 23:20). As with the Deuteronomic ban on interest, debt remission is to apply to all loans, and not just loans to the poor. Even loans for production purposes are cancelled in the seventh year (D 15:1-6). The only exception allowed is the loan to a foreigner, which may be collected after the seventh year. This is not to say that all debts last for seven years. Rather, the Year of Debt Remission comes round every seventh year, so that if it occurred in 1983, its next occurrence would be in 1990. The Year of Debt Remission was even a part of Nehemiah's reforms, after the exile (Neh 10:31).

The interest ban and the Year of Debt Remission overlap in several important respects. Both are aimed primarily not at the borrower, but at the lender. They aim to discourage the man with spare capital from lending it outside his kinship and community network. With debt being cancelled every seventh year, the rich may refuse to lend money as the Year of Debt Remission draws near, for fear of being unable to recover their loan. Moses foresees this situation and requires the lender to help the poor man without an eye to debt recovery. If he fails to, there is the threat of sin being held against him, through the needy individual's appeal to God (D 15:9). Both laws are also associated with promises of social blessing which extend to society as a whole. Obedience in the area of capital flows brings blessing to all that a society undertakes (D 23:20; D 15:4). This also is a hint that these laws are not just concerned with private morality but with the whole framework within which society is organised.

The universal statement of the interest ban, and its implications for society as a whole through its links with the Year of Debt Release and the landholding system, perhaps should have alerted Calvin to realise that interest is not entirely a private affair. Calvin permitted interest within well-defined limits:

> "I should, indeed, be unwilling to take usury under my patronage, and I wish the name itself were banished from the world; but I do not dare to pronounce upon so important a point more than God's words convey. It is abundantly clear that the ancient people were prohibited from usury, but we must needs confess that this was a part of their political constitution. Hence it follows, that usury is not now unlawful, except in so far as it contravenes equity and brotherly union". (Calvin, Harmony of the Four Last Books of the Pentateuch, Vol III, p. 132).

He could see no reason for failing to compensate an individual who parted with his money for a period to somebody else. He did not want to insist on obedience to the Law beyond its intended purpose. However, if the Law is not concerned just with the consequences of the individual transactions, but with the effects on relationships via the overall social structure as argued above, then Calvin's relaxation of the ban was misguided. Four times Moses stresses that the Year of Debt Remission is God's special institution (D 15:2, 4, 5, 6). Many want to use this to

limit its application. They would argue that this proves it was only relevant for Israel which had a unique covenant relationship. But is that the point of this emphasis? Perhaps God's lordship is being set over against the rights of the state. If it is God's institution, the state should not dare to change it. This certainly seems the relevance of the law's emphasis on all Israel's land belonging to God (L 25:23; I K 21:1-19).

The ban on interest occurs at a number of other points in the OT writings. The righteous man is somebody who speaks the truth, who does not slander and who keeps his promise. He is also somebody who does not lend at interest (Ps 15:1-5). The charging of interest is repeated three times among the evils of society by Ezekiel, along with idolatry, oppression and failure to honour parents. Under Nehemiah, the interest and debt question was a major issue in class confrontation, and its abolition an important part of his social reforms (Neh ch 5). Every time that interest is mentioned in the Bible, it is spoken of with disapproval.

This raises the question again of whether the Law and prophets really are only concerned about the effect of interest on the poor, in the personal relationship between the moneylender and the peasant. This was the position adopted by Calvin. It can be argued that this was the primary concern of the prophets, as this is the way that disobedience to the Law brought suffering in their society. However, it is equally true that nowhere do the Law or the prophets separate out some lending and make it legitimate because it is between contracting parties of equal financial strength, or because it may be classified as productive investment. Nor do the prophets ever suggest the Year of Debt Remission can be ignored, although it would clearly have operated to restrain commercial lending between equals. The interest ban and Year of Debt Remission had implications for human relationships which went far beyond the problems of a relatively small number of poor individuals. Were these far-reaching laws made only for the sake of protecting these poor from getting into debt, or were they intended to protect the whole structure of human relationships given in the Law?

Nothing in the NT relaxes the ban on interest. It is often argued that in the Parable of the Talents Jesus allows interest for business dealings, differentiating commercial loans from the exploitation by money lenders referred to in the Mosaic law. However, careful scrutiny of the passage does not allow this way out. Firstly, to base a major change in the Law on the detail of a parable is not generally regarded as permissible in biblical interpretation; it is surprising how readily it has been accepted in this case. Secondly, the words which Jesus actually puts in the mouth of the Master are these:

> "You bad and lazy servant. You knew, did you, that I reap harvests where I do not sow and gather crops where I do not scatter seed? Well then, you should have deposited my money in the bank and I would have received it all back with interest when I returned (Matt 25:26, 27).

Interest is regarded by the Master as reaping where one has not sown, rather like the current bank advertisement which shows a man asleep and with his feet up, who is said to be "busy earning 8.75%" on his money. This is hardly a view of interest which should encourage Christians to pro-

mote interest-lending. Nor can we even be certain that the bank referred to in the parable would be lending money to fellow Israelites. Knowing the influence of the Pharisees and their addiction to the detail of the Law, it is more likely that any banks in Jesus' day would have been lending to foreigners, so that the Master in the story is only encouraging the servant to lend within the framework laid down by the Law. If any lesson can be deduced from the story, it would be that lending at interest is better than just hoarding gold, but that it is still very much a second best to direct investment.

A final way round the interest ban is to interpret OT passages on debt as referring to spiritual realities. Some passages in the NT speak of sin as debt. This occurs in the Lord's Prayer and the passage following it (Matt 6:12-14), and in the parable about the two debtors (Matt 18:23-35). If debt is a picture of sin, the Year of Debt Remission is a picture of how God wants to release the individual from the psychological burden of guilt. Social institutions in Israel parallel spiritual realities. Thus, some want to limit the application of the OT Law on debt to individual spiritual fulfilment in the NT. However, it is difficult to find a spiritual parallel for the ban on interest. Also, we may ask whether God is less interested today than in the past in embodying spiritual truth in social structures? Is there any other way to bring the whole of life under the Lordship of Christ?

The Law claims to be relevant for Israelite society for all time (e.g. D6:24), and Jesus endorses this when He says, "Remember, as long as heaven and earth last, not the least point or the smallest detail of the law will be done away with" (Matt 5:18 TEV). Although we must interpret the Law in the light of its original intention, we must be careful not to rob it of its force by casuistic ingenuity as the Pharisees were so often guilty of doing (e.g. Mk 7:9-13). The interest ban and Year of Debt Remission had broad implications for social organisation. Are we really right to limit their application today to the sphere of private morality?

In the end, perhaps, there is no way to avoid the decision about what to do with the whole OT Law. Should it be regarded as God's will except for those parts which Jeses and the apostles make clear are no longer binding (i.e. Mk 7:19; Col 2:16), or is it abrogated unless there is some specific NT command that it should be obeyed (i.e. Mk 7:9-13; Eph 6:1-2)? This issue is dealt with in our earlier paper, "Using the Bible for Social Policy". In summary, our conclusion is that the Law still provides an outline of God's standards for society as a whole (Matt 5:17-19), but is "only good if it is used as it should be used" (I Tim 1:8). While aware of all the spiritual dangers that are involved in wanting to affirm a role for the Law, we believe it can serve to show men their sin individually, as by Jesus with the rich young ruler (Matt 19:16-22), and corporately by providing a critique of the social order. All scripture is useful for "training in righteousness" (2 Tim 3:16), and therefore must be studied and applied in every generation.

Why Does the Bible Ban Interest?

Interest is defended in Western economics on two main grounds. Firstly, it leads to more efficient use of resources. Interest, and the money market, allow money to be allocated to those in society who can pay most for it, i.e. to those who will use it most efficiently and increase

society's wealth fastest. This surely is in line with God's command to subdue the earth? Galbraith goes even further in arguing that interest contributes towards human equality. "The function of credit in a simple society is, in fact, remarkably egalitarian. It allows the man with energy and no money to participate in the economy more or less on a par with the man who has capital of his own" (Galbraith, Money. where It Came and Where It Went). Equality was also one of the goals underlying the Law as a whole (e.g. N 33:54). So why does the Law so categorically refuse to allow interest on loans between citizens?

The central themes of the Law are love for God and love for our neighbours (Matt 22:34-40). God is concerned primarily about human relationships rather than about economic growth. We should seek reasons for the ban on interest within the sphere of relationships rather than in its effects on level of per capita incomes. Nothing is intrinsically wrong with interest. Calvin is right. If interest was wrong in some absolute sense, then it would not be allowed on loans to foreigners. The interest ban is not just to prevent exploitation; God would hardly allow exploitation, even of foreigners. And surely God could have permitted a low rate of interest, rather than banning interest altogether if the aim was primarily to prevent exploitation. A ban on interest altogether seems a bit of an overkill if this was its sole purpose.

Several hints as to why interest is wrong can be gleaned from scripture itself. The ban on interest is to apply on loans between "brothers" (D 23:19; D 15:1). In Israelite thought, kinship extended to the nation as a whole. It is thus a national law applying to relationships between all citizens of the country. (1) There is meant to be something special about relationships between fellow citizens which makes interest on a loan inappropriate. Interest in some way undermines national solidarity and identity. Our task is to identify the mechanisms by which that occurs.

The charging of interest has an important effect upon those kinship relationships, which are central to Israelite social structure. If interest is not permitted in a society, then those with spare liquid funds will lend them to relatives and neighbours. This is partly because they are the only ones who can be trusted to repay, and partly because it is possible to obtain a wide range of non-pecuniary benefits from relatives to whom loans are given. These may include products at discounted prices, jobs for children and friends, etc. However, once interest is permitted, the lender can avoid extended family financial responsibilities and pursue purely selfish goals by putting the cash on deposit in a bank. This undermines the family so much that it is probably impossible to find any society where interest has governed financial transactions over a long period and the extended family is still a primary social institution.

From a borrower's perspective, if there are no banks to go to, he must borrow from relatives either for business enterprise or for domestic needs. The need to borrow thus provides an extra incentive to cultivate relationships with kin, and helps to guard against growth of individualism.

1. Historically, Jews have only applied the ban to loans among themselves rather than applying it to loans to any within the countries within which they have been resident. Perhaps they have never fully identified with the countries where they have resided outside Israel, but in any event it has been a major factor in their unpopularity.

So money should be seen to be like glue. Where borrowing or lending takes place, or may take place, money cements human relationships. A family-based exterprise often provides a common interest to strengthen family bonds. God wants relationships to occur within the context of kinship and family loyalties - not thrown into the impersonal market place. Money should be an important but subsidiary part of a human relationship rather than its sole concern. Marx was right in his critique of the "cash nexus" as an undesirable sole basis for human relations.

In many less direct ways, interest also undermines the kind of society the Law is trying to create. Interest makes possible capital flows out of a region, for example. Once capital has moved out, labour soon follows. This breaks up the family unit, as it is generally the younger members of the family who move away, leaving the old behind. It is arguable that mobility of labour induced in this way is the fundamental cause of the breakdown of local and community identity, which has severe negative repercussions both for the psychological health of the individual and the possible functions of local as against central government. Interest greatly facilitates accumulation of economic power, whether in the form of large-scale housing development, purchase of large tracts of land, state expenditure, or industrial concentration.

Interest and debt also introduce an undesirable element of leverage into personal and social relationships. The writer of Proverbs says that "the rich rules over the poor and the borrower is the slave of the lender" (Prov 22:7). This has been most apparent in history where poor families in rural areas have been driven to sell their land as a consequence of debt, and seek refuge in the urban slums. Debt inexorably leads to landlessness without an institution like the Year of Debt Remission to provide respite. Landlessness and inequality of wealth at the local level undermine justice in local politics, and again strengthen the case for strong central government rather than a decentralised approach to the distribution of power in society. The same type of "lender's leverage" is evident in international relations as well. God promises that the nation which does not permit interest at home will not borrow, and thus will not be subject to rule by other nations (D 15:6). Anyone who doubts the power associated with international lending today should examine the ability of the IMF to influence domestic economic policy in Third World countries.

Another effect of the interest ban would have been to reduce income disparities in society. While the ban on interest would not prevent a single family amassing great wealth, it would slow down the rate of wealth accumulation, for money can multiply much more quickly if borrowed funds as well as own funds are available. When individual wealth can be turned into a more permanent asset in the form of land, the result is development of entrenched social and economic classes. This can occur even over relatively short periods. The restrictions on capital and land markets were mutually reinforcing in helping to prevent such social stratification from occurring in Israel. Without factor markets it is hard to see how class can emerge in a society provided that there has been a relatively just distribution of resources at the start.

A further goal in banning interest was to prevent growth of poverty. The extraordinary promise of God to prevent all poverty if His word is

obeyed is set in the context of debt relief (D 15:4-5). Christians have to see poverty as a direct consequence of Man's disregard of, and disobedience to, God's word both in public and private morality. Jesus reminds us that there will always be poverty, and thus always some disobedience to His word, although the degree may vary from one generation to another. The interest ban became an issue in Nehemiah's day owing to its direct contribution to poverty (Neh 5:1-13). In our day, the relationship between interest and poverty has been obscured by complex financial intermediaries through which money passes from the lender to the borrower. However, even today, financial markets may be a cause of suffering to the poor, as they probably contribute towards unemployment and other causes of poverty and injustice (see Section D below).

A final argument against interest is its effects on the individual. Debt is often a severe psychological burden on the individual. One of the reasons for the Year of Debt Remission is to give the individual release from that burden. The same Hebrew word, whose root means release, is used both in the passage on debt relief and in the passage on giving land rest every seventh year (D 15:1; L 25:4). Without the Year of Debt Release, the burden of debt would seem as if it would go on for ever. God longs to provide similar release from the burden of guilt if only we will accept it.

C. IMPLICATIONS FOR TECHNOLOGY AND BRITISH ECONOMIC INSTITUTIONS

Is Modern Technology Possible Without Interest?

One major objection to the idea that interest is wrong is as follows. Advanced technology like cars, aeroplane, medical drugs, and the microchip, cannot be made without huge factories. These factories, in turn, are not possible without large accumulations of capital which depend on financial markets for their mobilisation. If interest had not been allowed, this technology would not have developed. Without the technology, our lives would have been very much less comfortable and it would not have been possible to provide so much help for the poor and the sick. So how can interest be wrong?

The argument is sometimes taken a step further. Interest is the central characteristic of the Western economies. They are even described as "capital-ist". At the same time, it was those in Western countries who returned to God and His word during the Reformation. The Protestant ethic and the rise of Capitalism are linked. Technological advance, and the wealth it has brought, are an indication of God's blessing as societies have responded in obedience to His word. Interest on normal commercial terms, then, cannot be wrong or God would not have blessed the Western economies as He has.

To answer the second problem first, wealth is not always a sign of God's blessing. It is true to say that national obedience to God's word bring material prosperity. This is one of the lessons from Deuteronomy. However, the corollary does not hold. Prosperity is not always a sign of national obedience. The state of Babylon in the OT was extremely prosperous, being pictured in Daniel's dream as a golden head, but few of

us would want to argue its prosperity was due to Nebuchadnezzar's obedience to God's word. The West's present prosperity may be despite failure to heed God's word, rather than because we have obeyed it.

Returning to the first question, could we have modern technology without capital markets? This can be answered at a theological and a practical level. Theologically, God promises national blessing for obedience (D chs 29-31), so we could have great material blessing even without interest. The form of that material prosperity, however, might be different in some or many respects from the kind of material prosperity we are experiencing in the West today. If modern technology is really to our advantage, God would have given it to us even without capital markets.

At a practical level, it is difficult to determine whether modern technology would have developed without capital markets. It is not possible to rerun history. Our belief is that technological change originated through a Christian understanding of nature, rather than through the mobilisation of capital. The direction of technological change, however, was determined in part by the relative costs and availability of capital and labour, and in part by levels of market demand. If capital had been more expensive or less available, in the absence of capital markets, and markets smaller, then perhaps technological change would have concentrated on the search for new materials and techniques rather than labour displacement in larger sizes of plant. As Mumford argues:

> "Fourneyron's water turbine and the turbine windmill, could perhaps have provided the coal mine and the iron mine with serious technical competitors that might have kept this decentralized regime long enough in existence to take advantage of the discovery of electricity and the production of the light metals" (Mumford, The City in History, p. 383).

In Argentina, the dominance of large farms has meant that research stations have focussed on improving machinery performance rather than developing hybrid seed varieties (Ruttan, Three Cases of Induced Institutional innovation). This is a good example of how the relative costs of capital and labour, a consequence in turn of social structures, has affected the direction of technical change.

Many modern products could be produced with much less concentation of capital than is used at present. Italy has led the way in this regard for a number of products. Steel is being produced in mini plants in Italy. Motorbikes are produced in plants which employ less than 100 people. Almost all the work is subcontracted out to thousands of small companies (Brusco, The Emilian Model: Productive Decentralization and Social Integration). Japan depends on a similar pattern of multi-level subcontracting arrangements (Ikeda, The Subcontracting System in the Japanese Electronics Industry). This requires a high degree of regional identity as small firms depend on each other heavily for survival. For many products, the minimum efficient scale (MES) of operation with present technology is very large. However, production at a fraction of the minimum efficient scale often results in a minimal loss of efficiency and these losses are often more than compensated by lower costs of advertising and distribution. In many cases, the large scale of operation observed in industries today can be attributed more to issues of market power than to those of technical efficiency.

The ban on interest should not be seen in isolation from the whole political, economic and social system being advocated by the Law. This is characterized by large extended family support units, strong regional identity, egalitarian land distribution, and absence of central government control in domestic affairs, as well as by the absence of capital markets. It contrasts at almost every point with the modern Western economy, with its emphasis on mobility of labour, the isolated nuclear family, weak regional identity, highly sophisticated capital markets, and strong central government control of the economy. As all these factors are inter-related, it is difficult to change one without changing the rest. The profound impact of interest on the industrial, political and social system in Britain will be discussed in Section D below.

A Critique of Some British Economic Institutions

If it is accepted that interest on loans between citizens is indeed contrary to God's will, what assessment should be made of Britain's main economic institutions? In terms of the methodology developed in the paper, "Using the Bible for Social Policy", we may ask what kind of economic institutions could have developed within Britain if the ban on interest had been obeyed? In what ways would they differ in their primary functions and modus operandi from the basis on which they are established at present? Looking at this question helps to define some limited objectives for reform in the 1980's.

Banks: A ban on interest would not necessarily mean that banks would not have developed, although it would limit their functions greatly. Banks could still lend overseas, as loans to foreigners at interest are permitted by the law. They could also act as a means of protecting wealth through vaults for deposits, which was the original job of banks in the seventeenth century (see Galbraith, Money). Only gradually at the end of the eighteenth century did bank credit develop, whereby banks issued promissory notes to pay a certain amount at a certain time against the deposits they were holding. They discovered rapidly they could extend credit to a level of several times their deposits. Bank credit, and associated institutional forms like hire purchase schemes, credit cards companies and even building societies could not have developed in their present form within the framework established by the Law.

Public and Private Companies: It is not immediately obvious whether a dividend on a share in a public company represents "interest" or not. Three components of the share dividend must be differentiated. The share dividend in part represents a return for taking risk. The amount of the risk varies largely with the size of the company; blue chip shares in large companies like ICI generally involve little risk. However, in small companies the risk may be substantial. Secondly, share dividends represent a return for a contribution to management. In public companies, this is no more than nominal as shareholders can generally only express an opinion once a year at the shareholders' meetings. However, in a small private company, substantial shareholders may have a significant management role in frequent interactions with the directors of the company. Thirdly, the dividend represents a return to capital, which in essence is no different from interest. Companies have to ensure some increment in share values, as well as the dividend, to keep investors from switching funds out of shares and into bonds or bank deposits. The higher risks on shares are compensated by the higher expected returns, but the return on shares is never totally a return to risk, except possibly in the smallest compaies. From this analysis, it does seem that public companies and the stock market could not have developed within the framework established by the Law.

Pensions and Life Assurance Funds: Pension funds operate in a way which is similar to the banks in that they collect money from a large number of savers. However, instead of using these funds primarily to provide loans to the business sector, they use their funds to buy land, buildings, and shares to provide steady capital appreciation and income over the long term. They then pay out pensions to the elderly based on the funds accumulated from these investments. They are like the banks in that they are an impersonal intermediary between lenders and borrowers; the financial transaction creates no social bond other than the "cash rexus". The payment of the pension represents again primarily a return to capital employed, rather than a return to risk-taking or management.

Do pensions represent a form of interest payment? Without interest it would be possible to have some form of pension fund within the framework given by the Law, but the fund would act essentially as a means of safeguarding assets. It could not play the role of a financial intermediary without interest as it would have no incentive to lend on. Equally, the individual would have little incentive to put money into such a pension fund as opposed to directly using his funds himself. Also, pension funds would have been most unlikely to develop within the OT framework as the extended family with its fixed landholding and strong local bonds provided a form of social security system which did not require the operation of huge and impersonal money markets.

Government Borrowing: The British Government spends above its income. In 1982/83, its spending is estimated to be £126bn. Tax and other revenues total about £116bn (Government Expenditure Plans, 1983). The difference between income and expenditure is financed by the so-called "public sector borrowing requirement" (PSBR). The Government issues bonds, which are pieces of paper which promise to pay to the individual saver a certain amount at a certain date in the future. For example, an individual can buy a bond at the cost of £80 in 1980 and the Government will guarantee to pay him back £100 in 1990, plus a fixed interest rate in between. This conforms to one of the types of interest, the "bite", which is specifically forbidden in the OT Law. It seems that Government borrowing, as distinct from direct and indirect taxation, could not have occurred in the framework of the OT model, partly because there would be no basis for repayment without interest, and partly because they imply a role for the state which steps outside the boundaries prescribed by the Law (see "OT Political Structures" paper).

The Co-operative: The co-operative comes closer to meeting the biblical criteria although it still separates ownership from management. The owners of shares in a co-operative seek a return on their capital through their shares, just as in a limited company. However, their involvement in the company is generally greater than those of public company shareholders; they may be consumers in a consumer co-operative, or farmers in an agricultural marketing co-operative. In either case, the aim of the enterprise is still to maximise returns to capital, which goes to the shareholders on the grounds that they are the ones who own the capital. Also, co-operatives often undermine the family, as do public and private companies, by taking on economic functions which should be carried out by the family, and which thereby weaken the family's source of cohesion.

The Family Business and the Partnership: Two types of business which did exist in the OT, and are consistent with the biblical model, are the small family business and the partnership. Because there is no separation of ownership and management, there is no distinct and separate payment to capital. In a unique sense, the business operates for the benefit of the family members or partners, and is thus human-centred, rather than aiming to maximise the returns to capital. In a family business, "the family so allocates costs, benefits and risks as to maximise expected utility to the household, not profits to the enterprise" (Lipton, Family, Fungibility and Formality, p. 2). Only when a family business grows very large will it correspond more closely with a capitalist firm and start to maximise returns to capital just like a public company. In the OT model, business size would have been restrained by the structure of the land and capital markets, but there is no space to explore this fully here.

D. CAPITAL MARKETS AND INDUSTRIAL STRUCTURE

How Capital Markets Promote Industrial Concentration

The early economists of both the Right and the Left debated the benefits of markets for economic growth. In the Wealth of Nations, Adam Smith advocated atomistic competition as the most effective way to control individual greed and selfishness. However, he failed to anticipate the effects of capital and land markets in encouraging concentration of power in the use of resources, and the effects this would have on competition. Marx, on the other hand, realised that control over resources, "the means of production", was crucial for the economic growth process and the distribution of its benefits. He even anticipated the growth of concentration which would occur in the industrial structure. However, he attributed concentration to declining profits, as a result of capital accumulation in the form of machinery, rather than to the modus operandi of capital markets. Thus, he failed to attack Capitalism at its roots, which are the markets for capital and land, and recommended institutional forms which would perpetuate concentration of power in the hands of the state.

The mechanisms by which capital markets contribute towards industrial concentration are complex, but in outline are as follows:

(i) Large companies are able to obtain funds at lower cost (= interest rates) than small companies. This is primarily because they offer opportunities for a return on capital at lower risk for those allocating funds in the capital markets. A large part of the growth of the large companies has been due to preferential access to capital from financial intermediary institutions such as pension and insurance funds which have a preference for investment in companies quoted on the Stock Exchange. Cheap debenture finance and the subtleties of tax legislation have also provided powerful incentives for company amalgamations. As Prais puts it:

> "The vast funds placed at the disposal of these institutional intermediaries, by being invested preferentially in large quoted companies, have contributed to financial pressures which have encouraged the formation of large industrial groups". (Prais, The Evolution of Giant Firms in Britain, p. 135).

(ii) Capital and land markets also foster the growth of the large firm in a number of indirect ways. Markets for land and capital are essential to achieve large-scale urban structures such as high rise buildings and housing estates, which favour techniques of large-scale mass production and distribution. Concentrated markets have also been important for development of techniques of mass advertising, which again would have less impact among a more dispersed population. Capital markets have also contributed to the growth of government control over the economy, which in turn channels resources towards the large company sector through its procurement systems.

Growth of Concentration in British Industry since 1930

Since the 1930's, there has been a gradual increase in levels of concentration in British industry, with the trend accelerating rapidly since the 1960's. For example, the average size of plant in Britain has grown dramatically since the 1930's. Before the war, half of manufacturing employment was in plants employing 70 to 750 employees, but by 1968 the corresponding range ran from 130 to 1,600 employees, while the number of smaller plants employing ten or less employees fell from 93,000 in 1930 to 35,000 in 1968 (Prais, The Evolution of Giant Firms in Britain, p. 51). Britain has a particularly small number of small plants. In the 1960's, the proportion of manufacturing establishments with less than 100 employees was 53% in Japan, 53% in Norway, 27% in USA, but only 20% in the UK (Gibbs, Industrial Policy in More Successful Economies - Japan, p. 31). Germany has five times more plants than Britain with four employees or less.

The share of the hundred largest enterprises in manufacturing net output in the United Kingdom has risen from 22% in 1949 to 40%-41% in 1970 and is estimated at nearly 50% in 1976. Projecting from these trends, between 1978 and 1988 the share of the largest enterprises would have risen to two-thirds of manufacturing net output unless there is some significant change in industrial policy (Prais, Productivity and Industrial Structure, p. 7). Germany's level of concentration was only two-thirds of the UK level in 1968, and in 1970 even the US level was approximately 80% of the UK level; by 1976 a third of all industrial companies in Western Europe with turnover exceeding £250 million were based in the UK (HMSO, A Review of Monopolies and Mergers Policy).

The five-firm concentration ratio based on sales by Standard Industrial Classification in 1972 is given in the Government's 1978 Green Paper (HMSO, A Review of Monopolies and Mergers, pp. 56-58). In 80% of the 158 industries examined, the concentration ratio exceeds 30% and in 54% exceeded 50%. Taking foreign trade into account lessens the degree of monopoly power, but 78% of the 144 industries for which data on imports and exports were available still had a concentration ratio in excess of 30%, and 47% a ratio exceeding 50%. This means that in well over half, and perhaps in as high as four out of five industries, there is likely to be a significant degree of market power arising from the degree of concentration.

A particular problem of concentration arises from "buyers' concentration" in retailing. The gory details are laid out in the same 1978 Green Paper. Even by 1971, multiple retail chains accounted for half the turnover sold through organisations other than co-operative societies for dairymen, off-licences, footwear shops, men's and boys' wear, women's and girls' wear, household textiles and general clothing, radio and TV hire and variety and general household stores. Multiples accounted for half the turnover sold through bakers, chemists and photographic dealers and department stores. By 1976, the top five grocery outlets held 44% of turnover, and the top fifty held 90%. By 1983, the largest six retailers held 64% of turnover, with their share continuing to increase at 1%-2% per annum (Financial Times, January 1984).

In the financial markets, the degree of concentration of power is even more alarming than in manufacturing. In 1957, institutions (insurance companies, pension funds, investment companies and unit trusts) accounted for 18% of all quoted UK ordinary shares. This proportion rose to over 40% in 1973, and has probably risen to two-thirds of all shares by 1984 (Prais, The Evolution of Giant Firms in Britain, p. 120). This has important implications for society as a whole, as it puts control over industrial activity into the hands of a small number of individuals. It seems naive to assume they will never use this power unless effective systems of accountability can be defined. And such systems of accountability are difficult enough to identify, let alone implement.

E. INDUSTRIAL CONCENTRATION AND HUMAN RELATIONSHIPS

God's concern in the Law was primarily with human relationships. Jesus said that the whole of the Law and the prophets depend on the two commands to love God and neighbour (Matt 22:34-40), and love defines a particular type of human relationship. In this section, we shall try and trace some of the major problems in relationships in British society back to the markets for capital, which have now been largely uncontrolled for several hundred years.

Relationships between Firms

A major consequence of industrial concentration is to produce a huge imbalance in the size of firms operating in a particular market. When large and small firms are in competition, large firms bully small firms. This bullying is not of an occasional and harmless type, but acts to permanently restrict the ability of most small firms to expand their operations and sales. It arises not because managers of large business are inherently any nastier than the rest of society, but because the interests of the firm and the pressures of the competitive system demand such behaviour. The ways in which this bullying take place have been documented in MMC reports at length, and make a formidable catalogue:

- restrictions on supply to certain outlets
- restrictions on sale of competitors' goods
- restrictions on supply of inputs to competitors
- full-line forcing
- tie-in sales

- loyalty bonuses to retailers
- aggregated rebates
- exclusive dealing
- overriding discounts

This is by no means a complete list. Williamson believes that few outsiders appreciate the wide range of informal sanctions which businessmen have access to, and illustrates these in a number of ways in the context of contractual arrangements. He refers to the way business reputations are handled, which is so vital in determining capital costs to the firm, the subtleties of information exchange, the use of vertical integration to increase the capital requirements to entry, and countless subtle forms of price discrimination. Firms may even "integrate forwards into the more elastic market in order to preclude arbitrage between it and another market to which the firm wishes to charge a higher price" (Williamson, Markets and Hierarchies, pp. 107-116).

The volume and direction of advertising "noise" is another powerful weapon of the large firms' battery against small business and to restrain entry. For example, large firms may react when small firms advertise and thus destroy their returns from advertising. Increases in advertising levels can be used at a local, regional or national level to undermine a competitor, and the threat of heavy advertising can deter new entry particularly easily. There is little evidence of economies of scale in advertising, although Comaner and Wilson conclude that some messages distributed in certain media are not perfect substitutes for those distributed in others because of differences in audiences reached. Disadvantages created by failure to realise discounts in some media may not easily be avoided through a greater reliance on others (Comaner and Wilson, Advertising and Market Power, pp. 61 and 218). However, selective and temporary increases in advertising expenditure are a powerful weapon against smaller competitors.

The key point about these uncompetitive practices by large firms is that they are extremely difficult to document, and generally impossible to legislate against. Exclusive dealing may be an anti-competitive device when operated by a dominant firm, or may be a means by which a new entrant can gain a foothold in the market. How it is possible to distinguish predatory pricing (or output expansion) from promotional pricing; it is generally impossible to assess the motivation for a price cut (Demetz, AER, March 1982, p. 47). The Green Paper in 1979 on Restrictive Trade Practices (p. 55ff) defines the common characteristic of these "uncompetitive practices" in terms of a degree of market power required over some product or some geographical area to make them effective, and argues that they are impossible to define accurately and exhaustively for legislation without imposing large burdens on industry. However, the alternative of trying to prevent concentration of power in the hands of huge companies as a means of restraining unjust business practices was not considered.

The prevalence of large firms and large plants also creates high barriers to entry in terms of the absolute level of capital costs required to start a small business in many sectors of the economy. Bain measures the barriers to entry by the percentage by which established firms can raise price above a specified competitive level without attracting new entry. (Bain, Barriers to New Competition). Baumol also does not consider entry barriers from the perspective of a small firm in his discussion of "contestable markets", for he defines freedom of entry not in terms of

the absolute cost of entry, but in terms of the entrant suffering no disadvantage after entry relative to incumbents in terms of such aspects as perceived product quality (Baumol, AER, March 1982, p. 3). However, from the small business viewpoint, the height of the entry barrier can be measured by the absolute level of capital required to produce and market a product of comparable quality, at a comparable price, with comparable exposure, as incumbent firms. An example of absolute cost levels being an effective barrier to entry to the small firm is in advertising, where national television by a large incumbent may effectively preclude a new entrant who only has sufficient capital available to launch his product on a regional basis. The absolute size of the incumbents in a market is also a critical issue in determining the degree of market power which can be brought to bear against the new entrant by the use of advertising, and various non-competitive techniques described above.

Relationships within the Firm

A consequence of large firm size and industrial concentration is the large size of plant noted above, and a result of large plant size is all too often an unhappy relationship between managers and workers, which in turn results in low productivity and poor economic performance. The level of strikes is one measure of the extent to which this is the case. Official strike frequency in Britain is almost directly proportional to size of plant. The burden of strikes in larger plants is heavier in three respects: the chance of having a strike-free year is lower, the expected number of strikes per year is greater and the number of days lost per year is greater (Prais, 1981, p. 63). The extremely severe strike problem in Britain relative to Germany and the US is primarily in the very large plants; in smaller plants, Britain's record is comparable or better. However, one of the important distinctions between Britain and Germany is that most strikes in Britain are unofficial. A survey of strikes of all sizes and other forms of "industrial action" indicates that for manufacturing industry in 1976-77 the total number of strikes (including those below the official minimum) was six times the number published by the Department of Employment (Edwards, 1980).

Poor relationships between management and unions have resulted in low productivity in British industry in several other ways. Disputes over wage differentials for higher skills have inadvertently contributed to the acute shortage of skilled manpower, which is repeatedly noted as a major problem of raising productivity in industry. In a CBI survey on innovation and competitiveness in smaller companies, two thirds of these companies, each with less than 1,000 employees, complained of a shortage of skilled manpower (CBI, Innovation and Competitiveness in Smaller Companies ~25). This is of special importance in the context of the rapid technological changes associated with information technology. Lack of highly skilled manpower ironically leads to lack of employment opportunities for the unskilled. While poor work relationships cannot be held solely responsible for the shortage of skilled manpower, it is a major contributory factor.

Disputes between labour and management have also held down productivity in two other ways. Frequently, it has delayed and obstructed introduction of new technology, especially where there are reductions in manpower involved. Classic examples of sectors affected are printing, tyres, engineering construction, metal containers, steel, coal, and the

railways, but the influence has been pervasive throughout British industry. The total impact of this opposition is difficult to measure, but sector studies suggest the consequences have been substantial. Secondly, British industry's relatively low levels of utilization of capital stock may be attributable in part to poor labour relations. Shift work is lower in Britain than in the US and Germany for plants of similar capital-intensity and is growing more slowly (Prais, 1981, pp. 52-58). While part of the reason for this is availability of transport to work, and thus relates to urban structure, a part of the reason is probably lack of flexibility in industrial relations to substitute shift work for other more remunerative forms of overtime payment to those already employed in the plant.

In aggregate, the consequences of unhappy relationships between management-labour are disturbing. For identical cars assembled in plants in Britain and Europe, it takes almost twice as many man-hours to assemble the same or comparable plant and equipment in Britain as it does on the Continent (Cabinet Office, The Future of the British Car Industry, p. 78). As disputes are concentrated in larger plants, the solution appears to be to decentralise production from large plants to small plants, and from large companies to small companies. How this could be done in practice is outlined in the next section.

The Role of Government

Capital markets have contributed in a major way to the increased role of government in the economy in the last 50 years in at least two ways. Firstly, government needed to intervene to ensure large companies did not behave in a way contrary to the public interest. Chamberlin in the USA and Robinson in Britain worked independently but at the same time to show that in reality firms do not operate in the efficient and optimum way assumed by neoclassical economics. In many situations there is not the assumed perfect competition, but rather monopoly power or only a few sellers or buyers in the market. The consequence of the limited number of buyers or sellers is to make the producer try and reduce production and raise price to increase his profits. Alternatively, he may try and create artificial demand through advertising. The only way to control the behaviour of these large companies is by government intervention. Local government was too small to deal with the giant companies, so political power had to become more highly centralized to handle the power centres of the economic system.

Capital markets, perhaps, should also bear the blame for the so-called "liquidity trap" identified by Keynes, which led to such extensive government involvement in the economy since 1945. Neo-classical economists like Marshall believed that a capitalist economy would always achieve full employment. If there was any unemployment, wages would fall, so that with cheap labour employers would offer more jobs and this would restore full employment. Then came the great depression, with long-term unemployment of a major part of the workforce throughout most of Europe. Keynes argued that the so-called "Say's Law" - what is produced is consumed - would not always hold true. In a situation of falling prices, people might prefer to hold on to money rather than spend it, in anticipation of further falls in prices. And businessmen might rather postpone spending money on new investment in anticipation of future low sales. This would then lead to a self-reinforcing downward spiral, with low sales leading to unemployment, leading to low incomes, leading to low consumption and low investmet, leading to lower sales, etc.

The answer to this problem Keynes saw in government spending (deficit financing), for example in housing, medical facilities or education. This would raise the demand for goods and services, and hence employment. The spiral outlined above would then be an upward spiral back to full employment. After full employment, as Keynes pointed out but most have ignored, government spending would lead only to inflation. Keynes' analysis provided further rationale for government intervention in the economic sphere. Specifically, it provided the theoretical economic justification for efforts to equalise incomes in society through government provision of social services, the so-called "Welfare State".

The question remains as to whether there would be business cycles and "depressions" if there were not capital markets. It can be argued that inflation, recessions and expansions of the economic system result from changes in the rate of credit expansion, which in turn depend on business confidence. In the sort of decentralized society envisaged by the OT Law, where savings and investment remain within the same locality and kinship group, and where money is a "real" commodity, there is no possibility of a "liquidity trap". There would be undoubtedly other difficulties, such as those of achieving technical progress and material dynamism, but not the difficulties caused by the complexities of the monetary system.

The consequences of large-scale government intervention in the economy for the structure of human relationships in Britain have obviously been profound, especially for the family. Government has taken over from both the church and the family responsibility to care for the poor, the old and those unable to cope with life. This has weakend the family as an institution profoundly, so that the family is increasingly regarded as a social contract which is only of value if it gives the individual more than he puts in. The high levels of government expenditure have tended to channel resources even more towards the large companies which find it easier to handle government bureaucratic procedures. Perhaps most profoundly, individuals now look to government to solve social problems such as unemployment, rather than looking to God and attempting to solve them themselves.

Family, Community and the Individual

Industrial concentration has also had severe negative implications for family and community life. Some of the indirect effects of the system are difficult to document but the general line of causation appears clear enough. Huge companies have disrupted family life in two direct ways. Firstly, they have been instrumental in bankrupting countless small family businesses. For example, the number of independent retailers declined from 97,000 to 45,000 from 1970 to 1980 (Independent Grocers' Association, p.). Many of those which went out of business were probably family businesses. No doubt there were advantages to the consumer in lower prices. But society took no care to look after those who were driven out of business by the giant industrial steamrollers. In Japan, when a large supermarket moves into a town, all concerned parties meet together to discuss how the small retailers will survive. Some will be given grants to raise efficiency; others will be helped to find alternative employment. In Britain, we allow "the market" to operate; less euphemistically, we do not care when small family businesses are driven to the wall.

Secondly, the large companies have disrupted family life by requiring their employees to move from one town to another so frequently. This is regarded as an essential part of personnel training and experience. But the effects on the family, and on neighbourhoods, have not been taken into account. They do not show up on the balance sheet, except perhaps indirectly in the higher levels of taxation required to meet the escalating costs of social services to look after those who cannot cope with it. Mobility is associated with marriage breakdown and loss of neighbourhood identity. It compels government to centralise responsibilities as there is no cohesive group at the grass roots to which vital tasks of welfare and community responsibility can be delegated. In addition, huge plants have contributed to the development of the large cities, which have spawned loneliness and moral anonymity.

Large companies have also undermined individual self-determination. The huge hierarchies of the large companies breed a bureaucractic mentality. The right decision is the one which pleases the boss. This affects the willingness of individuals to start new businesses. Fothergill and Gudgin found large industries seldom produced the individuals who started new businesses. This shortage of willingness or ability to shoulder risk is recognised as a major factor causing unemployment. It also affects willingness and ability of the individual to respond to the gospel. Those who have never felt the responsibility of managing their own economic affairs do not understand the importance or significance of managing their spiritual affairs. They do not reject Christ; they never even realise that they need to make a decision about Him.

F. SOME WAYS TO DECONCENTRATE THE INDUSTRIAL STRUCTURE

Is Large-Scale Production Required for Economic Efficiency?

The chief argument for both large firms and large plants in the popular imagination are engineering-type scale economies. Huge plants are needed to produce at the lowest possible cost. There may be a strong case for this in a few industries such as chemicals, but in how many industries is this the case, and how large are the cost savings involved? In the statistics of engineering-type estimates of minimum efficient scale noted in the 1978 Green Paper, for 13 out of 47 products or product groups considered the minimum efficient scale was 5% or less of the UK market, and in 29 out of 47 minimum efficient scale was 20% or less. However, even for those industries where minimum efficient scale is larger than 20% of the UK market, several other factors are important to consider:

(i) The percentage increase in costs due to operating below the minimum efficient scale is often very small. Scherer estimated that for 9 out of 12 industries he studied, the cost rose less than 10% for operating at one-third of optimum scale and for 4 of 12 the cost penalty was less than 5%. For 28 industries listed by Utton, 12 involved a cost penalty of 5% or less for operating at 5% or less for operating at 50% of minimum efficient scale, and for 20 out of 28 a cost penalty of 10% or less. Given the additional advertising and distribution costs of selling the additional out-

put, and the additional costs associated with labour disputes in large plants, possibly engineering minimum efficient scale provides an overriding argument for large plant and firm size in only a small number of industries.

(ii) As the 1978 Green Paper also points out, the case for large plant and firm size on the basis of scale economies can be overstated for two other reasons. There is a large market for specialist products within major industrial categories, such as for sports cars, clothing, etc. Also, most engineering-type scale economies are as realisable in a number of closely associated plants as in a single plant. Studies on subcontracting in Italy in textiles and motorbike manufacture (Brusco), in the UK on washing machine manufactures (Shaw and Sutton), and the electronics industry in Japan (Ikeda), bear out this conclusion. All but five industries in the Green Paper with a minimum efficient scale of over 20% of UK market sales appear to fall into this category.

The key issue in the discussion on engineering minimum efficient scale and the large plant is the extent to which technology dictates large plant size. Apart from major process industries such as chemicals, aluminium, steel, ammonium nitrate and sulphuric acid, engineering minimum efficient scale does not appear to dictate production in a single large plant size. In Williamson's terminology, "technical nonseparabilities" are much less widespread than is commonly believed, and this was also Florence's conclusion. Even for some of the process industries, the cost penalty of going to 50% minimum efficient scale is very small, for example an estimated 1% in the case of sulphuric acid or 8% in the case of steel wide strip rolling works. These cost increases are probably small relatively to the productivity gains now possible in the absence of obstructive labour relations. There is apparently great scope to reduce firm and plant size in the UK without incurring major cost increases in terms of engineering-type scale economies.

As was noted above, Britain has a relatively small number of small firms. Germany had five times as many firms of less than 5 employees as Britain in 1972 (Prais, 1976). In 1978, Italy had 200,000 firms of less than 50 employees in the "mechanical sector" alone, and of these 182,000 had fewer than 10 employees (Lovenzoni, Subcontracting in Italy, p. 1), whereas the UK even back in 1963 had only 27,000 establishments with less than 10 employees. (Prais, 1976, p. 159). Prais notes similar high differentials in 1963 between the UK and other EEC countries.

Subcontracting as a Means to Reduce Firm Size

There are three main reasons for examining the potential to increase the level of subcontraction in the British economy. Firstly, available evidence from both Italy and Japan suggests that subcontracting is associated with high levels of productivity, and makes possible very rapid rises in productivity. In Italy, subcontracting developed in response to extremely strong union power which made it virtually impossible for employers to hire or fire anybody. Workers now have to choose between self-employment with extremely hard work, involving high motivation, with high wages, or employment in a large plant, with less work and lower pay. In both Japan and Italy, subcontracting has provided an environment in which poor relations between management and labour do not delay or obstruct introduction of new machines, or techniques, even where large labour-saving is involved. Industries using subcontracting of this type are far better prepared in terms of industrial structure to meet the demands of the information technology revolution.

The advantages of subcontracting for high productivity are particularly evident in periods of labour displacing technological change, or externally-induced recession. Ikeda's description of the subcontracting system in the Japanese electronics industry illustrates how the adjustment was shifted down from the parent company to the subcontractors, who were able to lay off tens of thousands of employees between June 1974 and June 1975 in response to the international recession following the oil price rises in 1974. Such flexibility is not possible in a huge British manufacturing plant. Similarly, in Italy, Brusco argues that poor performance in one firm and successful development by another means Italian subcontractors simply switch customers from one company to another. The process of adjustments is doubtless painful for those involved, but probably has lower social costs over time than the British pattern, where successful plants are reluctant to take on additional labour because they fear it may be difficult to reduce the labour force again in the future.

Secondly, using so-called "transfer technology", it has been possible for large firms to lower overheads substantially through subcontracting. Large firms which have developed new processes supply the technology in the form of specialised machinery to the subcontractor, who may either rent the machinery, or may be compelled to buy it in certain circumstances. This involves capital savings to the parent company both in terms of space on the factory floor, and in terms of investment in fixed capital equipment. This may be a social as well as a private gain if it brings about a higher level of savings in the economy than would otherwise have occurred. Subcontracting obviously requires a large number of small workshops, in a relatively small geographical area. Thus, it is no accident that in both Italy and Japan the subcontracting is discussed in relation to agricultural areas with low density of population relative to the great conurbations. The urban structure in Britain makes some regions much better suited than others to develop these kinds of subcontracting arrangements, and it is precisely these regions which are showing the most rapid employment growth in the 1970's, even after adjusting for differences in industrial structure (Fothergill and Gudgin, Unequal Growth). A move towards subcontracting will require long-term changes in urban structure, which we have argued elsewhere is important to provide care for the disadvantaged with dependence on central government (Family Policy in OT Israel).

Thirdly, subcontracting is of great significance in providing the starting point for new businesses, and thus in providing new employment opportunities. In the UK context, this was noted by Fothergill and Gudgin, who estimate that 60% of engineering firms, and 35% of the others in their sample of 10,000 firms in Leicestershire, started with subcontract orders. They note the vital importance of small firms as an entrepreneurial training ground, "entrepreneurs need appropriate training, as do people in most skills. Very small firms probably provide the most effective training since the owner sets a direct example to his employees". A corollary of this is that few new firms are set up by people from large plants. In Italy, Brusco notes the ease of both the transition from worker to subcontractor, and from subcontractor to direct contact with the market, and sees the subcontracting system therefore as a "forcing ground for entrepreneurship".

The subcontracting system is not without its problems. In Italy, it often overlaps with the black economy. Many small enterprises avoid paying tax and meeting other regulatory requirements. There is also huge growth of the black economy in Britain (Feige, The UK's Unobserved Economy, pp. 205-212), so that a key decision for government is whether to fight it, or join it in the sense of legalising it. The subcontractors in Japan are allowed to operate very close to the black economy. Bureaucratic regulation is kept to a minimum, and corporate tax is only 6%. Thus, the gains from illegal activity are far lower than in Britain. A second danger is that subcontractors can be no more than an extension of the large firm's production facilities, with little real autonomy in decision-making. They may retain legal independence while losing operational independence. Daimler-Benz claim that maintaining the operational independence of their subcontractors is a major goal in their huge subcontracting operations (Daimler-Benz, Relationships with Business of Small and Medium Size). A recent study of two industrial sectors in Britain concluded that nearly half of those from whom responses were obtained could probably be classified as having lost a measure of operational independence. However, at least half retained operational control of their businesses (Blois, Large Customers and Their Suppliers, pp. 281-290).

How extensive, then, is the potential for subcontracting in British industry? The question should include the potential for franchising and other means of allowing large firms to give a measure of independence to the workforce and thus raise productivity. Porter and Spence suggest on theoretical grounds a number of areas where vertical integration rather than subcontracting could be expected, such as where inputs are highly specialised to a particular manufacturer because they have special attributes such as durability, design, performance limits, etc. However, the range of industries currently operating with extensive use of subcontracting covers a wide range of products including electronics, vehicle and motorbikes, washing machines, machine tools, packaging and agricultural machinery, etc. The potential for its application in Britain, in terms of the range of industries where it could be promoted, potential labour productivity gains, and the policies required to facilitate its rapid introduction, deserve urgent, careful study, especially in the light of the changes being introduced by information technology.

Small Firm Co-operation as an Alternative to Large Firm Scale Economies

A number of advantages accrue to the large enterprise which arise over and above the plant-level scale economies discussed above. Some of the main ones found in the literature may be listed as follows:

(i) Economies of scale in marketing, transport and finance, and in overheads such as top management. There are also scale economies in bulk handling and work in progress. In combination, these lead the authors of the 1978 Review of Monopolies and Mergers Policy to conclude:

> "Where multiplant operations involve horizontal and vertical integration, it is the interaction of plant level scale economies with overhead costs, transport and marketing costs, which determines optimum plant size" (p.).

(ii) Research and development is of special importance owing to its role in international competition in manufactured products. Galbraith has argued that only large firms can be involved owing to the large absolute costs, and because firms must have sufficient control of their markets to reap the rewards of their research (in American Capitalism). Schumpeter also argued that market power was conducive to technological change as the additional profits provide funds for investment in research and development, and creating new capacity to embody new technology (in The Theory of Economic Development).

(iii) Large firms have access to finance at lower costs, which in part is due to lower risks to investors, and lower transaction costs for investors in obtaining information required to make the investment.

(iv) Rationalization of existing firms in a declining industry creates large firms and is believed to be preferable to continued competition.

(v) Large size is believed necessary to compete against other large firms in the context of international trade, and especially in the EEC.

(vi) Conglomerates also lower costs in some instances, as they allow resources to be pooled across industries in different cyclical patterns.

(vii) Although one-third of the growth of giant firms can be attributed to mergers, the remaining two-thirds comes from internal growth. A normal distribution of growth rates in any firm-size group will result in some firms growing extremely large over time unless either they split into small independent cells as they expand, or there is some factor in the market to discourage very large size.

A number of the advantages attributed to large firm size could probably be realised by joint action and co-operation among smaller firms, if this were permitted under the Restrictive Trade Practices Act. The highly efficient administration of the Restrictive Trade Practices Act, with 3,078 agreements terminated out of the 3,678 registered by December 1978, has inhibited joint action by firms, and thus encouraged mergers and growth of the individual large firm (HMSO, 1979). It is an amazing anomoly in British policy that mergers are allowed if they do not lead the merged firms to have a market share of over 25%, but marketing arrangements are disallowed even if the agreements in total cover no more than ½% of the market. Similarly, joint action is possible in raising finance and in services such as accounting, as happens among small firms in Italy (Brusco), and even possibly in research and development, although it has been difficult to find examples of this occurring in practice. Certainly the usual firm-level economies of scale of purchasing, marketing and transport can be obtained from joint marketing arrangements as demonstrated, for example, by joint marketing of agricultural products by independent farm producers in Scandinavia.

The extent to which innovation depends on size of enterprise is particularly complex. A recent OECD report lists both the advantages and the handicaps of small firms (OECD, Innovation in Small and Medium Firms). Small firms are handicapped by lack of highly qualified engineers and technicians owing to lack of resources, have problems in information and communication with the outside world, find it harder to obtain funds, and suffer from their small bargaining power in the market and in dealings with government. On the other hand, their advantages include greater incentives to improve established products, less internal bureaucratic delays and greater motivation and creativity. The empirical evidence suggests innovation is spread widely across firm size, but with a higher proportion in small firms in some sectors and in large firms in others. Only in sectors where small firms have a market share of less than 20% do they sometimes have a negligible share of innovations. It is impossible to know how small firms would respond to innovation in these sectors if their market share was greater. A decision to split up large firms would probably need to examine especially carefully how to avoid negative repercussions on research and development expenditure and rates of innovation in certain sectors.

The importance of rationalizing declining industries, and even the whole argument for scale economies in large enterprises, is brought into question by the experience with mergers policy. The 1978 Government Green Paper, despite its general conclusions in favour of large-scale enterprise, concludes with respect to mergers, "mergers are often found to be unprofitable by those carrying them out, and little in the way of efficiency gained seem to be realised", and also, "the evidence suggests that, in the minds of managers at any rate, considerations of market power rather than firm level economies of scale, were the main motive for merger". Shareholders may not even benefit from mergers in declining industries if joint marketing agreements are permitted: if each firm is a multiplant operation, the benefits of mergers over joint marketing agreements are at least open to question.

At a more theoretical level, Williamson has argued that the main advantage of hierarches (in large firms) over against market-mediated vertical linkages is that hierarchies lower transaction costs. This is because they allow adaptive, sequential decision-making without the risks of opportunism inherent in small numbers supply relations, which occurs with recurrent short-term contracting. Also, hierarchies have advantages in coding and experience-rating abilities. Williamson argues that these advantages are most in evidence in hierarchical relationships of high complexity or uncertainty. However, hierarchies often have associated disadvantages, which include pursuit of personal or subgroup goals rather than systems goals, and information distortions due to the incidence of personal opportunism in the information chain.

It is impossible to measure the net effects of all these factors. However, it is probably no accident that organisation of small firms to carry out collectively functions elsewhere carried out mainly by larger firms is generally associated with a higher degree of regional identity and loyalty, as in the cases of Italy and Japan referred to above, and also in Spain (Campbell, Worker Owners: The Mondragon Achievement). In such situations, the costs and risks in small numbers supply relations in recurrent short-term contracting may be attenuated by the long-term loyalties implicit in regional identity. This is probably associated with the social pressures which lead to moral behaviour in small communities.

Despite some unanswered questions about innovation in some sectors, it does seem that a real choice exists between having market power vested in single large firms, or market power in the joint marketing agreements of small independent producers. Although both monopolies and mergers policies and restrictive trade practices legislation were reviewed simultaneously in 1977 - 1979, it is curious that the choice between these two alternative sources of market power, and the alternative means they represent for gaining marketing, financial and other such economies of scale, was never examined.

G. CONCLUSIONS AND A POSSIBLE POLICY PACKAGE

Even though we have argued that interest is contrary to God's will, we do not believe it should be abolished immediately in Britain. The suffering it would cause to the poor and needy would far outweigh the benefits it would bring. Jesus emphasized the importance of obedience to the major principles of the Law rather than to its letter (Matt 23:23). When people tried to interpret the Law so it precluded "doing good" on the Sabbath, Jesus was angry with them (Mk 3:1-6). So, too, we may conclude that the effects of trying to ban interest on domestic lending immediately through its effects on such things as unemployment and abolition of pensions provisions, would cause considerable suffering and would not glorify God. It was only when the purity of Israel's faith was at stake that Nehemiah was willing to push through the sort of radical reforms which caused widespread and immediate suffering to a significant part of the population (Neh 13:23-28). However, this is no excuse for complacency. We still have to seek to see God's word obeyed in society. Even the smallest details of the Law concern God (Matt 23:23), and disobedience to God's word due to the sin of previous generations still requires that we seek God's forgiveness as a nation or a "generation" (e.g. 2 Chron 30:1-2, 19-20).

This paper has tried to identify some of the major consequences of interest on British industrial structure, and then identify the sort of measures which might mitigate some of its worse effects. The focus has been on policies to reduce the size and power of the large companies, and to stimulate small and especially family businesses at the grass roots. Only when the institutions of family and community have been reconstructed effectively would it be possible to try and phase out interest altogether.

The key means to achieve these goals are perceived to be, firstly, to encourage subcontracting by the larger companies, and, secondly, to increase the ability of small firms to compete with large firms. This requires that joint action by small firms be allowed, and even encouraged, and that large firms are split up into smaller units. The ways in which this could be achieved in some instances have been discussed before, and in others can be learnt from a study of policies in other industrial countries. A study group needs to be set up to design a policy package to achieve the above objectives. This package might include some or all of the following, which are not intended to be an exhaustive list:

(i) Strengthen the mandate of the MMC. The 1978 Green Paper wants the MMC to have a "neutral" approach to mergers. This analysis suggest that MMC should have a "negative" approach, so that mergers are only permitted if they can be

shown to be positively in the public interest. It should also have as part of its brief to make recommendations on ways in which to reduce the size of huge firms and conglomerates, and ways to legislate against anti-competitive practices.

(ii) Relax the Restrictive Trade Practices legislation by exempting firms with less than 20 employees from its provisions. A major anomoly exists at present whereby: mergers are allowed, provided the new company does not control over 25% of a particular market, but joint marketing is not allowed even if it results in control of just 1% of the market. Finding a way to relax the RTPA, without in fact strengthening the power of the large companies, is essential if small firms are to be able to realise distribution and marketing economies of scale.

(iii) Provide incentives for company divestment. A number of fiscal incentives could be given to hive off subsidiaries. This can be done by issuing shareholders in the parent company with shares in the hived-off parts. Gradually, over time the two companies have different ownership as shares are traded separately for the original company and the hived-off sections. In addition, large firms should be required to disclose profits by plant and division so that it is no longer so easy to conceal profitability. The information is generally available to the company owing to its internal audit procedures. This would also provide the information required by investors if the company decided to split in the future. Also, overlapping directorships should be prohibited, as in the US.

(iv) Lower Corporate Tax on firms with less than 10 employees to levels close to zero. This has been the policy in Japan, where the level of corporate tax is 6%. This greatly reduces the incentives of very small companies to operate in the black market. Also, it puts companies with less than 10 employees in the same position as non-limited companies, to reduce bureaucratic demands. These measures would increase the profitability to large companies of subcontracting, as it would lower the rates of pay required to remunerate subcontractors, relative to pay levels internal to a large company-owned plant.

(v) Allow universal registration for VAT, but make zero-rated for VAT the sales of companies with a turnover of up to, say, £100,000, and stepped thereafter. This would put subcontractors in the same position as farmers with respect to VAT, and would provide another major incentive to large companies to subcontract work out.

(vi) Put tighter limits on national TV advertising time and promote regional advertising forms as in Germany, so as to encourage regionally segmented markets. This would help to lower the capital costs for small firms seeking entry to a large number of markets, and also reduce an important source of leverage against the small company. Comaner and Wilson

conclude that smaller firms have less of a disadvantage against larger firms for products which have regionally segmented markets for advertising (Comaner and Wilson, p. 53).

(vii) Make the large firm pension advantages available to the small firm. The privileges given to corporate pension schemes still give a wholly unwarranted advantage to the big corporation over the small business, and serve to discourage those in large companies from leaving the security of the large firm for the uncertainties and difficulties of starting up new companies.

The case for these reforms can be made to a non-Christian public on its own merits. A major shift towards subcontracting, and creating job possibilities by facilitating small firms' entry and growth will help to increase labour productivity. Reshuffling the industrial pack is not a zero-sum game in the context of international trade. Achievement of greater competitive efficiency has potential for substantial import displacement and export growth, which would also help to increase employment. However, Christian motivation is not concerned only with economic growth. It is primarily the opportunity to encourage justice and love in relationships between firms and within firms, and the strengthening of those key institutions, the family and the community, which should cause Christians to seek urgently reforms of the industrial structure.

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